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As Confidentially Submitted to the Securities and Exchange Commission on December 23, 2015

Registration No. 333-

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM S-1

REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933

Clearside Biomedical, Inc.

(Exact name of registrant as specified in its charter)

Delaware	**2834**	**45-2437375**
(State or other jurisdiction of incorporation or organization)	*(Primary Standard Industrial Classification Code Number)*	*(I.R.S. Employer Identification Number)*

1220 Old Alpharetta Road, Suite 300
Alpharetta, GA 30005
(678) 270-3631
(Address, including zip code, and telephone number, including area code, of registrant's principal executive offices)

Daniel H. White
Chief Executive Officer
Clearside Biomedical, Inc.
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Approximate date of commencement of proposed sale to the public: As soon as practicable after the effective date of this registration statement.

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, check the following box. ☐

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ☐

If this Form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ☐

If this Form is a post-effective amendment filed pursuant to Rule 462(d) under the Securities Act, check the following box and list the Securities Act registration number of the earlier effective registration statement for the same offering. ☐

CALCULATION OF REGISTRATION FEE

Title of Securities being Registered	**Proposed Maximum Aggregate Offering Price(1)(2)**	**Amount of Registration Fee**
Common Stock, $0.001 par value per share	$	$

(1) In accordance with Rule 457(o) under the Securities Act of 1933, as amended, the number of shares being registered and the proposed maximum offering price per share are not included in this table.
(2) Estimated solely for purposes of computing the amount of the registration fee pursuant to Rule 457(o) under the Securities Act. Includes offering price of additional shares that underwriters have the option to purchase.

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 under the Securities Exchange Act of 1934. (Check one):

Large Accelerated Filer ☐ Accelerated Filer ☐ Non-accelerated Filer ☒ Smaller Reporting Company ☐

The registrant hereby amends this Registration Statement on such date or dates as may be necessary to delay its effective date until the registrant shall file a further amendment that specifically states that this Registration Statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933, as amended, or until the registration statement shall become effective on such date as the Commission, acting pursuant to said Section 8(a), may determine.

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The information in this preliminary prospectus is not complete and may be changed. We may not sell these securities until the registration statement filed with the Securities and Exchange Commission is declared effective. This preliminary prospectus is not an offer to sell these securities and we are not soliciting offers to buy these securities in any jurisdiction where the offer or sale is not permitted.

Subject to Completion, dated December 23, 2015

Shares

COMMON STOCK

We are offering shares of our common stock. This is our initial public offering and no public market currently exists for our common stock. We expect the initial public offering price to be between $ and $ per share.

We have applied to list our common stock on The NASDAQ Global Market under the symbol "CLSD."

We are an emerging growth company, as defined in the Jumpstart Our Business Startups Act of 2012, and will be subject to reduced public company reporting requirements.

Investing in our common stock involves a high degree of risk. See "Risk Factors" beginning on page 15.

	PER SHARE	TOTAL
Initial public offering price	$	$
Underwriting discount and commissions(1)	$	$
Proceeds, before expenses, to us	$	$

(1) See "Underwriting" in this prospectus for a description of compensation payable to the underwriters.

We have granted the underwriters an option to purchase up to additional shares of common stock, exercisable at any time until 30 days after the date of this prospectus. If the underwriters exercise the option in full, the total underwriting discounts and commissions payable by us will be $ and the total proceeds to us, before expenses, will be $.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or passed upon the adequacy or accuracy of this prospectus. Any representation to the contrary is a criminal offense.

The underwriters expect to deliver the shares on or about , 2016.

RBC CAPITAL MARKETS **STIFEL**

NEEDHAM & COMPANY **NOMURA**

Prospectus dated , 2016

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You should rely only on the information contained in this prospectus and any free writing prospectus prepared by or on behalf of us or to which we have referred you. We have not authorized anyone to provide you with information that is different from that contained in such prospectuses. We are offering to sell shares of our common stock, and seeking offers to buy shares of our common stock, only in jurisdictions where such offers and sales are permitted. The information in this prospectus is accurate only as of the date of this prospectus, regardless of the time of delivery of this prospectus or any sale of our common stock.

Until and including , 2016, 25 days after the date of this prospectus, all dealers that buy, sell or trade our common stock, whether or not participating in this offering, may be required to deliver a prospectus. This is in addition to the dealer's obligation to deliver a prospectus when acting as an underwriter and with respect to unsold allotments or subscriptions.

For investors outside of the United States: neither we nor any of the underwriters have done anything that would permit this offering or possession or distribution of this prospectus in any jurisdiction where action for that purpose is required, other than in the United States. You are required to inform yourselves about and to observe any restrictions relating to this offering and the distribution of this prospectus.

PROSPECTUS SUMMARY

This summary highlights information contained elsewhere in this prospectus and does not contain all of the information that you should consider in making your investment decision. Before investing in our common stock, you should carefully read this entire prospectus, including our financial statements and the related notes thereto and the information set forth under the sections "Risk Factors" and "Management's Discussion and Analysis of Financial Condition and Results of Operations," in each case included in this prospectus. Unless the context otherwise requires, we use the terms "Clearside," "company," "we," "us" and "our" in this prospectus to refer to Clearside Biomedical, Inc.

Overview of Clearside Biomedical

We are a late-stage clinical biopharmaceutical company developing first-in-class drug therapies to treat blinding diseases of the eye. Our current product candidates focus on diseases affecting the retina and choroid, especially diseases associated with macular edema, and are injected into the suprachoroidal space, or SCS, adjacent to the choroid, using our proprietary SCS Microinjector. With the SCS injection, our product candidates are more directly administered to the retina and choroid as compared to other ocular drug delivery techniques, such as intravitreal injections. We believe SCS injection may provide a number of benefits, including lower frequency of necessary injection and faster onset of therapeutic effect. We hold the exclusive rights to develop and commercialize drugs for injection into the SCS. Our most advanced product candidates, CLS-1001 and CLS-1003, are based on commonly used ophthalmic drugs, which we believe will allow us to more efficiently and predictably pursue the regulatory approval of these product candidates under Section 505(b)(2) of the U.S. Federal Food, Drug, and Cosmetic Act. Under Section 505(b)(2), if we can establish that reliance on the Food and Drug Administration's, or FDA's, previous findings of safety and effectiveness for an approved product is scientifically appropriate, or there is scientific literature to support the product's safety or effectiveness, it may eliminate the need for us to conduct some of the preclinical studies or clinical trials for the new product candidate that might otherwise have been required. We estimate that there are nearly five million people in the United States diagnosed with our target indications and that worldwide annual sales of drugs to treat these indications were approximately $7 billion in 2014.

Our CLS-1001 program is being developed for the treatment of macular edema associated with non-infectious uveitis, a condition that we estimate affects 350,000 patients in the United States. CLS-1001 consists of an SCS injection of CLS-TA, our proprietary, preservative-free formulation of the corticosteroid triamcinolone acetonide, or TA, specifically designed to be administered through our SCS Microinjector. We enrolled the first patient in our Phase 3 clinical trial in November 2015. We expect to enroll approximately 150 patients in this trial and report the data in the second half of 2017. We believe, based on our end-of-Phase 2 review with the FDA in May 2015, that this Phase 3 clinical trial will be the only pivotal clinical trial necessary to support the filing of a New Drug Application, or NDA, with the FDA. In the second half of 2015, we completed enrollment of a 22-patient Phase 2 clinical trial and expect to report the results of this trial in January 2016. In our completed Phase 1/2 clinical trial, we observed a range of improvements in best corrected visual acuity, or BCVA, of between one and five lines on a standard eye chart. At the end of week 12, the average improvement in BCVA exceeded two lines, which is considered clinically meaningful. At the end of week 26, four of the eight patients in the trial had still not required additional treatment. For those four patients, the average improvement in BCVA was nearly three lines at week 26.

We are developing CLS-1003 for the treatment of macular edema associated with retinal vein occlusion, or RVO, a condition that we estimate affects 2.2 million patients in the United States. We have completed

enrollment of a 46-patient Phase 2 clinical trial and expect to report data from this trial in the second quarter of 2016. In our CLS-1003 program, we are exploring the concomitant SCS injection of CLS-TA and an intravitreal injection of Eylea, a corticosteroid and an anti-VEGF agent, respectively, to provide the potential benefits of improved visual acuity, reduced macular edema and reduced injection frequency. Corticosteroids and anti-VEGF agents have known advantages in treating RVO.

We are developing CLS-1002 for the treatment of wet age-related macular degeneration, or wet AMD, a condition that we estimate affects 1.2 million patients in the United States. We have selected a lead compound, axitinib, that has activity against both vascular endothelial growth factor, or VEGF, and platelet derived growth factor, or PDGF, to be administered by SCS injection, which we believe could be more effective than current treatments for wet AMD. We plan to develop a proprietary suspension formulation of axitinib and submit an investigational new drug application, or IND, with the FDA in the second half of 2016. We are also considering a development program for drug compounds to treat diabetic macular edema, or DME.

We are also working with third parties through collaborations and licenses to develop eye disease treatments using our proprietary SCS Microinjector and method of drug administration to the choroid and retina through the SCS. We are collaborating with Santen Pharmaceuticals, Ltd., or Santen, to develop compounds for SCS injection that are designed to treat DME, wet AMD and RVO. Additionally, we are collaborating with Santen to explore the potential benefits of SCS injection of compounds known to reduce intraocular pressure, or IOP, associated with glaucoma for a sustained period of time. We have also entered into an agreement with Spark Therapeutics, Inc., or Spark, pursuant to which we are collaborating with Spark to investigate the use of our SCS Microinjector to administer gene therapy to the back of the eye for the potential treatment of orphan diseases of the eye.

Our current and planned development programs aim to restore or improve visual function primarily by reducing the macular edema associated with a number of diseases affecting the retina, the tissue that lines the inside of the eye and is the part of the eye primarily responsible for vision, and the choroid, the layer adjacent to the retina that supplies the retina with blood, oxygen and nourishment. These diseases include uveitis, RVO, wet AMD and DME. Macular edema is the build-up of fluid that can cause abnormal swelling of the macula, the portion of the retina responsible for central vision and color perception. This swelling can rapidly result in deterioration of vision and can eventually lead to blindness.

The most common treatments for eye diseases with associated macular edema affecting the retina and choroid are corticosteroids and drugs that inhibit VEGF signaling, known as anti-VEGF drugs. These corticosteroids and anti-VEGF drugs are often injected into the vitreous, a jelly-like substance that occupies the central portion of the eye. Intravitreal injections rely on drug to diffuse outward from the vitreous to the retina and choroid. This diffusion can result in lower concentrations of drug in these targeted areas. At the same time, this diffusion can also result in drug spreading to unintended parts of the eye, where, for some drugs, it can cause significant side effects. By contrast, with our SCS Microinjector, drug is injected into and spreads within the SCS, which is the space located between the choroid and the outer protective layer of the eye known as the sclera, to reach the back of the eye.

We believe administration of drug using our SCS Microinjector may provide improved bioavailability to the targeted retina and choroid, with drug remaining more localized and away from other parts of the eye, where the drug could cause side effects. Corticosteroids are effective both at treating the inflammation aspects of ocular disease and at reducing macular edema, but when delivered intravitreally, they have been associated with significant side effects, such as cataract formation or exacerbation and elevated IOP, which

can lead to glaucoma. Anti-VEGF drugs, while highly effective in reducing macular edema, require frequent administration, in some cases as often as monthly. We believe that our differentiated approach of injecting ocular drugs into the SCS may result in fewer side effects and improved bioavailability of drug at the diseased retina and choroid, as compared to intravitreal administration, a faster onset of therapeutic effect, a similar efficacy profile with lower drug amounts required, and longer duration of therapeutic effect with less frequent required injections. The procedure for SCS injection with our SCS Microinjector is conducted in an in-office setting and is similar to the procedure for intravitreal injection, and we therefore expect our products, if they achieve regulatory approval, to be incorporated into retinal specialists' standard medical practice.

Our drug candidates, SCS Microinjector and method of drug administration into the SCS are protected by five issued U.S. patents and over 50 patent applications filed in the United States and major international markets, including the European Union, Canada, India, Japan, China and Australia. Our issued patents are broadly directed to methods of administering drugs of any type, including anti-inflammatory drugs, anti-VEGF drugs, and gene therapy, into the SCS by injection and are not scheduled to expire until 2027, 2029 and 2034. Our patent applications relate to SCS injection technology and methods, our current therapeutic drug candidates and formulations, various therapeutic uses, including treatment of specific indications such as macular edema associated with non-infectious uveitis and RVO, as well as wet AMD and DME, and administration of specific classes of drugs to the SCS, including anti-inflammatory drugs and anti-VEGF drugs. Our pending patent applications are not projected to expire until between 2027 and 2035.

If our product candidates are approved, we plan to build a specialized team of 30 to 40 sales and medical marketing support professionals to target the approximately 1,700 retinal specialists in the United States, and we may also pursue collaborations with third parties to commercialize any of our drugs approved for marketing outside the United States.

The members of our management team have held senior leadership positions at a number of pharmaceutical and biotechnology companies with approved ophthalmic drugs, including Alcon, Alimera Sciences, CIBA Vision and ISTA Pharmaceuticals. Members of our team have contributed to the development, regulatory approval and commercialization of several retinal products, such as Triesence, Iluvien, Nevanac, Visudyne and Xibrom.

The Clearside Approach

We are developing drug candidates for back of the eye diseases to be administered to the retina and choroid through the SCS using our proprietary SCS Microinjector. We believe that our novel, patented approach of SCS drug administration may provide a number of potential benefits, including:

- ***Improved bioavailability at the site of disease and faster onset of therapeutic effect.*** In preclinical studies, we observed higher amounts of drug present in the retina and choroid following SCS injection, both at early time points and over the course of the experimental timeframe, as compared to the amounts of the same drug present over time in the retina and choroid following intravitreal administration. We believe this suggests that treatment using SCS injection of a drug may have a faster onset of therapeutic effect as compared to intravitreal administration, along with similar or better efficacy, in diseases such as uveitis, RVO, wet AMD and DME.
- ***Similar efficacy profile with lower drug amounts required.*** In a preclinical study in an animal model of uveitis, SCS injection of TA achieved similar efficacy results with only 10% of the drug

amount commonly administered through intravitreal injection. We believe this suggests our approach may allow us to develop ocular therapies with similar efficacy, but with lower amounts of active drug, compared to current therapies.

- ***Less frequent injections.*** Current treatments for RVO require monthly intravitreal injections of anti-VEGF drugs, while current treatments for wet AMD require such injections as often as seven times per year. For RVO patients, we believe that a combination of a standard intravitreal injection of an anti-VEGF drug that addresses the vascular aspect of the disease, together with an SCS injection of CLS-TA, which addresses the inflammatory aspect of RVO, may have efficacy similar to that of monthly intravitreal anti-VEGF injections but with a reduction in the frequency of treatment to once every 90 days. In wet AMD, we believe that more direct administration of drugs with anti-VEGF or dual anti-VEGF and anti-PDGF activity to the neovascularization in the choroid through SCS injection may substantially block the process of additional new vascular growth within the choroid before the vessels break into the retina and create further damage through leakage. If treatment through the SCS can block retinal damage before it occurs, we believe it could delay vision loss for a longer duration of time than the current standard intravitreal administration of anti-VEGF drugs and, accordingly, could require less frequent administration while providing at least the same levels of efficacy.
- ***Enhanced safety profile.*** Intravitreal injections result in drugs diffusing throughout the eye, including to the lens, iris and ciliary body at the front of the eye, which for some drugs, such as corticosteroids, has been associated with safety issues, such as cataracts and elevated IOP levels. Intravitreal administration of TA has been associated with cataracts and increases in IOP levels in 20% to 60% of patients. Because SCS injection of drugs in preclinical studies appeared to result in drug remaining mostly localized in the retina and choroid without substantial diffusion to the vitreous or the front portion of the eye, we believe SCS injection has the potential to reduce the incidence of these side effects. None of the eight patients dosed in our Phase 1/2 clinical trial in non-infectious uveitis experienced cataracts, abnormally high levels of IOP or other treatment-related serious adverse events over the course of 26 weeks following a single SCS injection of TA.
- ***Incorporated into standard medical practice.*** If approved for marketing, our drugs will be packaged together with our SCS Microinjector for use by retinal specialists in their offices. Our product candidates are designed to be administered using a procedure similar to that used for intravitreal injections. Accordingly, we expect our products, if approved, will be incorporated into retinal specialists' standard medical practice.

Strategy

Our goal is to be a leading biopharmaceutical company focused on the development and commercialization of therapeutics to treat blinding diseases of the eye, with a particular emphasis on diseases affecting the retina and the choroid. The key elements of our strategy are:

- ***Advancing CLS-1001 and CLS-1003 to FDA approval under the Section 505(b)(2) NDA regulatory pathway.*** Our most advanced product candidates, CLS-1001 and CLS-1003, utilize CLS-TA, our proprietary formulation of TA, a corticosteroid that has been used for decades to treat ocular inflammatory conditions. We believe this approach will allow us to more efficiently and predictably pursue the regulatory approval of these product candidates under Section 505(b)(2) of the Federal Food, Drug, and Cosmetic Act. In the CLS-1001 uveitis program, we recently commenced a pivotal

Phase 3 clinical trial of CLS-TA for the treatment of macular edema associated with non-infectious uveitis and expect to report data from this trial in the second half of 2017. Based on our end-of-Phase 2 review with the FDA in May 2015, we expect this trial to be the only pivotal clinical trial necessary to support a 505(b)(2) NDA filing for CLS-TA. Separately, in the CLS-1003 program, we have completed enrollment of a 46-patient Phase 2 clinical trial with CLS-TA injected into the SCS concomitantly with intravitreally injected Eylea for the treatment of macular edema associated with RVO. We expect to report data from this trial in the second quarter of 2016.

- ***Maximizing the commercial potential of our product candidates.*** If either CLS-1001 or CLS-1003 is approved, we plan to build a specialized team of 30 to 40 sales and medical marketing support professionals to target the approximately 1,700 retinal specialists in the United States. We expect that this sales force would be able to effectively sell more than one of our products, in the event that multiple product candidates are approved for marketing. We have retained the worldwide commercialization rights to all of our product candidates, except we have granted a third party the exclusive right to commercialize our product candidates in Russia and specified adjacent territories pursuant to a license agreement, as described later in this prospectus. We may pursue additional collaborations with third parties to commercialize any of our drugs approved for marketing outside the United States, either through territorial licenses or distributor relationships.
- ***Advancing our CLS-1002 wet AMD development program.*** We plan to develop a proprietary suspension formulation of axitinib, a compound with dual anti-VEGF and anti-PDGF activity, for the treatment of wet AMD by injection into the SCS. We believe a single injection of a drug with dual anti-VEGF and anti-PDGF activity to the choroid and retina through the SCS may provide superior visual outcomes compared to intravitreal anti-VEGF treatment and could reduce the number of injections required to treat wet AMD. We plan to file an IND for our proprietary formulation of axitinib in the second half of 2016.
- ***Developing a product candidate to treat DME.*** DME, like uveitis and RVO, is characterized by an inflammatory aspect. After the data from the CLS-1003 Phase 2 clinical trial have been analyzed, we intend to initiate clinical trials to develop a product candidate to treat DME modeled after our approach for addressing the treatment of RVO.
- ***Developing additional therapies through collaborations with third parties.*** We plan to explore collaborations with third parties to develop SCS-injected treatments for eye diseases. These collaborations may take the form of in-licenses of the third parties' drugs or drug candidates for our own development for SCS-injected treatments, or out-licenses for third parties to use our intellectual property covering SCS-injected treatments as part of the development of their own drugs. For example, we are collaborating with Santen to develop compounds designed to treat macular edema and neovascularization associated with wet AMD, RVO and DME, as well as elevated IOP associated with glaucoma. We have also entered into an agreement with Spark pursuant to which we are collaborating with Spark to investigate the use of our SCS Microinjector to administer gene therapy to the back of the eye.
- ***Maintaining and strengthening our intellectual property portfolio.*** Our intellectual property strategy aims to control the commercialization of SCS access, with patents and patent applications covering SCS injection, novel formulations of drugs and microinjectors used to access the SCS, and methods of treatment of diseases through the SCS. Our current patents and patent applications

provide us with exclusivity in the United States and major international markets, and are not projected to expire until between 2027 and 2035. We will seek to broaden the scope of and increase the geographic reach of our patent protection throughout the world.

Overview of our Product Candidates

The current development status of our product candidates is summarized in the chart below:

Development Program	Indication	Route of Administration and Active Ingredient	Status and Upcoming Milestones
CLS-1001	Macular edema associated with non-infectious uveitis	SCS injection of CLS-TA	• Initiated ~150-patient single pivotal Phase 3 clinical trial in November 2015 with CLS-TA, with data expected in the second half of 2017 • Completed enrollment of a 22-patient Phase 2 clinical trial with CLS-TA, with data expected in January 2016 • Completed Phase 1/2 clinical trial
CLS-1003	Macular edema associated with RVO	SCS injection of CLS-TA together with intravitreal injection of the anti-VEGF agent, Eylea	• Completed enrollment of a 46-patient Phase 2 clinical trial, with data expected in the second quarter of 2016
CLS-1002	Wet AMD	SCS injection of the anti-VEGF and anti-PDGF agent, axitinib	• IND submission expected in the second half of 2016

We have discussed our proposed development program with the FDA for the CLS-1001 program using CLS-TA for the treatment of macular edema associated with non-infections uveitis, but we have not yet done so for our CLS-1003 and CLS-1002 development programs.

CLS-1001 Program Targeting Macular Edema Associated with Non-infectious Uveitis

The most common treatment for non-infectious uveitis, a condition characterized by inflammation of the choroid and surrounding tissues, involves the use of corticosteroids, such as TA. CLS-1001 consists of an SCS injection of CLS-TA with our SCS Microinjector. Because CLS-1001 is based on our formulation of TA, and TA is known to be effective in treating uveitis, we believe that our product candidate will be at least as effective as commonly used formulations of TA in treating all aspects of the disease, including the associated macular edema. If approved, CLS-1001 would be the first drug specifically indicated for macular edema associated with non-infectious uveitis. In November 2015, we enrolled the first patient in a pivotal Phase 3 clinical trial in which our CLS-TA is injected into the SCS with our SCS Microinjector. We intend to enroll approximately 150 patients with macular edema associated with non-infectious uveitis and expect to report the results of this trial in the second half of 2017. Based on our end-of-Phase 2 review with the FDA in May 2015, we believe this will be the only pivotal clinical trial necessary to support a 505(b)(2) NDA filing for CLS-TA for macular edema associated with non-infectious uveitis. We have completed a Phase 2 clinical trial in patients with macular edema associated with non-infectious uveitis to evaluate the safety and efficacy of our CLS-TA injected into the SCS with our SCS Microinjector, and we expect to

report data from this trial in January 2016. In our completed Phase 1/2 clinical trial, we evaluated the safety of SCS injection of Triesence, a TA formulation that is similar to CLS-TA and that has been approved by the FDA to treat non-infectious uveitis. While the trial was primarily a safety and tolerability study, we also assessed efficacy measures. Data from the eight patients enrolled in this trial indicated that SCS injection of the drug was generally well tolerated, with none of the eight patients having developed cataracts or experienced elevated IOP. At the end of week 12, the average improvement in BCVA exceeded two lines, which is considered clinically meaningful. At the end of week 26, four of the eight patients in the trial had still not required additional treatment. For those four patients, the average improvement in BCVA was nearly three lines at week 26. Our preclinical studies suggest that SCS injection of TA may provide improved bioavailability of drug at the diseased retina and choroid, which may result in faster onset of therapeutic effect and a similar efficacy profile with lower drug amounts required. Our preclinical studies suggest the potential for CLS-1001 to effectively treat uveitis for at least 90 days following a single SCS injection and our Phase 1/2 clinical trial observations potentially support a duration of action longer than 90 days since four of the eight patients in that trial did not require additional treatment over the 180-day observation period. Currently used ocular injections of TA are typically effective for approximately 90 days.

CLS-1003 Program Targeting Macular Edema Associated with Retinal Vein Occlusion

Under our CLS-1003 program, we have completed enrollment of a Phase 2 clinical trial for the treatment of macular edema associated with RVO, a sight-threatening disorder resulting from the blockage of a retinal vein. The current standard of care for RVO involves monthly intravitreal injections of an anti-VEGF drug, such as Lucentis (ranibizumab), Eylea (aflibercept) or Avastin (bevacizumab). Corticosteroids are also indicated for the treatment of macular edema associated with RVO. In our Phase 2 clinical trial, in which we enrolled 46 patients, we are evaluating the safety and efficacy of the injection of our CLS-TA into the SCS together with Eylea injected into the vitreous, as compared to an intravitreal injection of Eylea alone. We believe that SCS injection of CLS-TA, by addressing the inflammatory aspect of RVO, in combination with intravitreal anti-VEGF treatment, addressing the vascular aspect of RVO, may result in faster onset of therapeutic effect and may be able to improve visual acuity and reduce macular edema, compared to currently used intravitreal anti-VEGF treatment alone, while also potentially reducing the frequency of necessary anti-VEGF treatments from once every 30 days to once every 90 days. In addition, we believe that the side effect profile of CLS-1003 will be similar to that of current intravitreal anti-VEGF treatments alone, as SCS injections of CLS-TA should allow the corticosteroid to remain substantially localized in the retina and choroid without introducing the side effects that are commonly observed with other routes of administration of corticosteroids.

CLS-1002 Program Targeting Wet Age-Related Macular Degeneration

Under our CLS-1002 program for the treatment of wet AMD, we plan to develop a proprietary suspension formulation of axitinib, a single molecule with dual anti-VEGF and anti-PDGF activity, for injection into the SCS with our SCS Microinjector. Axitinib, also known by its brand name Inlyta, is currently marketed by Pfizer and is approved by the FDA for the treatment of advanced renal cell carcinoma, but not for any ophthalmology indications. Wet AMD is a condition involving the abnormal formation and growth of new blood vessels in the choroid, their intrusion into the outer layers of the retina and the leakage of blood and fluid into the retina. The current standard of care for the treatment of wet AMD is intravitreal injection of anti-VEGF drugs as a standalone therapy, as often as seven times per year. Additionally, anti-PDGF molecules, when injected into the vitreous immediately following an anti-VEGF

intravitreal injection, have shown clinical promise from Phase 1 and Phase 2 trials conducted by others in improving upon the visual acuity outcomes of the anti-VEGF agent alone. Because wet AMD manifests in the retina and choroid, we believe that SCS injection of drug more directly to the retina and choroid may result in faster onset of therapeutic effect as compared to intravitreal injection. We believe that SCS injection also has the potential to access the new blood vessels in the choroid before they intrude into the retina, which could reduce the necessary frequency of treatment, and reduce or prevent damage to the retina. We plan to file an IND for CLS-1002 in the second half of 2016.

Future Potential Product Candidates

We believe that our SCS-focused approach has the potential for application in treating other back of the eye diseases, and we intend to develop additional product candidates for SCS injection based on the results of our current and planned clinical trials. In addition to uveitis, RVO and wet AMD, there are a number of ophthalmic conditions affecting the retina and choroid with unmet medical need for which SCS injection of therapy may be beneficial. These indications include DME, a common ocular complication of diabetes that results in swelling in the macula and is the primary cause of vision loss associated with diabetes, polypoidal choroidal vasculopathy, or PCV, a disorder resulting from the abnormal growth of new blood vessels in the choroid adjacent to the macula, and geographic atrophy, another advanced form of AMD.

Risks Associated with Our Business

Our business is subject to a number of risks of which you should be aware before making a decision to invest in our common stock. These risks are discussed more fully in the “Risk Factors” section of this prospectus. These risks include the following:

- We have incurred significant losses since our inception, expect to incur losses over the next several years and may never achieve or maintain profitability.
- Except for our most advanced programs, CLS-1001 and CLS-1003, all of our product candidates are in preclinical development.
- Clinical drug development involves a lengthy and expensive process, with an uncertain outcome, and we may incur additional costs or experience delays in completing, or ultimately be unable to complete, the development and commercialization of our product candidates.
- We rely, and expect to continue to rely, on third parties to conduct our clinical trials for our product candidates, and those third parties may not perform satisfactorily, including failing to meet deadlines for the completion of such trials.
- If the FDA does not conclude that our product candidates satisfy the requirements for the Section 505(b)(2) NDA regulatory approval pathway, or if the requirements under Section 505(b)(2) are not as we expect, the approval pathway for our product candidates will likely take significantly longer, cost significantly more and entail significantly greater complications and risks than anticipated, and in either case may not be successful.
- Our research and development efforts are focused on the development of product candidates for SCS injection, which is a novel approach and may fail to achieve and sustain market acceptance.

- If we are unable to establish sales, marketing and distribution capabilities for our product candidates, we may not be successful in commercializing those product candidates, if and when they are approved.
- If we are unable to obtain and maintain patent protection for our technology and product candidates, or if our licensors are unable to obtain and maintain patent protection for the technology or product candidates that we license from them, or if the scope of the patent protection obtained is not sufficiently broad, our competitors could develop and commercialize technology and drugs similar or identical to ours, and our ability to successfully commercialize our technology and product candidates may be impaired.
- An active trading market for our common stock may not develop and you may not be able to resell your shares of our common stock at or above the initial offering price, if at all.
- We are an "emerging growth company" and as a result of the reduced disclosure and governance requirements applicable to emerging growth companies, our common stock may be less attractive to investors.

Corporate Information

We were incorporated under the laws of the State of Delaware in May 2011. Our principal executive offices are located at 1220 Old Alpharetta Road, Suite 300, Alpharetta, Georgia 30005 and our telephone number is (678) 270-3631. Our website address is *www.clearsidebio.com*. The information contained on our website is not incorporated by reference into this prospectus, and you should not consider any information contained on, or that can be accessed through, our website as part of this prospectus or in deciding whether to purchase our common stock.

We have proprietary rights to a number of trademarks used in this prospectus which are important to our business, including Clearside®, SCS and the Clearside logo. Solely for convenience, the trademarks and trade names in this prospectus are referred to without the ® and TM symbols, but such references should not be construed as any indicator that their respective owners will not assert, to the fullest extent under applicable law, their rights thereto. All other trademarks, trade names and service marks appearing in this prospectus are the property of their respective owners.

Implications of Being an Emerging Growth Company

As a company with less than $1 billion in revenue during our last fiscal year, we qualify as an "emerging growth company" as defined in the Jumpstart Our Business Startups Act of 2012, or the JOBS Act. For so long as we remain an emerging growth company, we are permitted and intend to rely on exemptions from some of the reporting requirements that are applicable to other public companies that are not emerging growth companies. These exemptions include:

- being permitted to provide only two years of audited financial statements, in addition to any required unaudited interim financial statements, with correspondingly reduced "Management's Discussion and Analysis of Financial Condition and Results of Operations" disclosure;
- not being required to comply with the auditor attestation requirements in the assessment of our internal control over financial reporting;
- not being required to comply with any requirement that may be adopted by the Public Company Accounting Oversight Board regarding mandatory audit firm rotation or a supplement to the auditor's report providing additional information about the audit and the financial statements;

- reduced disclosure obligations regarding executive compensation; and
- not being required to hold a non-binding advisory vote on executive compensation or obtain stockholder approval of any golden parachute payments not previously approved.

We may take advantage of these reporting exemptions until we are no longer an emerging growth company. We will remain an emerging growth company until the earlier of (1) the last day of the fiscal year (a) following the fifth anniversary of the completion of this offering, (b) in which we have total annual gross revenue of at least $1 billion or (c) in which we are deemed to be a large accelerated filer, which means the market value of our common stock that is held by non-affiliates exceeds $700 million as of the prior June 30th and (2) the date on which we have issued more than $1 billion in non-convertible debt during the prior three-year period. We may choose to take advantage of some, but not all, of the available exemptions. We have taken advantage of some reduced reporting burdens in this prospectus. Accordingly, the information contained herein may be different than the information you receive from other public companies in which you hold stock.

In addition, under the JOBS Act, emerging growth companies can delay adopting new or revised accounting standards until such time as those standards apply to private companies. We have irrevocably elected not to avail ourselves of this exemption from new or revised accounting standards and, therefore, we will be subject to the same new or revised accounting standards as other public companies that are not emerging growth companies.

THE OFFERING

Common stock offered by us	shares
Common stock to be outstanding immediately after this offering	shares
Option to purchase additional shares	We have granted the underwriters an option for a period of 30 days from the date of this prospectus to purchase up to additional shares of our common stock.
Use of proceeds	We estimate that the net proceeds to us from this offering, after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us, will be approximately $ million, assuming the shares are offered at $ per share, which is the midpoint of the estimated offering price range set forth on the cover page of this prospectus. We anticipate that the majority of the net proceeds from this offering will be used to fund our pivotal Phase 3 clinical trial of CLS-1001, our Phase 2 clinical trial of CLS-1003 and our preparation of an IND for, and subsequent Phase 1/2 clinical trial of, CLS-1002. The remaining proceeds will be used for the continued research and development of our earlier-stage programs, and for working capital and general corporate purposes. See “Use of Proceeds” for additional information.
Risk factors	You should read the “Risk Factors” section of this prospectus for a discussion of factors to consider carefully before deciding to invest in shares of our common stock.
Proposed NASDAQ Global Market symbol	CLSD

The number of shares of our common stock that will be outstanding after this offering is based on 26,751,433 shares of common stock outstanding as of December 15, 2015, after giving effect to the automatic conversion of 20,638,557 shares of our convertible preferred stock outstanding as of December 15, 2015 and the exercise of warrants to purchase an aggregate of 248,175 shares of common stock that would otherwise expire upon the closing of this offering, and excludes:

- 2,775,680 shares of our common stock issuable upon the exercise of stock options outstanding under our 2011 stock incentive plan as of December 15, 2015, at a weighted average exercise price of $1.09 per share;
- 73,693 shares of our common stock issuable upon the exercise of warrants at a weighted average exercise price of $3.12 per share, which will remain outstanding following the closing of this offering; and
- shares of our common stock reserved for future issuance under our equity incentive plans following this offering.

Except as otherwise indicated herein, all information in this prospectus, including the number of shares that will be outstanding after this offering, assumes or gives effect to:

- -for- reverse stock split of our common stock expected to be completed prior to the completion of this offering;
- the conversion of all outstanding shares of our convertible preferred stock into an aggregate of 20,638,557 shares of our common stock, which will occur automatically upon the closing of this offering;
- the exercise of all outstanding warrants to purchase shares of common stock that will otherwise expire upon the closing of this offering for an aggregate of 248,175 shares of common stock;
- the conversion of outstanding warrants to purchase shares of convertible preferred stock into warrants to purchase an aggregate of 73,693 shares of common stock upon the closing of this offering; and
- no exercise of the underwriters' option to purchase additional shares of common stock.

Summary Financial Data

In the tables below, we provide you with our summary financial data for the periods indicated. We have derived the following summary of our statement of operations data for the years ended December 31, 2013 and 2014 from our audited financial statements appearing elsewhere in this prospectus. We have derived the following summary of our statement of operations data for the nine months ended September 30, 2014 and 2015 and our balance sheet data as of September 30, 2015 from our unaudited interim financial statements appearing elsewhere in this prospectus.

The financial data for the nine months ended September 30, 2014 and 2015 and as of September 30, 2015 includes, in the opinion of our management, all adjustments, consisting only of normal recurring adjustments that are necessary for a fair presentation of our financial position and results of operations for these periods. Our historical results are not necessarily indicative of the results to be expected in the future, and our operating results for the nine months ended September 30, 2015 are not necessarily indicative of the results that may be expected for the entire year ending December 31, 2015 or any other future period.

You should read this summary financial data together with the historical financial statements and related notes to those statements, as well as "Management's Discussion and Analysis of Financial Condition and Results of Operations," which are included elsewhere in this prospectus.

	Year Ended December 31,		Nine Months Ended September 30,	
	2013	2014	2014	2015
	(in thousands, except share and per share data)			
Statement of Operations Data:				
Operating expenses:				
Research and development	$ 5,045	$ 6,692	$ 4,776	$ 6,964
General and administrative	2,193	3,131	2,398	5,337
Total operating expenses	7,238	9,823	7,174	12,301
Loss from operations	(7,238)	(9,823)	(7,174)	(12,301)
Other income (expense):				
Interest expense	(23)	(371)	(353)	(174)
Interest income	7	5	1	6
Total other expense	(16)	(366)	(352)	(168)
Net loss	$ (7,254)	$ (10,189)	$ (7,526)	$ (12,469)
Net loss per share of common stock — basic and diluted	$ (2.45)	$ (2.66)	$ (2.00)	$ (2.54)
Weighted average shares outstanding — basic and diluted	2,956,285	3,825,052	3,769,091	4,910,055
Pro forma net loss per share — basic and diluted		$ (0.53)		$ (0.61)
Pro forma weighted average shares outstanding — basic and diluted		19,390,011		20,475,014

The following table presents our summary balance sheet data as of September 30, 2015:

- on an actual basis;
- on a pro forma basis to give effect to:
  - the conversion of all outstanding shares of our convertible preferred stock, including the 5,073,598 shares of Series C preferred stock issued in November and December 2015, into an aggregate of 20,638,557 shares of our common stock, which will occur automatically upon the closing of this offering; and

- the exercise of all outstanding warrants to purchase shares of common stock that will otherwise expire upon the closing of this offering for an aggregate of 248,175 shares of common stock; and

- on a pro forma as adjusted basis to give further effect to our sale of shares of common stock in this offering at an assumed initial public offering price of $ per share, which is the midpoint of the price range set forth on the cover page of this prospectus, after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us.

	As of September 30, 2015		
	Actual	Pro forma	Pro forma as adjusted
	(in thousands)		
Balance Sheet Data:			
Cash and cash equivalents	$ 4,186	$	$
Total assets	4,516		
Total liabilities	8,848		
Total convertible preferred stock	27,228		
Total stockholders' equity (deficit)	(31,560)		

The pro forma as adjusted information presented in the summary balance sheet data is illustrative only and will change based on the actual initial public offering price and other terms of this offering determined at pricing. Each $1.00 increase or decrease in the assumed initial public offering price of $ per share, which is the midpoint of the price range set forth on the cover page of this prospectus, would increase or decrease each of cash and cash equivalents, total assets and total stockholders' equity on a pro forma as adjusted basis by $ million, assuming that the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same. Similarly, each increase or decrease of 1.0 million shares offered by us at the assumed initial public offering price would increase or decrease each of cash and cash equivalents, total assets and total stockholders' equity on a pro forma as adjusted basis by $ million.

RISK FACTORS

Investing in our common stock involves a high degree of risk. Before you invest in our common stock, you should carefully consider the following risks, as well as general economic and business risks, and all of the other information contained in this prospectus. Any of the following risks could have a material adverse effect on our business, operating results and financial condition and cause the trading price of our common stock to decline, which would cause you to lose all or part of your investment. When determining whether to invest, you should also refer to the other information contained in this prospectus, including our financial statements and the related notes thereto.

Risks Related to Our Financial Position and Capital Needs

We have incurred significant losses since our inception. We expect to incur losses over the next several years and may never achieve or maintain profitability.

Since our inception through September 30, 2015, we have incurred net losses of $34.2 million. We incurred net losses of $7.3 million, $10.2 million and $12.5 million for the years ended December 31, 2013 and 2014 and the nine months ended September 30, 2015, respectively. We financed our operations through September 30, 2015 with approximately $33.9 million of net cash proceeds raised in private placements of convertible preferred stock and convertible promissory notes, as well as a long-term loan agreement. In November and December 2015, we raised an additional $19.2 million from the sale of Series C convertible preferred stock.

We have devoted substantially all of our financial resources and efforts to research and development, including preclinical studies and clinical trials. We are still in the early stages of development of our product candidates, and we have not completed development of any drugs. We expect to continue to incur significant expenses and operating losses over the next several years. Our net losses may fluctuate significantly from quarter to quarter and year to year. We anticipate that our expenses will increase substantially as we:

- complete our ongoing pivotal Phase 3 clinical trial in our CLS-1001 program and our ongoing Phase 2 clinical trial in our CLS-1003 program, initiate clinical trials in our CLS-1002 program and conduct additional clinical trials in these programs;
- continue the research and development of our other product candidates;
- seek to discover and develop additional product candidates;
- seek regulatory approvals for any product candidates that successfully complete clinical trials;
- ultimately establish a sales, marketing and distribution infrastructure and scale up external manufacturing capabilities to commercialize any drugs for which we may obtain regulatory approval;
- maintain, expand and protect our intellectual property portfolio;
- hire additional clinical, manufacturing and scientific personnel;
- add operational, financial and management information systems and personnel, including personnel to support our drug development and planned future commercialization efforts; and
- incur additional legal, accounting and other expenses in operating as a public company.

To become and remain profitable, we must succeed in developing and eventually commercializing drugs that generate significant revenue. This will require us to be successful in a range of challenging activities, including completing preclinical testing and clinical trials of our product candidates, obtaining regulatory approval and manufacturing, marketing and selling any products for which we may obtain regulatory approval, as well as discovering and developing additional product candidates. We are only in the preliminary stages of most of these activities. We may never succeed in these activities and, even if we do, may never generate revenues that are significant enough to achieve profitability.

Because of the numerous risks and uncertainties associated with drug development, we are unable to accurately predict the timing or amount of expenses or when, or if, we will be able to achieve profitability. If we are required by regulatory authorities to perform studies in addition to those currently expected, or if there are any delays in the initiation and completion of our clinical trials or the development of any of our product candidates, our expenses could increase.

Even if we achieve profitability, we may not be able to sustain or increase profitability on a quarterly or annual basis. Our failure to become and remain profitable would depress our value and could impair our ability to raise capital, expand our business, maintain our research and development efforts, diversify our product offerings or continue our operations. A decline in our value could also cause you to lose all or part of your investment.

We will need substantial additional funding to meet our financial obligations and to pursue our business objectives. If we are unable to raise capital when needed, we could be forced to delay, reduce or altogether cease our drug development programs or commercialization efforts.

We believe that the net proceeds from this offering, together with our existing cash and cash equivalents, will enable us to fund our operating expenses and capital expenditure requirements for at least the next 12 months. However, we will need to obtain substantial additional funding in connection with our continuing operations. Our future capital requirements will depend on many factors, including:

- the progress and results of our ongoing Phase 3 clinical trial for CLS-1001, our ongoing Phase 2 clinical trial for CLS-1003, our planned Phase 1/2 clinical trial for CLS-1002 and our future clinical trials for these programs;
- the scope, progress, results and costs of preclinical development, laboratory testing and clinical trials for our other product candidates;
- the number and development requirements of other product candidates that we may pursue;
- the costs, timing and outcome of regulatory review of our product candidates;
- the costs and timing of future commercialization activities, including product manufacturing, marketing, sales and distribution, for any of our product candidates for which we receive marketing approval;
- the revenue, if any, received from commercial sales of our product candidates for which we receive marketing approval;
- the costs and timing of preparing, filing and prosecuting patent applications, maintaining and enforcing our intellectual property rights and defending any intellectual property-related claims; and
- the extent to which we acquire or in-license other product candidates and technologies.

Identifying potential product candidates and conducting preclinical testing and clinical trials is a time-consuming, expensive and uncertain process that takes years to complete, and we may never generate the necessary data or results required to obtain regulatory approval and achieve product sales. In addition, our product candidates, if approved, may not achieve commercial success. Our commercial revenues, if any, will be derived from sales of drugs that we do not expect to be commercially available for several years, if at all. Accordingly, we will need to continue to rely on additional financing to achieve our business objectives. Adequate additional financing may not be available to us on acceptable terms, or at all. In addition, we may seek additional capital due to favorable market conditions or strategic considerations even if we believe we have sufficient funds for our current or future operating plans. If we are unable to raise capital when needed or on attractive terms, we could be forced to delay, reduce or altogether cease our research and development programs or future commercialization efforts.

Raising additional capital may cause dilution to our stockholders, including purchasers of common stock in this offering, restrict our operations or require us to relinquish rights to our technologies or product candidates.

Until such time, if ever, as we can generate substantial product revenue, we expect to finance our cash needs through a combination of equity offerings, debt financings and potential collaboration, license and development agreements. We do not currently have any committed external source of funds. To the extent that we raise additional capital through the sale of equity or convertible debt securities, your ownership interest will be diluted, and the terms of these securities may include liquidation or other preferences that adversely affect your rights as a common stockholder. Debt financing and preferred equity financing, if available, may involve agreements that include covenants limiting or restricting our ability to take specific actions, such as incurring additional debt, making capital expenditures or declaring dividends.

If we raise additional funds through collaborations, strategic alliances or marketing, distribution or licensing arrangements with third parties, we may be required to relinquish valuable rights to our technologies, future revenue streams, research programs or product candidates or to grant licenses on terms that may not be favorable to us. If we are unable to raise additional funds through equity or debt financings when needed, we may be required to delay, limit, reduce or terminate our drug development or future commercialization efforts or grant rights to develop and market product candidates that we would otherwise prefer to develop and market ourselves.

Our operating history may make it difficult for you to evaluate the success of our business to date and to assess our future viability.

We commenced active operations in 2012, and our operations to date have been largely focused on raising capital, identifying potential product candidates, broadening our expertise in the development of our product candidates, including our SCS Microinjector, and undertaking preclinical studies and conducting early clinical trials. We have not yet demonstrated an ability to successfully complete later-stage clinical trials, obtain regulatory approvals, manufacture a commercial scale product or arrange for a third party to do so on our behalf, or conduct sales and marketing activities necessary for successful commercialization. Consequently, any predictions you make about our future success or viability may not be as accurate as they could be if we had a longer operating history.

We may encounter unforeseen expenses, difficulties, complications, delays and other known or unknown factors in achieving our business objectives. We will need to transition at some point from a

company with a research and development focus to a company capable of supporting commercial activities. We may not be successful in such a transition.

We expect our financial condition and operating results to continue to fluctuate significantly from quarter to quarter and year to year due to a variety of factors, many of which are beyond our control. Accordingly, you should not rely upon the results of any quarterly or annual periods as indications of future operating performance.

We may not be able to generate sufficient cash to service our indebtedness, which currently consists of our loan from Silicon Valley Bank.

We have entered into a loan and security agreement with Silicon Valley Bank, or SVB, pursuant to which we have borrowed an aggregate of $6.0 million. Our obligations under the loan agreement are secured by substantially all of our assets except for our intellectual property, and we may not encumber our intellectual property without SVB's prior written consent. The loan agreement with SVB contains negative covenants restricting our activities, including limitations on dispositions, mergers or acquisitions, incurring indebtedness or liens, paying dividends or making investments and other specified business transactions. Our obligations under the loan agreement are subject to acceleration upon the occurrence of specified events of default, including a material adverse change in our business, operations or financial or other condition. We were in compliance with these covenants as of September 30, 2015. We may also enter into other debt agreements in the future which may contain similar or more restrictive terms.

Our ability to make scheduled monthly payments or to refinance our debt obligations depends on numerous factors, including the amount of our cash reserves and our actual and projected financial and operating performance. These amounts and our performance are subject to certain financial and business factors, as well as prevailing economic and competitive conditions, some of which may be beyond our control. We cannot assure you that we will maintain a level of cash reserves or cash flows from operating activities sufficient to permit us to pay the principal, premium, if any, and interest on our existing or future indebtedness. If our cash flows and capital resources are insufficient to fund our debt service obligations, we may be forced to reduce or delay capital expenditures, sell assets or operations, seek additional capital or restructure or refinance our indebtedness. We cannot assure you that we would be able to take any of these actions, or that these actions would permit us to meet our scheduled debt service obligations. Failure to comply with the conditions of the loan agreement could result in an event of default, which could result in an acceleration of amounts due under the loan agreement. We may not have sufficient funds or may be unable to arrange for additional financing to repay our indebtedness or to make any accelerated payments, and SVB could seek to enforce security interests in the collateral securing such indebtedness, which would harm our business.

Risks Related to the Development of Our Product Candidates

Our research and development efforts are focused on the development of product candidates for SCS injection, which is a novel approach and may fail to achieve and sustain market acceptance.

Injecting drugs into the SCS is a novel approach for ophthalmic therapies, and there is no guarantee this approach will be accepted by physicians, patients or third-party payors. We believe we are the first and only company developing drugs specifically for SCS injection. The scientific evidence to support the feasibility of developing drugs based on this approach is both preliminary and limited. Although our clinical trial results suggest that SCS injection of drugs, such as CLS-1001, may be effective at treating back of the eye diseases, to date no company has developed a drug for administration through the SCS that has received marketing approval.

Additionally, we have limited clinical experience in SCS drug injection. Therefore, we cannot guarantee that SCS injection of drugs will prove in our ongoing and future clinical trials to be a safe or effective approach for treating back of the eye diseases in humans.

Even if we are able to achieve marketing approval for one of our product candidates, the novelty of SCS injection may make it difficult to demonstrate to physicians and third-party payors that SCS injection of our drugs is an appropriate approach for treating diseases such as non-infectious uveitis, RVO and wet AMD and provides advantages compared to the current standard of care. Further, if we are not successful in conveying to physicians, patients and third-party payors that the administration of our drug candidates with our proprietary SCS Microinjector improves patient outcomes, we may experience reluctance, or refusal, on the part of physicians to order and use, and third-party payors to cover and provide adequate payment for, our product candidates. Additionally, in some cases, our product candidates will complement the current standard of care, rather than serve as a replacement for the current standard of care. Therefore, we may encounter significant difficulty in gaining broad market acceptance by physicians, third-party payors and potential patients using CLS-1001, CLS-1003 and our other product candidates.

Except for our most advanced programs, CLS-1001 and CLS-1003, all of our product candidates are in preclinical development. If we are unable to commercialize our product candidates or if we experience significant delays in doing so, our business may be harmed.

For our most advanced clinical development program, CLS-1001 for the treatment of macular edema associated with non-infectious uveitis, we have completed a Phase 1/2 clinical trial, in which we dosed eight patients with a commercially available formulation of the active ingredient in CLS-TA, and completed enrollment of a Phase 2 trial, in which we administered CLS-TA to 22 patients with our SCS Microinjector. For our second clinical development program, CLS-1003 for the treatment of macular edema associated with RVO, we have completed enrollment in our first clinical trial, a Phase 2 trial, in which we administered CLS-TA to 46 patients. Given our limited human experience with our clinical programs, the successful development of any of our product candidates is extremely uncertain, and we cannot guarantee that we will be successful in developing any of our product candidates.

Further, the FDA may conclude that our clinical trials are not sufficient to support approval of our product candidates. For example, we have initiated our clinical development program for CLS-1003 with a Phase 2 clinical trial without having conducted a separate Phase 1 clinical trial for this program. We believe that we will be able to rely on our completed toxicology study of CLS-TA in rabbits, the preclinical studies and safety data generated by our completed clinical trials for CLS-1001 and other supportive literature for a potential NDA submission for CLS-1003, which has the same active pharmaceutical ingredient, CLS-TA, as CLS-1001. However, we have not yet confirmed this approach with the FDA, and the FDA may require that we conduct additional safety studies or trials. For our CLS-1002 program, the only clinical trial we have conducted to date is the Phase 1 exploratory trial of Avastin in Mexico. Although the exploratory trial was conducted in accordance with good clinical practices and had approval and oversight of institutional review boards and institutional ethics committees, the FDA could conclude that we may not rely on the results of the trial conducted in Mexico as part of our regulatory application seeking marketing approval for axitinib.

We have not completed the development of any product candidates, we currently generate no revenues from sales of any products and we may never be able to develop a marketable product. We have invested substantially all of our efforts and financial resources in the development of our proprietary SCS

Microinjector for SCS injection of drugs and the identification of potential drug candidates using that technology. Our ability to generate revenue from our product candidates, which we do not expect will occur for several years, if ever, will depend heavily on their successful development and eventual commercialization. The success of those product candidates will depend on several factors, including the following:

- successful completion of preclinical studies and requisite clinical trials;
- receipt of marketing approvals from applicable regulatory authorities;
- obtaining marketing approvals with labeling for sufficiently broad patient populations and indications, without unduly restrictive distribution limitations or safety warnings;
- obtaining and maintaining patent, trademark and trade secret protection and regulatory exclusivity for our product candidates;
- making arrangements with third-party manufacturers for, or establishing, commercial manufacturing capabilities;
- launching commercial sales of products, if and when approved, whether alone or in collaboration with others;
- successful training of physicians in the proper use of our SCS Microinjector;
- acceptance of the therapies and of the concept of SCS injection of drugs, if and when approved, by physicians, patients and third-party payors;
- competing effectively with other therapies;
- obtaining and maintaining healthcare coverage and adequate reimbursement;
- protecting our rights in our intellectual property portfolio; and
- maintaining a continued acceptable safety profile of the drugs and our SCS Microinjector following approval.

If we do not achieve one or more of these factors in a timely manner or at all, we could experience significant delays or an inability to successfully commercialize our product candidates, which would materially harm our business.

The administration of CLS-1003 as a therapy together with anti-VEGF drugs for the treatment of macular edema associated with RVO is a novel approach and may fail to be successful.

We are developing our second drug program, CLS-1003, as a therapy to complement the current standard of care in the treatment of patients experiencing macular edema associated with RVO, with the goal of reducing current required monthly anti-vascular endothelial growth factor, or anti-VEGF, injections to quarterly injections. The scientific evidence to support the potential efficacy of this treatment approach is limited and based on third party clinical trials studying intravitreal injections of steroids in patients with RVO, which, although effective in reducing edema, has been associated with side effects. While our clinical trial experience involving the SCS injection of steroids suggests that these adverse side effects may be avoided using SCS injection, to date no other company has explored this specific concomitant treatment approach in clinical trials or preclinical studies.

Even if we are able to successfully develop, and achieve marketing approval of, CLS-1003, it may be difficult to demonstrate to physicians and third-party payors that the administration of CLS-1003 concomitantly with anti-VEGF drugs, and the reduction in frequency of anti-VEGF treatments, is the appropriate approach for treating RVO and is superior to the current standard of care. Further, if we are not successful in conveying to physicians, patients and third-party payors that the administration of CLS-1003 concomitantly with anti-VEGF drugs improves patient outcomes, we may experience reluctance, or refusal, on the part of physicians to order and use, and third-party payors to pay for, CLS-1003. Therefore, we may encounter significant difficulty in gaining broad market acceptance by physicians, third-party payors and potential patients using CLS-1003.

We have recently revised the design of our SCS Microinjector. We do not yet have significant experience with our SCS Microinjector in humans.

In our preclinical studies and Phase 1/2 clinical trials, we used several prototype iterations of the SCS Microinjector. We have since finalized the commercial design, which we have been using in our CLS-1001 and CLS-1003 Phase 2 clinical trials and plan to use in our Phase 3 clinical trial of CLS-1001. Accordingly, in addition to the risks associated with drug development, we are also subject to the risks associated with developing the microinjector. For example, in our Phase 1/2 clinical trial, the needle of our earlier microinjector was not long enough to penetrate the scleras of two patients screened for the trial. If we encounter similar limitations with this design, or if it does not function properly in any way, we could be required to expend significant additional time and resources to redesign our microinjector, which would delay or compromise our drug development efforts. Additionally, our ability to successfully commercialize our product candidates will depend on retinal specialists being comfortable with the design and functionality of our microinjector. If, for any reason, retinal specialists were unsatisfied with the form or function of our microinjector, it would harm the market acceptance and potential commercial success of our product candidates, if any, that receive marketing approval.

We may not be successful in our efforts to build a pipeline of product candidates.

A key element of our strategy is to build a pipeline of product candidates for SCS injection and to progress these product candidates through clinical development for the treatment of a variety of diseases of the back of the eye. We may not be able to develop product candidates that are safe and effective. Even if we are successful in continuing to build our pipeline, the potential product candidates that we identify may not be suitable for clinical development, including as a result of being shown to have significant side effects or other characteristics that indicate that they are unlikely to be drugs that will receive marketing approval or achieve market acceptance. If we do not successfully develop and commercialize product candidates based upon our approach, we will not be able to obtain product revenue in future periods, which could significantly harm our financial position and adversely affect our stock price.

Clinical drug development involves a lengthy and expensive process, with an uncertain outcome. We may incur additional costs or experience delays in completing, or ultimately be unable to complete, the development and commercialization of our product candidates.

The risk of failure for our product candidates is high. It is impossible to predict when or if any of our product candidates will prove effective or safe in humans and will receive regulatory approval. Before obtaining marketing approval from regulatory authorities for the sale of any product candidate, we must complete preclinical development and then conduct extensive clinical trials to demonstrate the safety and

efficacy of our product candidates in humans. Clinical testing is expensive, difficult to design and implement, can take many years to complete and is uncertain as to outcome. A failure of one or more clinical trials can occur at any stage of testing. The outcome of preclinical testing and early clinical trials may not be predictive of the success of later clinical trials, and interim results of a clinical trial do not necessarily predict final results. Moreover, preclinical and clinical data are often susceptible to varying interpretations and analyses, and many companies that have believed their product candidates performed satisfactorily in preclinical studies and clinical trials have nonetheless failed to obtain marketing approval of their products.

We may experience numerous unforeseen events during, or as a result of, clinical trials that could delay or prevent our ability to receive marketing approval or commercialize our product candidates, including:

- regulators or institutional review boards may not authorize us or our investigators to commence a clinical trial or conduct a clinical trial at a prospective trial site;
- we may experience delays in reaching, or fail to reach, agreement on acceptable clinical trial contracts or clinical trial protocols with prospective trial sites;
- clinical trials of our product candidates may produce negative or inconclusive results, including failure to demonstrate statistical significance, and we may decide, or regulators may require us, to conduct additional clinical trials or abandon product development programs;
- the number of patients required for clinical trials of our product candidates may be larger than we anticipate, enrollment in these clinical trials may be slower than we anticipate or participants may drop out of these clinical trials at a higher rate than we anticipate;
- our third-party contractors may fail to comply with regulatory requirements or meet their contractual obligations to us in a timely manner, or at all;
- regulators or institutional review boards may require that we or our investigators suspend or terminate clinical research for various reasons, including noncompliance with regulatory requirements or a finding that the participants are being exposed to unacceptable health risks;
- the cost of clinical trials of our product candidates may be greater than we anticipate;
- the supply or quality of our product candidates or other materials necessary to conduct clinical trials of our product candidates may be insufficient or inadequate; and
- our product candidates may have undesirable side effects or other unexpected characteristics, causing us or our investigators, regulators or institutional review boards to suspend or terminate the trials.

If we are required to conduct additional clinical trials or other testing of our product candidates beyond those that we currently contemplate, if we are unable to successfully complete clinical trials of our product candidates or other testing, if the results of these trials or tests are not positive or are only modestly positive or if there are safety concerns, we may:

- be delayed in obtaining marketing approval for our product candidates;
- not obtain marketing approval at all;
- obtain approval for indications or patient populations that are not as broad as intended or desired;
- obtain approval with labeling that includes significant use or distribution restrictions or safety warnings;

- be subject to additional post-marketing testing requirements; or
- have the product removed from the market after obtaining marketing approval.

Our drug development costs may also increase if we experience delays in testing or marketing approvals. We do not know whether any of our preclinical studies or clinical trials will begin as planned, will need to be restructured or will be completed on schedule, or at all. Significant preclinical study or clinical trial delays also could shorten any periods during which we may have the exclusive right to commercialize our product candidates or allow our competitors to bring products to market before we do and impair our ability to successfully commercialize our product candidates.

If we experience delays or difficulties in the enrollment of patients in clinical trials, our receipt of necessary regulatory approvals could be delayed or prevented.

We may not be able to initiate or continue clinical trials for our product candidates if we are unable to locate and enroll a sufficient number of eligible patients to participate in these trials as required by the FDA or similar regulatory authorities outside the United States. For example, we began enrolling patients in our Phase 1/2 uveitis trial in July 2013 and intended to enroll approximately 10 patients in the trial, but we completed enrollment after dosing the eighth patient in July 2014. We have very little experience enrolling patients in our clinical trials, and cannot predict how successful we will be at enrolling patients in future clinical trials. If we are not successful at enrolling patients in one clinical trial, it may effect when we are able to initiate our next clinical trial, which could result in significant delays in our efforts to pursue regulatory approval of and commercialize our product candidates. In addition, some of our competitors have ongoing clinical trials to treat the same indications as our product candidates, and patients who would otherwise be eligible for our clinical trials may instead enroll in clinical trials of our competitors. Patient enrollment is affected by other factors including:

- the severity of the disease under investigation;
- the eligibility criteria for the study in question;
- the perceived risks and benefits of the product candidate under study;
- the availability of drugs approved to treat the diseases under study;
- the efforts to facilitate timely enrollment in clinical trials;
- the patient referral practices of physicians;
- the ability to monitor patients adequately during and after treatment; and
- the proximity and availability of clinical trial sites for prospective patients.

Our inability to enroll a sufficient number of patients for clinical trials would result in significant delays and could require us to abandon one or more clinical trials altogether. Enrollment delays in these clinical trials may result in increased development costs for our product candidates, which could cause our value to decline and limit our ability to obtain additional financing.

If serious adverse or unacceptable side effects are identified during the development of our product candidates, we may need to abandon or limit our development of some of our product candidates.

If our product candidates are associated with side effects in clinical trials or have characteristics that are unexpected, we may need to abandon their development or limit development to more narrow uses or

subpopulations in which the side effects or other characteristics are less prevalent, less severe or more acceptable from a risk-benefit perspective. Many product candidates that initially showed promise in early stage testing have later been found to cause side effects that prevented further development of the product candidate.

We may expend our limited resources to pursue a particular product candidate or indication and fail to capitalize on product candidates or indications that may be more profitable or for which there is a greater likelihood of success.

Because we have limited financial and management resources, we focus on research programs and product candidates that we identify for specific indications. As a result, we may forego or delay pursuit of opportunities with other product candidates or for other indications that later prove to have greater commercial potential. Our resource allocation decisions may cause us to fail to capitalize on viable commercial drugs or profitable market opportunities. Our spending on current and future research and development programs and product candidates for specific indications may not yield any commercially viable products. If we do not accurately evaluate the commercial potential or target market for a particular product candidate, we may relinquish valuable rights to that product candidate through collaboration, licensing or other royalty arrangements in cases in which it would have been more advantageous for us to retain sole development and commercialization rights to such product candidate.

Risks Related to Our Dependence on Third Parties

We expect to rely on third parties to conduct our clinical trials for our product candidates, and those third parties may not perform satisfactorily, including failing to meet deadlines for the completion of such trials.

We have engaged contract research organizations, or CROs, for our ongoing and planned clinical trials. We also expect to engage CROs for any of our other product candidates that may progress to clinical development. We expect to rely on CROs, as well as other third parties, such as clinical data management organizations, medical institutions and clinical investigators, to conduct those clinical trials. Agreements with such third parties might terminate for a variety of reasons, including a failure to perform by the third parties. If we need to enter into alternative arrangements, that would delay our drug development activities.

Our reliance on these third parties for research and development activities will reduce our control over these activities but will not relieve us of our responsibilities. For example, we will remain responsible for ensuring that each of our clinical trials is conducted in accordance with the general investigational plan and protocols for the trial. Moreover, the FDA requires us to comply with regulatory standards, commonly referred to as good clinical practices, or GCPs, for conducting, recording and reporting the results of clinical trials to assure that data and reported results are credible and accurate and that the rights, integrity and confidentiality of trial participants are protected. We also are required to register ongoing clinical trials and post the results of completed clinical trials on a government-sponsored database, ClinicalTrials.gov, within specified timeframes. Failure to do so can result in FDA refusal to approve applications based on the clinical data, fines, adverse publicity and civil and criminal sanctions.

Furthermore, these third parties may also have relationships with other entities, some of which may be our competitors. If these third parties do not successfully carry out their contractual duties, meet expected deadlines or conduct our clinical trials in accordance with regulatory requirements or our stated protocols, we will not be able to obtain, or may be delayed in obtaining, marketing approvals for our product candidates and will not be able to, or may be delayed in our efforts to, successfully commercialize our product candidates.

In addition, principal investigators for our clinical trials may serve as scientific advisors or consultants to us from time to time and may receive cash or equity compensation in connection with such services. If these relationships and any related compensation result in perceived or actual conflicts of interest, or the FDA concludes that the financial relationship may have affected the interpretation of the trial, the integrity of the data generated at the applicable clinical trial site may be questioned and the utility of the clinical trial itself may be jeopardized, which could result in the delay or rejection by the FDA of any NDA we submit. Any such delay or rejection could prevent us from commercializing CLS-1001, CLS-1003 or our other future product candidates.

We also expect to rely on other third parties to store and distribute product supplies for our clinical trials. Any performance failure on the part of our distributors could delay clinical development or marketing approval of our product candidates or commercialization of our products, producing additional losses and depriving us of potential product revenue.

We contract with third parties for the manufacture of CLS-TA and our SCS Microinjector for preclinical and clinical testing and expect to continue to do so for commercialization. This reliance on third parties increases the risk that we will not have sufficient quantities of CLS-TA and our SCS Microinjector or such quantities at an acceptable cost, which could delay, prevent or impair our development or commercialization efforts.

We do not have any manufacturing facilities or personnel. We currently procure the active pharmaceutical ingredient in CLS-TA on a purchase order basis from a third-party manufacturer, and we anticipate entering into commercial supply agreements with this or another manufacturer at a later date. In addition, we obtain each of the components of our SCS Microinjector on a purchase order basis from third-party suppliers. Some of our current suppliers are based outside of the United States. We expect to continue to rely on third parties as we proceed with preclinical and clinical testing using CLS-TA with our SCS Microinjector, as well as for commercial manufacture, if any of our product candidates receives marketing approval. This reliance on third parties increases the risk that we will not have sufficient quantities of CLS-TA and our SCS Microinjector or such quantities at an acceptable cost or quality, which could delay, prevent or impair our ability to timely conduct our clinical trials or our other development or commercialization efforts.

We also expect to rely on third-party manufacturers or collaborators for the manufacture of commercial supply of any other product candidates for which we obtain marketing approval. We may be unable to establish any agreements with third-party manufacturers or collaborators or to do so on acceptable terms. Even if we are able to establish agreements with third-party manufacturers or collaborators, reliance on third-party manufacturers or collaborators entails additional risks, including:

- reliance on the third party for regulatory compliance and quality assurance;
- the possible breach of the manufacturing agreement by the third party;
- the possible misappropriation of our proprietary information, including our trade secrets and know-how; and
- the possible termination or nonrenewal of the agreement by the third party at a time that is costly or inconvenient for us.

Our product candidates, including our proprietary drug formulations packaged together with our SCS Microinjector, are drug/device combination products that will be regulated under the drug regulations of the

Federal Food, Drug, and Cosmetic Act, or FDCA, based on their primary mode of action as drugs. Third-party manufacturers may not be able to comply with current good manufacturing practices, or cGMP, regulations, regulations applicable to drug/device combination products, including applicable provisions of the FDA's drug cGMP regulations, device cGMP requirements embodied in the Quality System Regulation, or QSR, or similar regulatory requirements outside the United States. Our failure, or the failure of our third-party manufacturers, to comply with applicable regulations could result in sanctions being imposed on us, including clinical holds, fines, injunctions, civil penalties, delays, suspension or withdrawal of approvals, license revocation, seizures or recalls of product candidates, operating restrictions and criminal prosecutions, any of which could significantly affect supplies of our product candidates.

Our product candidates that we may develop may compete with other drugs and devices for access to manufacturing facilities. There are a limited number of manufacturers that operate under the drug and device cGMP regulations applicable to our product candidates and that might be capable of manufacturing for us. Any performance failure on the part of our existing or future manufacturers could delay clinical development or marketing approval. We do not currently have arrangements in place for redundant supply or a second source for bulk drug substance or our SCS Microinjector. If our current contract manufacturers cannot perform as agreed, we may be required to replace such manufacturers. Although we believe that there are several potential alternative manufacturers who could manufacture our drugs and the components of our SCS Microinjector, we may incur added costs and delays in identifying and qualifying any such replacement. For example, the FDA could require supplemental data if a new supplier is relied upon for the active pharmaceutical ingredient used in our products. Any interruption or delay in the supply of components and materials, or our inability to obtain components or materials from alternate sources at acceptable prices in a timely manner, could impair our ability to meet the demand of our customers and cause them to cancel orders.

Our current and anticipated future dependence upon others for the manufacture of our product candidates may compromise our future profit margins and our ability to commercialize any product candidates that receive marketing approval on a timely and competitive basis.

We may seek collaborations with third parties for the development and commercialization of our product candidates. If those collaborations are not successful, we may not be able to capitalize on the market potential of these product candidates.

We may seek third-party collaborators for the development and commercialization of our product candidates, particularly for the commercialization of any of our product candidates that are approved for marketing outside the United States or for product candidates targeted at larger indications in the United States such as wet AMD and DME. Our likely collaborators for any collaboration arrangements include large and mid-size pharmaceutical companies, regional and national pharmaceutical companies and biotechnology companies. We have entered into a collaboration with Santen to develop compounds that are designed to treat macular edema and neovascularization associated with wet AMD, RVO and DME, as well as elevated IOP associated with glaucoma. We have also entered into an agreement with Spark to investigate the use of our SCS Microinjector to administer gene therapy to the back of the eye. Under our collaborations with Santen and Spark, and if we enter into any future collaboration arrangements with any third parties, we will likely have limited control over the amount and timing of resources that our collaborators dedicate to the development or commercialization of our product candidates. Our ability to generate revenues from these arrangements will depend on our collaborators' abilities to successfully perform the functions assigned to them in these arrangements.

Collaborations involving our product candidates would pose the following risks to us:

- collaborators have significant discretion in determining the efforts and resources that they will apply to these collaborations;
- collaborators may not perform their obligations as expected;
- collaborators may not pursue development and commercialization of any product candidates that achieve regulatory approval or may elect not to continue or renew development or commercialization programs based on clinical trial results, changes in the collaborators' strategic focus or available funding, or external factors, such as an acquisition, that divert resources or create competing priorities;
- collaborators may delay clinical trials, provide insufficient funding for a clinical trial program, stop a clinical trial or abandon a product candidate, repeat or conduct new clinical trials or require a new formulation of a product candidate for clinical testing;
- collaborators could independently develop, or develop with third parties, products that compete directly or indirectly with our product candidates if the collaborators believe that competitive products are more likely to be successfully developed or can be commercialized on terms that are more economically attractive than ours;
- product candidates discovered in collaboration with us may be viewed by our collaborators as competitive with their own product candidates or products, which may cause collaborators to cease to devote resources to the commercialization of our product candidates;
- a collaborator with marketing and distribution rights to one or more of our product candidates that achieve regulatory approval may not commit sufficient resources to the marketing and distribution of such products;
- disagreements with collaborators, including disagreements over proprietary rights, contract interpretation or the preferred course of development, might cause delays or termination of the research, development or commercialization of product candidates, might lead to additional responsibilities for us with respect to product candidates, or might result in litigation or arbitration, any of which would be time-consuming and expensive;
- collaborators may not properly maintain or defend our or their intellectual property rights or may use our or their proprietary information in such a way as to invite litigation that could jeopardize or invalidate such intellectual property or proprietary information or expose us to potential litigation;
- collaborators may infringe the intellectual property rights of third parties, which may expose us to litigation and potential liability; and
- collaborations may be terminated for the convenience of the collaborator and, if terminated, we could be required to raise additional capital to pursue further development or commercialization of the applicable product candidates.

Collaboration agreements may not lead to development or commercialization of product candidates in the most efficient manner or at all. If a present or future collaborator of ours were to be involved in a business combination, the continued pursuit and emphasis on our drug development or commercialization program could be delayed, diminished or terminated.

If we are not able to establish collaborations, we may have to alter some of our future development and commercialization plans.

Our drug development programs and the potential commercialization of our product candidates will require substantial additional cash to fund expenses. For some of our product candidates, we may decide to collaborate with pharmaceutical and biotechnology companies, such as our current collaborations with Santen and Spark, for the future development and potential commercialization of those product candidates.

We face significant competition in seeking appropriate collaborators. Whether we reach a definitive agreement for a collaboration will depend, among other things, upon our assessment of the collaborator's resources and expertise, the terms and conditions of the proposed collaboration and the proposed collaborator's evaluation of a number of factors. Those factors may include the design or results of clinical trials, the likelihood of approval by the FDA or similar regulatory authorities outside the United States, the potential market for the subject product candidate, the costs and complexities of manufacturing and delivering such product candidate to patients, the potential of competing products, the existence of uncertainty with respect to our ownership of technology, which can exist if there is a challenge to such ownership without regard to the merits of the challenge, and industry and market conditions generally. The collaborator may also consider alternative product candidates or technologies for similar indications that may be available to collaborate on and whether such a collaboration could be more attractive than the one with us for our product candidate. We may also be restricted under existing license agreements from entering into agreements on certain terms with potential collaborators. Collaborations are complex and time-consuming to negotiate and document. In addition, there have been a significant number of recent business combinations among large pharmaceutical companies that have resulted in a reduced number of potential future collaborators.

We may not be able to negotiate collaborations on a timely basis, on acceptable terms, or at all. If we are unable to do so, we may have to curtail the development of such product candidate, reduce or delay its development program or one or more of our other development programs, delay its potential commercialization or reduce the scope of any sales or marketing activities, or increase our expenditures and undertake development or commercialization activities at our own expense. If we elect to increase our expenditures to fund development or commercialization activities on our own, we may need to obtain additional capital, which may not be available to us on acceptable terms or at all. If we do not have sufficient funds, we may not be able to further develop our product candidates or bring them to market and generate product revenue.

Risks Related to the Commercialization of Our Product Candidates

If we are unable to establish sales, marketing and distribution capabilities for our product candidates, we may not be successful in commercializing those product candidates, if and when they are approved.

We do not have a sales or marketing infrastructure and have no experience in the sale, marketing or distribution of pharmaceutical drugs or medical devices. To achieve commercial success for any product candidate for which we may obtain marketing approval in the United States, we will need to establish a sales and marketing organization. In the future, we expect to build a focused sales and marketing infrastructure to target the approximately 1,700 retinal specialists in the United States for any of our product candidates that receive marketing approval. There are risks involved with establishing our own sales, marketing and distribution capabilities. For example, recruiting and training a sales force is expensive and time consuming and could delay any product launch. If the commercial launch of a product candidate for which we recruit a sales force and establish marketing capabilities is delayed or does not occur for any reason, we would have

prematurely or unnecessarily incurred these commercialization expenses. This may be costly, and our investment would be lost if we cannot retain or reposition our sales and marketing personnel.

Factors that may inhibit our efforts to commercialize our drugs on our own include:

- our inability to recruit, train and retain adequate numbers of effective sales and marketing personnel;
- the inability of sales personnel to obtain access to physicians or persuade adequate numbers of physicians to prescribe any future drugs;
- the lack of complementary drugs to be offered by sales personnel, which may put us at a competitive disadvantage compared to companies with more extensive product lines; and
- unforeseen costs and expenses associated with creating an independent sales and marketing organization.

If we are unable to establish our own sales, marketing and distribution capabilities and, instead, enter into arrangements with third parties to perform these services, our product revenues and our profitability, if any, are likely to be lower than if we were to sell, market and distribute any product candidates that we develop ourselves. In addition, we may not be successful in entering into arrangements with third parties to sell, market and distribute our product candidates or may be unable to do so on terms that are favorable to us. We likely will have little control over such third parties, and any of them may fail to devote the necessary resources and attention to sell and market our product candidates effectively. If we do not establish sales, marketing and distribution capabilities successfully, either on our own or in collaboration with third parties, we will not be successful in commercializing our product candidates.

Even if any of our product candidates receives marketing approval, it may fail to achieve the degree of market acceptance by physicians, patients, third-party payors and others in the medical community necessary for commercial success.

If any of our product candidates receives marketing approval, it may nonetheless fail to gain sufficient market acceptance by physicians, patients, third-party payors and others in the medical community. SCS injection of drugs is a novel approach and physicians, patients or third-party payors may be hesitant to deviate from or change the current standard of care. If our product candidates do not achieve an adequate level of market acceptance, we may not generate significant product revenue and we may not become profitable. The degree of market acceptance of our product candidates, if approved for commercial sale, will depend on a number of factors, including:

- the efficacy and potential advantages compared to alternative treatments;
- our ability to offer our drugs for sale at competitive prices;
- the convenience and ease of administration compared to alternative treatments;
- the willingness of the target patient population to try new therapies and of physicians to prescribe these therapies;
- the willingness of the healthcare community and patients to adopt new technologies and our novel approach of SCS injection of drugs;
- the willingness of retinal specialists to expend the time necessary to receive proper training on injecting drugs into the SCS using our SCS Microinjector;

- the ability to manufacture our product in sufficient quantities and yields;
- the strength of marketing and distribution support;
- the availability of third-party coverage and adequate reimbursement;
- the prevalence and severity of any side effects; and
- any restrictions on the use of our drugs together with other medications.

We face substantial competition, which may result in others discovering, developing or commercializing products before or more successfully than we do.

The development and commercialization of new products is highly competitive. We face competition with respect to our current product candidates, and will face competition with respect to any product candidates that we may seek to develop or commercialize in the future, from major pharmaceutical companies, specialty pharmaceutical companies and biotechnology companies worldwide.

With respect to CLS-TA, we face competition from other commercially available forms of TA and other injectable and implantable corticosteroids. Bristol-Myers Squibb markets TA under the brand name Kenalog. Kenalog is indicated only for intramuscular or intraarticular injection, although it is commonly used off-label for intraocular inflammation. There are also a number of generic equivalents of Kenalog. In addition, Alcon's injectable TA, Triesence, is approved in the United States for the treatment of uveitis and other inflammatory conditions unresponsive to topical corticosteroids, although it is not indicated for the treatment of macular edema associated with uveitis or RVO or for the treatment of DME. Ozurdex, marketed by Allergan, is a bioerodable extended release implant that delivers the corticosteroid dexamethasone and is approved for the treatment of non-infectious uveitis affecting the back of the eye and RVO in both the United States and in the European Union, and recently received approval from the FDA to treat DME in adult patients who have an artificial lens implant or who are scheduled for cataract surgery. Bausch + Lomb markets Retisert, an intravitreal implant of the corticosteroid fluocinolone acetonide, for the treatment of non-infectious uveitis. Iluvien, marketed by Alimera Sciences, is a fluocinolone acetonide implant and is approved for the treatment of DME in both the United States and the European Union.

Our product candidates will also compete with anti-VEGF drugs, which are the current standard of care for RVO and wet AMD and have also been approved for DME. Genentech's products Lucentis and Avastin are both anti-VEGF antibodies. Lucentis is currently approved in the United States and European Union for the treatment of wet AMD, macular edema associated with RVO and DME. Avastin is an anti-VEGF drug used by retinal specialists off-label in both the United States and in certain countries of the European Union in the treatment of numerous retinal diseases, but it is not indicated for ophthalmic use. Regeneron's anti-VEGF product, Eylea, is approved for the treatment of wet AMD, macular edema associated with RVO and DME in the United States. In the European Union, Eylea is approved for the treatment of wet AMD, DME and macular edema secondary to RVO.

Ophthotech's drug candidate, Fovista, an anti-PDGF agent, is in Phase 3 clinical trials as a potential treatment for wet AMD to be administered together with an anti-VEGF drug. We are also aware of several other drug candidates in earlier stages of development as potential treatments for the diseases that we intend to target.

Our commercial opportunity could be reduced or eliminated if our competitors develop and commercialize products that are safer, more effective, have fewer or less severe side effects, are more convenient or are less expensive than any product candidates that we may develop. Our competitors also

may obtain FDA or other regulatory approval for their product candidates more rapidly than we may obtain approval for ours, which could result in our competitors establishing a strong market position before we are able to enter the market. In addition, our ability to compete may be affected in many cases by insurers or other third-party payors seeking to encourage the use of generic drugs. For some of the indications that we are pursuing, drugs used off-label, such as Kenalog and Avastin, serve as a cheaper alternatives to our product candidates. Their lower prices could result in significant pricing pressure, even if our product candidates are otherwise viewed as a preferable therapy. Additional drugs may become available on a generic basis over the coming years. If our product candidates achieve marketing approval, we expect that they will be priced at a significant premium over competitive generic drugs.

Many of the companies against which we are competing or against which we may compete in the future have significantly greater financial resources and expertise in research and development, manufacturing, preclinical testing, conducting clinical trials, obtaining regulatory approvals and marketing approved drugs than we do. Mergers and acquisitions in the pharmaceutical and biotechnology industries may result in even more resources being concentrated among a smaller number of our competitors. Smaller and other early stage companies may also prove to be significant competitors, particularly through collaborative arrangements with large and established companies. These third parties compete with us in recruiting and retaining qualified scientific and management personnel, establishing clinical trial sites and patient registration for clinical trials, as well as in acquiring technologies complementary to, or necessary for, our programs.

Even if we are able to commercialize any product candidates, our product candidates may be subject to unfavorable pricing regulations, third-party coverage and reimbursement policies or healthcare reform initiatives.

Our ability to commercialize any product candidates successfully will depend, in part, on the extent to which coverage and adequate reimbursement for our product candidates will be available from government payor programs at the federal and state levels, including Medicare and Medicaid, private health insurers, managed care plans and other third-party payors. Government authorities and other third-party payors, such as private health insurers and health maintenance organizations, decide which medical products they will pay for and establish reimbursement levels. Increasingly, third-party payors are requiring that drug companies provide them with predetermined discounts from list prices and are challenging the prices charged for drugs and products. Coverage and reimbursement may not be available for any product that we commercialize and, even if these are available, the level of reimbursement may not be satisfactory. Inadequate reimbursement levels may adversely affect the demand for, or the price of, any product candidate for which we obtain marketing approval. Obtaining and maintaining adequate reimbursement for our drugs may be difficult. We may be required to conduct expensive pharmacoeconomic studies to justify coverage and reimbursement or the level of reimbursement compared to other therapies. If coverage and adequate reimbursement are not available or reimbursement is available only to limited levels, we may not be able to successfully commercialize any product candidates for which marketing approval is obtained.

A primary trend in the U.S. healthcare industry and elsewhere is cost containment. Government authorities and other third-party payors have attempted to control costs by limiting coverage and the amount of reimbursement for particular medical products. By way of example, the Medicare Prescription Drug Improvement and Modernization Act of 2003, or MMA, changed the way Medicare covers and pays for pharmaceutical products. The legislation expanded Medicare coverage for outpatient drug purchases by those covered by Medicare under a new Part D and introduced a new reimbursement methodology based on average sales prices for Medicare Part B physician-administered drugs, including drugs currently on the

market used by physicians to treat the clinical indications for which we are currently seeking FDA approval and likely our product candidates, if approved. As a result of this legislation and the expansion of federal coverage of drug products, there is additional pressure to contain and reduce costs. While the MMA applies only to drug benefits for Medicare beneficiaries, private payors often follow Medicare coverage policy and payment limitations in setting their own reimbursement rates, and any reduction in reimbursement that results from the MMA may result in a similar reduction in payments from private payors. These cost reduction initiatives and other provisions of the MMA could decrease the coverage and reimbursement that we receive for any approved products, and could seriously harm our business.

Further, from time to time, typically on an annual basis, payment amounts are updated and revised by third-party payors. Because we expect that customers who use our product candidates, if approved, will be separately reimbursed for the procedure administering our products, these updates could directly impact the demand for our products. An example of payment updates is the Medicare program updates to physician payments, which is done on an annual basis using a prescribed statutory formula. In the past, when the application of the formula resulted in lower payment, Congress has passed interim legislation to prevent the reductions. However, the Medicare Access and CHIP Reauthorization Act of 2015, or MACRA, ended the use of the statutory formula, and provided for a 0.5% annual increase in payment rates under the Medicare Physician Fee Schedule through 2019, but no annual update from 2020 through 2025. MACRA also introduced a merit based incentive bonus program for Medicare physicians beginning in 2019. At this time it is unclear how the introduction of the merit based incentive program will impact overall physician reimbursement under the Medicare program. In addition, the Medicare physician fee schedule has been adapted by some private payors into their plan-specific physician payment schedule. We cannot predict how pending and future healthcare legislation will impact our business, and any changes in coverage and reimbursement that further restricts coverage of our products or lowers reimbursement for procedures using our products could materially affect our business.

There may be significant delays in obtaining coverage and reimbursement for newly approved drugs, and coverage may be more limited than the indications for which the product is approved by the FDA or similar regulatory authorities outside the United States. Moreover, eligibility for coverage and reimbursement does not imply that a product will be paid for in all cases or at a rate that covers our costs, including research, development, manufacture, sale and distribution expenses. Interim reimbursement levels for new drugs, if applicable, may also not be sufficient to cover our costs and may not be made permanent. Reimbursement rates may vary according to the use of the product and the clinical setting in which it is used, may be based on reimbursement levels already set for lower cost drugs and may be incorporated into existing payments for other services. Net prices for drugs may be reduced by mandatory discounts or rebates required by government healthcare programs or private payors and by any future relaxation of laws that presently restrict imports of drugs from countries where they may be sold at lower prices than in the United States. Third-party payors often rely upon Medicare coverage policy and payment limitations in setting their own reimbursement policies. However, no uniform policy requirement for coverage and reimbursement for drug products exists among third-party payors in the United States. Therefore, coverage and reimbursement can differ significantly from payor to payor. As a result, the coverage determination process is often a time-consuming and costly process that will require us to provide scientific and clinical support for the use of our products to each payor separately, with no assurance that coverage and adequate reimbursement will be applied consistently or obtained at all. Our inability to promptly obtain coverage and adequate reimbursement rates from both government-funded and private payors for any approved drugs that we develop could significantly harm our operating results, our ability to raise capital needed to commercialize drugs and our overall financial condition.

The regulations that govern marketing approvals, pricing, coverage and reimbursement for new drugs vary widely from country to country. Current and future legislation may significantly change the approval requirements in ways that could involve additional costs and cause delays in obtaining approvals. Some countries require approval of the sale price of a product before it can be marketed. In many countries, the pricing review period begins after marketing or product licensing approval is granted. In some foreign markets, prescription pharmaceutical pricing remains subject to continuing governmental control even after initial approval is granted. As a result, we might obtain marketing approval for a product in a particular country, but then be subject to price regulations that delay commercial launch of the product, possibly for lengthy time periods, and negatively impact the revenues able to be generated from the sale of the product in that country. Adverse pricing limitations may hinder our ability to recoup our investment in one or more product candidates, even if our product candidates obtain marketing approval.

There can be no assurance that our product candidates, if they are approved for sale in the United States or in other countries, will be considered medically reasonable and necessary for a specific indication, that they will be considered cost-effective by third-party payors, that coverage or an adequate level of reimbursement will be available, or that third-party payors' reimbursement policies will not adversely affect our ability to sell our product candidates profitably if they are approved for sale.

Product liability lawsuits against us could cause us to incur substantial liabilities and to limit commercialization of any products that we may develop.

We face an inherent risk of product liability exposure related to the testing of our product candidates in human clinical trials and will face an even greater risk if we commercially sell any drugs that we may develop. If we cannot successfully defend ourselves against claims that our product candidates or products caused injuries, we will incur substantial liabilities. Regardless of merit or eventual outcome, liability claims may result in:

- decreased demand for any product candidates or products that we may develop;
- injury to our reputation and significant negative media attention;
- withdrawal of clinical trial participants;
- significant costs to defend the related litigation;
- substantial monetary awards paid to trial participants or patients;
- loss of revenue;
- reduced resources of our management to pursue our business strategy; and
- the inability to commercialize any drugs that we may develop.

We currently hold $5.0 million in product liability insurance coverage in the aggregate, with a per incident limit of $5.0 million, which may not be adequate to cover all liabilities that we may incur. We may need to increase our insurance coverage as we expand our clinical trials or if we commence commercialization of our product candidates. Insurance coverage is increasingly expensive. We may not be able to maintain insurance coverage at a reasonable cost or in an amount adequate to satisfy any liability that may arise.

Risks Related to Employee Matters and Managing Our Growth

Our future success depends on our ability to retain key executives and to attract, retain and motivate qualified personnel.

We are highly dependent on the management, research and development, clinical, financial and business development expertise of Daniel White, our Chief Executive Officer, Charlie Deignan, our Chief Financial Officer, and Glenn Noronha, our Executive Vice President of Research and Development, as well as the other members of our scientific and clinical teams. Although we intend to enter into new employment agreements with our executive officers that will be effective upon the closing of this offering, each of them may currently terminate their employment with us at any time and will continue to be able to do so after the closing of this offering. We do not maintain "key person" insurance for any of our executives or employees.

Recruiting and retaining qualified scientific and clinical personnel and, if we progress the development of our product pipeline toward scaling up for commercialization, manufacturing and sales and marketing personnel, will also be critical to our success. The loss of the services of our executive officers or other key employees could impede the achievement of our research, development and commercialization objectives and seriously harm our ability to successfully implement our business strategy. Furthermore, replacing executive officers and key employees may be difficult and may take an extended period of time because of the limited number of individuals in our industry with the breadth of skills and experience required to successfully develop, gain regulatory approval of and commercialize our product candidates. Competition to hire from this limited pool is intense, and we may be unable to hire, train, retain or motivate these key personnel on acceptable terms given the competition among numerous pharmaceutical and biotechnology companies for similar personnel. We also experience competition for the hiring of scientific and clinical personnel from universities and research institutions. In addition, we rely on consultants and advisors, including scientific and clinical advisors, to assist us in formulating our research and development and commercialization strategy. Our consultants and advisors may have commitments under consulting or advisory contracts with other entities that may limit their availability to us. If we are unable to continue to attract and retain high quality personnel, our ability to pursue our growth strategy will be limited.

We expect to expand our development and regulatory capabilities and potentially implement sales, marketing and distribution capabilities, and as a result, we may encounter difficulties in managing our growth, which could disrupt our operations.

As of December 15, 2015, we had 21 employees. As our development progresses, we expect to experience significant growth in the number of our employees and the scope of our operations, particularly in the areas of research, drug development, regulatory affairs and, if any of our product candidates receives marketing approval, sales, marketing and distribution. To manage our anticipated future growth, we must continue to implement and improve our managerial, operational and financial systems, expand our facilities and continue to recruit and train additional qualified personnel. Due to our limited financial resources and the limited experience of our management team in managing a company with such anticipated growth, we may not be able to effectively manage the expansion of our operations or recruit and train additional qualified personnel. The expansion of our operations may lead to significant costs and may divert our management and business development resources. Any inability to manage growth could delay the execution of our business plans or disrupt our operations.

Risks Related to Our Intellectual Property

If we are unable to obtain and maintain patent protection for our technology and product candidates, or if our licensors are unable to obtain and maintain patent protection for the technology or product candidates that we license from them, or if the scope of the patent protection obtained is not sufficiently broad, our competitors could develop and commercialize technology and drugs similar or identical to ours, and our ability to successfully commercialize our technology and product candidates may be impaired.

Our success depends in large part on our and our licensors' ability to obtain and maintain patent protection in the United States and other countries with respect to our product candidates. We and our licensors seek to protect our proprietary position by filing patent applications in the United States and abroad related to our technology and product candidates.

The patent prosecution process is expensive and time-consuming, and we may not be able to file and prosecute all necessary or desirable patent applications at a reasonable cost or in a timely manner. It is also possible that we will fail to identify patentable aspects of our research and development output before it is too late to obtain patent protection. We may not have the right to control the preparation, filing and prosecution of patent applications, or to maintain the rights to patents licensed to third parties. For example, we do not control the prosecution of the patent applications licensed to us under the Emory/GT License described below. Therefore, these patents and applications may not be prosecuted and enforced in a manner consistent with the best interests of our business. If such licensors fail to maintain such patents, or lose rights to those patents, the rights we have licensed may be reduced or eliminated.

The patent position of biotechnology and pharmaceutical companies generally is highly uncertain, involves complex legal and factual questions and has in recent years been the subject of much litigation. In addition, the laws of foreign countries may not protect our rights to the same extent as the laws of the United States or visa-versa. For example, European patent law restricts the patentability of methods of treatment of the human body more than United States law does. Publications of discoveries in the scientific literature often lag behind the actual discoveries, and patent applications in the United States and other jurisdictions are typically not published until 18 months after filing, or in some cases not at all. Therefore, we cannot know with certainty whether we were the first to make the inventions claimed in our owned or licensed patents or pending patent applications, or that we were the first to file for patent protection of such inventions. As a result, the issuance, scope, validity, enforceability and commercial value of our patent rights are highly uncertain. Our pending and future patent applications may not result in patents being issued that protect our technology or product candidates, in whole or in part, or which effectively prevent others from commercializing competitive technologies and drugs. Changes in either the patent laws or interpretation of the patent laws in the United States and other countries may diminish the value of our patents or narrow the scope of our patent protection.

Recent patent reform legislation could increase the uncertainties and costs surrounding the prosecution of our patent applications and the enforcement or defense of our issued patents. On September 16, 2011, the Leahy-Smith America Invents Act, or the Leahy-Smith Act, was signed into law. The Leahy-Smith Act includes a number of significant changes to United States patent law. These include provisions that affect the way patent applications are prosecuted, redefine prior art and may also affect patent litigation. The United States Patent and Trademark Office recently developed new regulations and procedures to govern administration of the Leahy-Smith Act, and many of the substantive changes to patent law associated with the Leahy-Smith Act, and in particular, the first to file provisions, only became effective on March 16,

2013. Accordingly, it is not clear what, if any, impact the Leahy-Smith Act will have on the operation of our business. However, the Leahy-Smith Act and its implementation could increase the uncertainties and costs surrounding the prosecution of our patent applications and the enforcement or defense of our issued patents, all of which could significantly harm our business and financial condition. In addition, patent reform legislation may pass in the future that could lead to additional uncertainties and increased costs surrounding the prosecution, enforcement and defense of our owned and licensed patents and patent applications.

Moreover, we may be subject to a third-party preissuance submission of prior art to the U.S. Patent and Trademark Office, or become involved in opposition, derivation, reexamination, *inter partes* review, post-grant review or interference proceedings challenging our patent rights or the patent rights of others. An adverse determination in any such submission, proceeding or litigation could reduce the scope of, or invalidate, our patent rights, allow third parties to commercialize our technology or drugs and compete directly with us, without payment to us, or result in our inability to manufacture or commercialize drugs without infringing third-party patent rights. In addition, if the breadth or strength of protection provided by our patents and patent applications is threatened, it could dissuade companies from collaborating with us to license, develop or commercialize current or future product candidates.

Even if our owned and licensed patent applications issue as patents, they may not issue in a form that will provide us with any meaningful protection, and may not be of sufficient scope or strength to provide us with any commercial advantage. Our competitors may be able to design around our owned or licensed patents by developing similar or alternative technologies or drugs without infringing on our intellectual property rights.

In addition, the issuance of a patent is not conclusive as to its inventorship, scope, validity or enforceability, and our owned and licensed patents may be challenged in the courts or patent offices in the United States and abroad. Such challenges may result in loss of exclusivity or freedom to operate or in patent claims being narrowed, invalidated or held unenforceable, in whole or in part, which could limit our ability to stop others from using or commercializing similar or identical technology and drugs, or limit the duration of the patent protection of our technology and drugs. Given the amount of time required for the development, testing and regulatory review of new product candidates, patents protecting such candidates might expire before or shortly after such candidates are commercialized. As a result, our owned and licensed patent portfolio may not provide us with sufficient rights to exclude others from commercializing drugs similar or identical to ours, and our business will suffer.

We may become involved in lawsuits to protect or enforce our patents or other intellectual property, which could be expensive, time consuming and unsuccessful.

Competitors may infringe our issued patents or other intellectual property. To counter infringement or unauthorized use, we may be required to file infringement claims, which can be expensive and time consuming. Any claims we assert against perceived infringers could provoke these parties to assert counterclaims against us alleging that we infringe their patents. In addition, in a patent infringement proceeding, a court may decide that a patent of ours is invalid or unenforceable, in whole or in part, construe the patent’s claims narrowly or refuse to stop the other party from using the technology at issue on the grounds that our patents do not cover the technology. An adverse result in any litigation proceeding could put one or more of our patents at risk of being invalidated or interpreted narrowly, which would undermine our competitive position.

Third parties may initiate legal proceedings alleging that we are infringing their intellectual property rights, the outcome of which would be uncertain and could significantly harm business.

Our commercial success depends upon our ability, and the ability of any collaborators, to develop, manufacture, market and sell our product candidates and use our proprietary technologies without infringing the proprietary rights of third parties. There is considerable intellectual property litigation in the biotechnology and pharmaceutical industries. In particular, we are focused on developing product candidates based on widely used therapeutic agents, many of which are protected by proprietary rights of third parties, and we are developing proprietary formulations of these therapeutic agents specifically for SCS injection using our proprietary SCS Microinjector. For example, in our CLS-1002 program for wet AMD, we plan to develop a propriety formulation of axitinib to be administered by SCS injection, which we believe could be more effective than current treatments for wet AMD. We plan to file an IND with the FDA for CLS-1002 delivered using SCS injection for this indication in the second half of 2016. Axitinib is currently marketed by Pfizer and was approved for the treatment of advanced renal cell carcinoma. Pfizer has Orange Book-listed as well as unlisted patents for axitinib that expire in 2020, without extension. Pfizer has also applied for Patent Term Extension under 35 U.S.C. § 156 that could extend the term of one listed patent to 2025 for the approved indication. Although we seek to develop our proprietary drug formulations that don't infringe the intellectual property rights of others, we may become party to, or threatened with, future adversarial proceedings or litigation regarding intellectual property rights with respect to our drugs or other aspects of our technology, including interference or derivation proceedings before the U.S. Patent and Trademark Office. Third parties may assert infringement claims against us based on existing patents or patents that may be granted in the future.

If we are found to infringe a third party's intellectual property rights, we could be required to obtain a license from such third party to continue developing and marketing our technology and drugs. However, we may not be able to obtain any required license on commercially reasonable terms or at all. Even if we were able to obtain a license, it could be non-exclusive, thereby giving our competitors access to the same technologies licensed to us. We could be forced, including by court order, to cease commercializing the infringing technology or product. In addition, we could be found liable for monetary damages, including treble damages and attorneys' fees if we are found to have willfully infringed a patent. A finding of infringement could prevent us from commercializing our product candidates or force us to cease some of our business operations.

Competing products may also be sold in other countries in which our patent coverage might not exist or be as strong. If we lose a foreign patent lawsuit alleging our infringement of a competitor's patent, we could be prevented from marketing our products in one or more foreign countries. As a result, our ability to grow our business and compete in the market may be harmed.

Intellectual property litigation could cause us to spend substantial resources and distract our personnel from their normal responsibilities.

Even if resolved in our favor, litigation or other legal proceedings relating to intellectual property claims may cause us to incur significant expenses, and could distract our technical and management personnel from their normal responsibilities. In addition, there could be public announcements of the results of hearings, motions or other interim proceedings or developments. If securities analysts or investors perceive these results to be negative, it could hurt the price of our common stock. Such litigation or proceedings could substantially increase our operating losses and reduce the resources available for development activities or any future sales, marketing or distribution activities. We may not have sufficient financial or other resources to conduct such litigation or proceedings adequately. Some of our competitors

may be able to sustain the costs of such litigation or proceedings more effectively than we can because of their greater financial resources. Uncertainties resulting from the initiation and continuation of patent litigation or other proceedings could compromise our ability to compete in the marketplace.

If we fail to comply with our obligations under our existing intellectual property licenses with third parties, we could lose license rights that are important to our business.

We are a party to a license agreement with Emory University and Georgia Tech Research Corporation, or the Emory/GT License, and may enter into additional license agreements in the future. Our existing license agreement imposes, and we expect that future license agreements would impose, various diligence, milestone payment, royalty, insurance and other obligations on us. For example, under the Emory/GT License, we are required to use commercially reasonable efforts to develop and commercialize licensed products under the agreement and to satisfy other specified obligations, including the payment of license fees and minimum royalty payments. If we fail to comply with our obligations under our license agreements, our licensors may have the right to terminate these license agreements, in which event we might not be able to market any product that is covered by these agreements, or to convert the license to a non-exclusive license, which could impair the value of the product candidate being developed under the license agreement. Termination of these license agreements or reduction or elimination of our licensed rights may result in our having to negotiate new or reinstated licenses with less favorable terms. If our licensors under the Emory/GT License were to terminate their license agreement with us for any reason, we would lose access to critical technology related to our SCS Microinjector.

We may need to license additional intellectual property from third parties, and such licenses may not be available or may not be available on commercially reasonable terms.

A third party may hold intellectual property rights, including patent rights, that are important or necessary to the development of our product candidates. It may be necessary for us to use the patented or proprietary technology of third parties to commercialize our product candidates, in which case we would be required to obtain a license from these third parties. Such a license may not be available on commercially reasonable terms, or at all, and we could be forced to accept unfavorable contractual terms. If we are unable to obtain such licenses on commercially reasonable terms, our business could be harmed.

We may be subject to claims by third parties asserting that we or our employees have misappropriated their intellectual property, or claiming ownership of what we regard as our own intellectual property.

Many of our employees were previously employed at universities or other biotechnology or pharmaceutical companies. Although we try to ensure that our employees do not use the proprietary information or know-how of others in their work for us, we may be subject to claims that these employees or we have inadvertently or otherwise used or disclosed intellectual property, including trade secrets or other proprietary information, of any such employee's former employer. We may also in the future be subject to claims that we have caused an employee to breach the terms of his or her non-competition or non-solicitation agreement. Litigation may be necessary to defend against these potential claims.

In addition, while it is our policy to require our employees and contractors who may be involved in the development of intellectual property to execute agreements assigning such intellectual property to us, we may be unsuccessful in executing such an agreement with each party who in fact develops intellectual property that we regard as our own. Our and their assignment agreements may not be self-executing or may be breached, and we may be forced to bring claims against third parties, or defend claims they may bring against us, to determine the ownership of what we regard as our intellectual property.

If we fail in prosecuting or defending any such claims, in addition to paying monetary damages, we may lose valuable intellectual property rights or personnel. A court could prohibit us from using technologies or features that are essential to our products, if such technologies or features are found to incorporate or be derived from the trade secrets or other proprietary information of the former employers. Even if we are successful in prosecuting or defending against such claims, litigation could result in substantial costs and could be a distraction to management. In addition, any litigation or threat thereof may adversely affect our ability to hire employees or contract with independent service providers. Moreover, a loss of key personnel or their work product could hamper or prevent our ability to commercialize our products.

Any trademarks we may obtain may be infringed or successfully challenged, resulting in harm to our business.

We expect to rely on trademarks as one means to distinguish any of our product candidates that are approved for marketing from the products of our competitors. We have not yet selected trademarks for our product candidates and have not yet begun the process of applying to register trademarks for our product candidates. Once we select trademarks and apply to register them, our trademark applications may not be approved. Third parties may oppose our trademark applications, or otherwise challenge our use of the trademarks. In the event that our trademarks are successfully challenged, we could be forced to rebrand our products, which could result in loss of brand recognition and could require us to devote resources to advertising and marketing new brands. Our competitors may infringe our trademarks and we may not have adequate resources to enforce our trademarks.

If we are unable to protect the confidentiality of our trade secrets, our business and competitive position would be harmed.

In addition to seeking patent and trademark protection for our product candidates, we also rely on trade secrets, including unpatented know-how, technology and other proprietary information, to maintain our competitive position. We seek to protect our trade secrets, in part, by entering into non-disclosure and confidentiality agreements with parties who have access to them, such as our employees, corporate collaborators, outside scientific collaborators, contract manufacturers, consultants, advisors and other third parties. We also enter into confidentiality and invention or patent assignment agreements with our employees and consultants. Despite these efforts, any of these parties may breach the agreements and disclose our proprietary information, including our trade secrets. Monitoring unauthorized uses and disclosures of our intellectual property is difficult, and we do not know whether the steps we have taken to protect our intellectual property will be effective. In addition, we may not be able to obtain adequate remedies for any such breaches. Enforcing a claim that a party illegally disclosed or misappropriated a trade secret is difficult, expensive and time-consuming, and the outcome is unpredictable. In addition, some courts inside and outside the United States are less willing or unwilling to protect trade secrets.

Moreover, our competitors may independently develop knowledge, methods and know-how equivalent to our trade secrets. Competitors could purchase our products and replicate some or all of the competitive advantages we derive from our development efforts for technologies on which we do not have patent protection. If any of our trade secrets were to be lawfully obtained or independently developed by a competitor, we would have no right to prevent them, or those to whom they communicate it, from using that technology or information to compete with us. If any of our trade secrets were to be disclosed to or independently developed by a competitor, our competitive position would be harmed.

Risks Related to Regulatory Approval of Our Product Candidates and Other Legal Compliance Matters

If we are not able to obtain, or if there are delays in obtaining, required regulatory approvals, we will not be able to commercialize our product candidates, and our ability to generate revenue will be materially impaired.

Our product candidates and the activities associated with their development and commercialization, including their design, research, testing, manufacture, safety, efficacy, quality control, recordkeeping, labeling, packaging, storage, approval, advertising, promotion, sale, distribution, import, export, and reporting of safety and other post-market information, are subject to comprehensive regulation by the FDA and other regulatory agencies in the United States and by the European Medicines Agency, or EMA, and similar regulatory authorities outside the United States. Failure to obtain marketing approval for a product candidate will prevent us from commercializing the product candidate. We have not received approval to market any of our product candidates from regulatory authorities in any jurisdiction. We have only limited experience in filing and supporting the applications necessary to gain marketing approvals and expect to rely on third-party CROs to assist us in this process. Securing marketing approval requires the submission of extensive preclinical and clinical data and supporting information to regulatory authorities for each therapeutic indication to establish the product candidate's safety and efficacy. Securing marketing approval also requires the submission of information about the product manufacturing process to, and inspection of manufacturing facilities by, the regulatory authorities. Our product candidates may not be effective, may be only moderately effective or may prove to have undesirable or unintended side effects, toxicities or other characteristics that may preclude our obtaining marketing approval or prevent or limit commercial use. If any of our product candidates receives marketing approval, the accompanying label may limit its approved use, which could limit sales of the product.

The process of obtaining marketing approvals, both in the United States and abroad, is expensive and may take many years, if approval is obtained at all, and can vary substantially based upon a variety of factors, including the type, complexity and novelty of the product candidates involved. Changes in marketing approval policies during the development period, changes in or the enactment of additional statutes or regulations, or changes in regulatory review for each submitted product application, may cause delays in the approval or rejection of an application. Regulatory authorities have substantial discretion in the approval process and may refuse to accept any application or may decide that our data is insufficient for approval and require additional preclinical, clinical or other studies. In addition, varying interpretations of the data obtained from preclinical and clinical testing could delay, limit or prevent marketing approval of a product candidate. Any marketing approval we ultimately obtain may be limited or subject to restrictions or post-approval commitments that render the approved product not commercially viable.

If we experience delays in obtaining approval or if we fail to obtain approval of our product candidates, the commercial prospects for our product candidates may be harmed and our ability to generate revenues will be materially impaired.

If the FDA does not conclude that our product candidates satisfy the requirements for the Section 505(b)(2) regulatory approval pathway, or if the requirements under Section 505(b)(2) are not as we expect, the approval pathway for our product candidates will likely take significantly longer, cost significantly more and entail significantly greater complications and risks than anticipated, and in either case may not be successful.

We intend to seek FDA approval through the Section 505(b)(2) regulatory pathway for our product candidates, such as CLS-1001. Our product candidates, including our proprietary drug formulations

packaged together with our SCS Microinjector, are drug/device combination products that will be regulated under the drug provisions of the FDCA, enabling us to submit NDAs for approval of our product candidates. The Drug Price Competition and Patent Term Restoration Act of 1984, also known as the Hatch-Waxman Amendments, added Section 505(b)(2) to the FDCA. Section 505(b)(2) permits the filing of an NDA where at least some of the information required for approval comes from studies not conducted by or for the applicant and for which the applicant has not obtained a right of reference.

If the FDA does not allow us to pursue the Section 505(b)(2) regulatory pathway as anticipated, we may need to conduct additional clinical trials, provide additional data and information and meet additional standards for regulatory approval. If this were to occur, the time and financial resources required to obtain FDA approval for our product candidates, and complications and risks associated with our product candidates, would likely substantially increase. We may need to obtain additional funding, which could result in significant dilution to the ownership interests of our then existing stockholders to the extent we issue equity securities or convertible debt. We cannot assure you that we would be able to obtain such additional financing on terms acceptable to us, if at all. Moreover, inability to pursue the Section 505(b)(2) regulatory pathway could result in competitive products reaching the market before our product candidates, which could impact our competitive position and prospects. Even if we are allowed to pursue the Section 505(b)(2) regulatory pathway, we cannot assure you that our product candidates will receive the requisite approvals for commercialization.

In addition, notwithstanding the approval of a number of products by the FDA under Section 505(b)(2) over the last few years, some pharmaceutical companies and others have objected to the FDA's interpretation of Section 505(b)(2). If the FDA's interpretation of Section 505(b)(2) is successfully challenged, the FDA may be required to change its Section 505(b)(2) policies and practices, which could delay or even prevent the FDA from approving any NDA that we submit under Section 505(b)(2).

Additional time may be required to obtain regulatory approval for our product candidates because they are combination products.

Our product candidates are drug/device combination products that require coordination within the FDA and similar foreign regulatory agencies for review of their device and drug components. Although the FDA and similar foreign regulatory agencies have systems in place for the review and approval of combination products such as ours, we may experience delays in the development and commercialization of our product candidates due to regulatory timing constraints and uncertainties in the product development and approval process.

Failure to obtain marketing approval in international jurisdictions would prevent our product candidates from being marketed abroad.

In order to market and sell our products in the European Union and any other jurisdictions, we must obtain separate marketing approvals and comply with numerous and varying regulatory requirements. The approval procedure varies among countries and can involve additional testing. The time required to obtain approval may differ substantially from that required to obtain FDA approval. The regulatory approval process outside the United States generally includes all of the risks associated with obtaining FDA approval. In addition, in many countries outside the United States, it is required that the product be approved for reimbursement before the product can be approved for sale in that country. We may not obtain approvals from regulatory authorities outside the United States on a timely basis, if at all. Approval by the FDA does not ensure approval by regulatory authorities in other countries or jurisdictions, and approval by one

regulatory authority outside the United States does not ensure approval by regulatory authorities in other countries or jurisdictions or by the FDA. However, failure to obtain approval in one jurisdiction may impact our ability to obtain approval elsewhere. We may not be able to file for marketing approvals and may not receive necessary approvals to commercialize our products in any market.

A variety of risks associated with marketing our product candidates internationally could affect our business.

We may seek regulatory approval for our product candidates outside of the United States and, accordingly, we expect that we will be subject to additional risks related to operating in foreign countries if we obtain the necessary approvals, including:

- differing regulatory requirements in foreign countries;
- the potential for so-called parallel importing, which is what happens when a local seller, faced with high or higher local prices, opts to import goods from a foreign market with low or lower prices rather than buying them locally;
- unexpected changes in tariffs, trade barriers, price and exchange controls and other regulatory requirements;
- economic weakness, including inflation, or political instability in particular foreign economies and markets;
- compliance with tax, employment, immigration and labor laws for employees living or traveling abroad;
- foreign taxes, including withholding of payroll taxes;
- foreign currency fluctuations, which could result in increased operating expenses and reduced revenues, and other obligations incident to doing business in another country;
- difficulties staffing and managing foreign operations;
- workforce uncertainty in countries where labor unrest is more common than in the United States;
- potential liability under the Foreign Corrupt Practices Act of 1977 or comparable foreign regulations;
- challenges enforcing our contractual and intellectual property rights, especially in those foreign countries that do not respect and protect intellectual property rights to the same extent as the United States;
- production shortages resulting from any events affecting raw material supply or manufacturing capabilities abroad; and
- business interruptions resulting from geo-political actions, including war and terrorism.

These and other risks associated with our international operations may compromise our ability to achieve or maintain profitability.

Any product candidate for which we obtain marketing approval could be subject to post-marketing restrictions or recall or withdrawal from the market, and we may be subject to penalties if we fail to comply with regulatory requirements or if we experience unanticipated problems with our product candidates, when and if any of them are approved.

Any product candidate for which we obtain marketing approval, along with the manufacturing processes, post-approval clinical data, labeling, advertising and promotional activities for such product, will be subject to continual requirements of and review by the FDA and other regulatory authorities. These requirements include submissions of safety and other post-marketing information and reports, registration and listing requirements, cGMP requirements relating to manufacturing, quality control, quality assurance and corresponding maintenance of records and documents, requirements regarding the distribution of samples to physicians and recordkeeping. Even if marketing approval of a product candidate is granted, the approval may be subject to limitations on the indicated uses for which the product may be marketed or to the conditions of approval, including the requirement to implement a risk evaluation and mitigation strategy, which could involve requirements for, among other things, a medication guide, special training for prescribers and dispensers, and patient registries. If any of our product candidates receives marketing approval, the accompanying label may limit its approved uses, which could limit sales of the product.

The FDA may also impose requirements for costly post-marketing studies or clinical trials and surveillance to monitor the safety or efficacy of the product. The FDA closely regulates the post-approval marketing and promotion of products to ensure products are marketed only for the approved indications and in accordance with the provisions of the approved labeling. The FDA imposes stringent restrictions on manufacturers' communications regarding off-label use and if we do not market our drugs for their approved indications, we may be subject to enforcement action for off-label marketing. Violations of the FDCA relating to the promotion of prescription drugs may lead to investigations alleging violations of federal and state healthcare fraud and abuse laws, as well as state consumer protection laws.

In addition, later discovery of previously unknown adverse events or other problems with our drugs, including device malfunctions, manufacturers or manufacturing processes, or failure to comply with regulatory requirements, may have negative consequences, including:

- restrictions on such drugs, manufacturers or manufacturing processes;
- restrictions on the labeling or marketing of a drug;
- restrictions on drug distribution or use;
- requirements to conduct post-marketing studies or clinical trials;
- warning letters;
- recall or withdrawal of the drugs from the market;
- refusal to approve pending applications or supplements to approved applications that we submit;
- clinical holds;
- fines, restitution or disgorgement of profits or revenues;
- suspension or withdrawal of marketing approvals;
- refusal to permit the import or export of our drugs;
- product seizure; or
- injunctions or the imposition of civil or criminal penalties.

Non-compliance with European Union requirements regarding safety monitoring, or pharmacovigilance, and with requirements related to the development of drugs for the pediatric population, can also result in significant financial penalties. Similarly, failure to comply with the European Union's requirements regarding the protection of personal information can also lead to significant penalties and sanctions.

Even though we have received orphan drug designation in the European Union for our most advanced product candidate, CLS-1001, we may not be able to obtain orphan drug marketing exclusivity for this product candidate or any of our future product candidates.

Regulatory authorities in some jurisdictions, including the United States and the European Union, may designate drugs for relatively small patient populations as orphan drugs. We have received orphan drug designation from the EMA for CLS-1001 for the treatment of non-infectious uveitis, and we may seek orphan drug designation from the FDA or EMA for our future drug candidates. However, we do not plan to pursue orphan drug designation and exclusivity from the FDA for CLS-1001.

Regulation (EC) No 141/2000 and Regulation (EC) No 847/2000 provide that a product can be designated as an orphan medicinal product by the European Commission if its sponsor can establish: that the product is intended for the diagnosis, prevention or treatment of (1) a life-threatening or chronically debilitating condition affecting not more than five in ten thousand persons in the European Union when the application is made, or (2) a life-threatening, seriously debilitating or serious and chronic condition in the European Union and that without incentives the medicinal product is unlikely to be developed. For either of these conditions, the applicant must demonstrate that there exists no satisfactory method of diagnosis, prevention or treatment of the condition in question that has been authorized in the European Union or, if such method exists, the medicinal product will be of significant benefit to those affected by that condition. Once authorized, orphan medicinal products are entitled to ten years of market exclusivity in all EU Member States and in addition a range of other benefits during the development and regulatory review process including scientific assistance for study protocols, authorization through the centralized marketing authorization procedure covering all member countries and a reduction or elimination of registration and marketing authorization fees. However, marketing authorization may be granted to a similar medicinal product with the same orphan indication during the ten-year period with the consent of the marketing authorization holder for the original orphan medicinal product or if the manufacturer of the original orphan medicinal product is unable to supply sufficient quantities. Marketing authorization may also be granted to a similar medicinal product with the same orphan indication if this product is safer, more effective or otherwise clinically superior to the original orphan medicinal product. In addition, the period of market exclusivity may be reduced to six years if it can be demonstrated based on available evidence that the original orphan medicinal product is sufficiently profitable not to justify maintenance of market exclusivity. There is no guarantee that we will be able to obtain or maintain orphan exclusivity for CLS-1001 even if we receive marketing authorization for CLS-1001 in Europe.

Our employees, independent contractors, principal investigators, CROs, consultants, commercial partners and vendors may engage in misconduct or other improper activities, including non-compliance with regulatory standards and requirements.

We are exposed to the risk of employee fraud or other misconduct. Misconduct by employees and independent contractors, such as principal investigators, CROs, consultants, commercial partners and vendors, could include failures to comply with FDA regulations, to provide accurate information to the FDA, to comply with manufacturing standards we have established, to comply with federal and state healthcare fraud and abuse laws, to report financial information or data accurately or to disclose unauthorized activities to us. In particular, sales, marketing and other business arrangements in the healthcare industry are subject to extensive

laws intended to prevent fraud, kickbacks, self-dealing and other abusive practices. These laws may restrict or prohibit a wide range of business activities, including, but not limited to, research, manufacturing, distribution, pricing, discounting, marketing and promotion, sales commission, customer incentive programs and other business arrangements. Employee and independent contractor misconduct could also involve the improper use of individually identifiable information, including, without limitation, information obtained in the course of clinical trials, which could result in regulatory sanctions and serious harm to our reputation. In addition, federal procurement laws impose substantial penalties for misconduct in connection with government contracts and require certain contractors to maintain a code of business ethics and conduct. It is not always possible to identify and deter employee and independent contractor misconduct, and any precautions we take to detect and prevent improper activities may not be effective in controlling unknown or unmanaged risks or losses or in protecting us from governmental investigations or other actions or lawsuits stemming from a failure to be in compliance with such laws. If any such actions are instituted against us, those actions could have a significant impact on our business, including the imposition of civil, criminal and administrative penalties, damages, monetary fines, disgorgement, possible exclusion from participation in Medicare, Medicaid and other federal healthcare programs, contractual damages, reputational harm, diminished profits and future earnings and curtailment or restructuring of our operations, any of which could adversely affect our ability to operate.

Our current and future relationships with healthcare professionals, principal investigators, consultants, customers and third-party payors in the United States and elsewhere may be subject, directly or indirectly, to applicable anti-kickback, fraud and abuse, false claims, physician payment transparency, health information privacy and security and other healthcare laws and regulations, which could expose us to penalties.

Healthcare providers, physicians and third-party payors in the United States and elsewhere will play a primary role in the recommendation and prescription of any product candidates for which we obtain marketing approval. Our current and future arrangements with healthcare professionals, principal investigators, consultants, customers and third-party payors may expose us to broadly applicable fraud and abuse and other healthcare laws, including, without limitation, the federal Anti-Kickback Statute and the federal False Claims Act, that may constrain the business or financial arrangements and relationships through which we sell, market and distribute any product candidates for which we obtain marketing approval. In addition, we may be subject to physician payment transparency laws and patient privacy and security regulation by the federal government and by the states and foreign jurisdictions in which we conduct our business. The applicable federal, state and foreign healthcare laws that may affect our ability to operate include the following:

- the federal Anti-Kickback Statute, which prohibits, among other things, persons from knowingly and willfully soliciting, offering, receiving or providing remuneration, directly or indirectly, in cash or in kind, to induce or reward, or in return for, either the referral of an individual for, or the purchase, lease, order or recommendation of, any good, facility, item or service, for which payment may be made, in whole or in part, under federal and state healthcare programs such as Medicare and Medicaid;
- federal civil and criminal false claims laws and civil monetary penalty laws, including the federal False Claims Act, which impose criminal and civil penalties, including through civil whistleblower or *qui tam* actions, against individuals or entities for, among other things, knowingly presenting, or causing to be presented, to the federal government, including the Medicare and Medicaid programs, claims for payment that are false or fraudulent or making a false statement to avoid, decrease or conceal an obligation to pay money to the federal government;

- the civil monetary penalties statute, which imposes penalties against any person or entity who, among other things, is determined to have presented or caused to be presented a claim to a federal health program that the person knows or should know is for an item or service that was not provided as claimed or is false or fraudulent;
- the federal Health Insurance Portability and Accountability Act of 1996, or HIPAA, which created new federal criminal statutes that prohibit knowingly and willfully executing, or attempting to execute, a scheme to defraud any healthcare benefit program or obtain, by means of false or fraudulent pretenses, representations or promises, any of the money or property owned by, or under the custody or control of, any healthcare benefit program, regardless of whether the payor is public or private, knowingly and willfully embezzling or stealing from a health care benefit program, willfully obstructing a criminal investigation of a health care offense and knowingly and willfully falsifying, concealing or covering up by any trick or device a material fact or making any materially false statements in connection with the delivery of, or payment for, healthcare benefits, items or services relating to healthcare matters;
- HIPAA, as amended by the Health Information Technology for Economic and Clinical Health Act of 2009, or HITECH, and their respective implementing regulations, which impose obligations on "covered entities," including healthcare providers, health plans, and healthcare clearinghouses, as well as their respective "business associates" that create, receive, maintain or transmit individually identifiable health information for or on behalf of a covered entity, with respect to safeguarding the privacy, security and transmission of individually identifiable health information;
- the federal Open Payments program, created under Section 6002 of Patient Protection and Affordable Care Act, as amended by the Health Care and Education Reconciliation Act, or collectively, the ACA, and its implementing regulations, imposed new annual reporting requirements for manufacturers of drugs, devices, biologicals and medical supplies for certain payments and "transfers of value" provided to physicians and teaching hospitals, as well as ownership and investment interests held by physicians and their immediate family members. Failure to submit timely, accurately and completely the required information for all payments, transfers of value and ownership or investment interests may result in civil monetary penalties of up to an aggregate of $150,000 per year and up to an aggregate of $1.0 million per year for "knowing failures," for an aggregate potential annual liability of $1,150,000; and
- analogous state and foreign laws, such as state anti-kickback and false claims laws, which may apply to sales or marketing arrangements and claims involving healthcare items or services reimbursed by non-governmental third-party payors, including private insurers; state and foreign laws that require pharmaceutical companies to comply with the pharmaceutical industry's voluntary compliance guidelines and the relevant compliance guidance promulgated by the federal government or to adopt compliance programs as prescribed by state laws and regulations, or that otherwise restrict payments that may be made to healthcare providers; state and foreign laws that require drug manufacturers to report information related to payments and other transfers of value to physicians and other healthcare providers or marketing expenditures; and state and foreign laws governing the privacy and security of health information in certain circumstances, many of which differ from each other in significant ways and often are not preempted by HIPAA, thus complicating compliance efforts.

Further, the ACA, among other things, amended the intent requirement of the federal Anti-Kickback Statute and certain criminal statutes governing healthcare fraud. A person or entity no longer needs to have

actual knowledge of the statute or specific intent to violate it. In addition, the ACA provided that the government may assert that a claim including items or services resulting from a violation of the federal Anti-Kickback Statute constitutes a false or fraudulent claim for purposes of the False Claims Act.

Efforts to ensure that our future business arrangements with third parties will comply with applicable healthcare laws and regulations may involve substantial costs. It is possible that governmental authorities will conclude that our business practices may not comply with current or future statutes, regulations or case law involving applicable fraud and abuse or other healthcare laws. If our operations are found to be in violation of any of these laws or any other governmental regulations that may apply to us, we may be subject to significant civil, criminal and administrative penalties, including, without limitation, damages, fines, imprisonment, exclusion from participation in government healthcare programs, such as Medicare and Medicaid, and the curtailment or restructuring of our operations, which could significantly harm our business. If any of the physicians or other healthcare providers or entities with whom we expect to do business, including future collaborators, are found not to be in compliance with applicable laws, they may be subject to criminal, civil or administrative sanctions, including exclusions from participation in government healthcare programs, which could also affect our business.

Recently enacted and future legislation may increase the difficulty and cost for us to obtain marketing approval of and commercialize our product candidates and affect the prices we may obtain.

In the United States and some foreign jurisdictions, there have been a number of legislative and regulatory changes and proposed changes regarding the healthcare system that could prevent or delay marketing approval of our product candidates, restrict or regulate post-approval activities and affect our ability to profitably sell any product candidates for which we obtain marketing approval.

Among policy makers and payors in the United States and elsewhere, there is significant interest in promoting changes in healthcare systems with the stated goals of containing healthcare costs, improving quality and/or expanding access. In the United States, the pharmaceutical industry has been a particular focus of these efforts and has been significantly affected by major legislative initiatives. In March 2010, President Obama signed into law the ACA, a sweeping law intended to broaden access to health insurance, reduce or constrain the growth of healthcare spending, enhance remedies against fraud and abuse, add new transparency requirements for the healthcare and health insurance industries, impose new taxes and fees on the health industry and impose additional health policy reforms.

Among the provisions of the ACA of importance to our potential product candidates are the following:

- an annual, nondeductible fee on any entity that manufactures or imports certain branded prescription drugs and biologic agents, apportioned among these entities according to their market share in certain government healthcare programs;
- a 2.3% medical device excise tax on certain transactions, including many U.S. sales of medical devices and drug and device combination products, which, under the Consolidated Appropriations Act, 2016, is suspended from January 1, 2016 to December 31, 2017, and, absent further legislative action, will be reinstated starting January 1, 2018;
- an increase in the statutory minimum rebates a manufacturer must pay under the Medicaid Drug Rebate Program to 23.1% and 13.0% of the average manufacturer price for branded and generic drugs, respectively;
- expansion of healthcare fraud and abuse laws, including the False Claims Act and the Anti-Kickback Statute, new government investigative powers and enhanced penalties for non-compliance;

- addressed a new methodology by which rebates owed by manufacturers under the Medicaid Drug Rebate Program are calculated for drugs that are inhaled, infused, instilled, implanted or injected;
- a new Medicare Part D coverage gap discount program, in which manufacturers must agree to offer 50% point-of-sale discounts off negotiated prices of applicable brand drugs to eligible beneficiaries during their coverage gap period, as a condition for the manufacturer's outpatient drugs to be covered under Medicare Part D;
- extension of manufacturers' Medicaid rebate liability to covered drugs dispensed to individuals who are enrolled in Medicaid managed care organizations;
- expansion of eligibility criteria for Medicaid programs by, among other things, allowing states to offer Medicaid coverage to additional individuals and by adding new mandatory eligibility categories for certain individuals with income at or below 133% of the Federal Poverty Level beginning in 2014, thereby potentially increasing manufacturers' Medicaid rebate liability;
- expansion of the entities eligible for discounts under the Public Health Service pharmaceutical pricing program;
- the new requirements under the federal Open Payments program and its implementing regulations;
- a new requirement to annually report drug samples that manufacturers and distributors provide to physicians; and
- a new Patient-Centered Outcomes Research Institute to oversee, identify priorities in, and conduct comparative clinical effectiveness research, along with funding for such research.

There have been judicial and congressional challenges to certain aspects of the ACA, and we expect there will be additional challenges and amendments to the ACA in the future.

In addition, other legislative changes have been proposed and adopted since the ACA was enacted. These changes included aggregate reductions to Medicare payments to providers of up to 2% per fiscal year, which went into effect in April 2013 and, due to the Bipartisan Budget Act of 2015, will stay in effect through 2025 unless additional Congressional action is taken. In January 2013, President Obama signed into law the American Taxpayer Relief Act of 2012, which, among other things, further reduced Medicare payments to several providers, and increased the statute of limitations period for the government to recover overpayments to providers from three to five years. These new laws may result in additional reductions in Medicare and other healthcare funding, which could negatively impact customers for our product candidates, if approved, and, accordingly, our financial operations.

We expect that the ACA, as well as other healthcare reform measures that may be adopted in the future, may result in more rigorous coverage criteria and in additional downward pressure on the price that we receive for any approved product. Any reduction in reimbursement from Medicare or other government programs may result in a similar reduction in payments from private payors. The implementation of cost containment measures or other healthcare reforms may prevent us from being able to generate revenue, attain profitability, or commercialize our drugs.

Legislative and regulatory proposals have been made to expand post-approval requirements and restrict sales and promotional activities for drugs. We cannot be sure whether additional legislative changes will be enacted, or whether the FDA regulations, guidance or interpretations will be changed, or what the impact of such changes on the marketing approvals of our product candidates, if any, may be. In addition, increased

scrutiny by the U.S. Congress of the FDA's approval process may significantly delay or prevent marketing approval, as well as subject us to more stringent product labeling and post-marketing testing and other requirements.

Governments outside the United States tend to impose strict price controls, which may affect our revenue, if any.

In some countries, particularly the countries of the European Union, the pricing of prescription pharmaceuticals is subject to governmental control. In these countries, pricing negotiations with governmental authorities can take considerable time after the receipt of marketing approval for a product. To obtain coverage and reimbursement or pricing approval in some countries, we may be required to conduct a clinical trial that compares the cost-effectiveness of our product candidate to other available therapies. If reimbursement of our drugs is unavailable or limited in scope or amount, or if pricing is set at unsatisfactory levels, our business could be harmed, possibly materially.

If we fail to comply with environmental, health and safety laws and regulations, we could become subject to fines or penalties or incur costs that could harm our business.

We are subject to numerous environmental, health and safety laws and regulations, including those governing laboratory procedures and the handling, use, storage, treatment and disposal of hazardous materials and wastes. Our operations involve the use of hazardous materials, including chemicals and biological materials. Our operations also produce hazardous waste products. We generally contract with third parties for the disposal of these materials and wastes. We cannot eliminate the risk of contamination or injury from these materials. In the event of contamination or injury resulting from our use of hazardous materials, we could be held liable for any resulting damages, and any liability could exceed our resources. We also could incur significant costs associated with civil or criminal fines and penalties for failure to comply with such laws and regulations.

Although we maintain workers' compensation insurance to cover us for costs and expenses we may incur due to injuries to our employees resulting from the use of hazardous materials, this insurance may not provide adequate coverage against potential liabilities. We do not maintain insurance for environmental liability or toxic tort claims that may be asserted against us in connection with our storage or disposal of biological or hazardous materials.

In addition, we may incur substantial costs in order to comply with current or future environmental, health and safety laws and regulations. These current or future laws and regulations may impair our research, development or production efforts. Our failure to comply with these laws and regulations also may result in substantial fines, penalties or other sanctions.

Risks Related to this Offering, Ownership of Our Common Stock and Our Status as a Public Company

An active trading market for our common stock may not develop and you may not be able to resell your shares of our common stock at or above the initial offering price, if at all.

Prior to this offering, there has been no public market for our common stock. The initial public offering price for our common stock will be determined through negotiations with the underwriters and may not be indicative of the price at which our common stock will trade upon completion of this offering. Although we have applied to list our common stock on The NASDAQ Global Market, an active trading market for our

shares may never develop or be sustained following this offering. If an active market for our common stock does not develop or is not sustained, it may be difficult for you to sell shares you purchased in this offering at an attractive price or at all.

The trading price of the shares of our common stock may be volatile, and purchasers of our common stock could incur substantial losses.

Our stock price may be volatile. The stock market in general and the market for biopharmaceutical companies in particular have experienced extreme volatility that has often been unrelated to the operating performance of particular companies. As a result of this volatility, investors may not be able to sell their common stock at or above the price paid for the shares. The market price for our common stock may be influenced by many factors, including:

- actual or anticipated variations in our operating results;
- changes in financial estimates by us or by any securities analysts who might cover our stock;
- conditions or trends in our industry;
- stock market price and volume fluctuations of comparable companies and, in particular, those that operate in the biopharmaceutical industry;
- announcements by us or our competitors of significant acquisitions, strategic partnerships or divestitures;
- announcements of investigations or regulatory scrutiny of our operations or lawsuits filed against us;
- capital commitments;
- investors' general perception of us and our business;
- recruitment or departure of key personnel; and
- sales of our common stock, including sales by our directors and officers or specific stockholders.

In addition, in the past, stockholders have initiated class action lawsuits against pharmaceutical and biotechnology companies following periods of volatility in the market prices of these companies' stock. Such litigation, if instituted against us, could cause us to incur substantial costs and divert management's attention and resources from our business.

If equity research analysts do not publish research or reports, or publish unfavorable research or reports, about us, our business or our market, our stock price and trading volume could decline.

The trading market for our common stock will be influenced by the research and reports that equity research analysts publish about us and our business. We do not currently have and may never obtain research coverage by equity research analysts. Equity research analysts may elect not to provide research coverage of our common stock after the completion of this offering, and such lack of research coverage may adversely affect the market price of our common stock. In the event we do have equity research analyst coverage, we will not have any control over the analysts or the content and opinions included in their reports. The price of our stock could decline if one or more equity research analysts downgrade our stock or issue other unfavorable commentary or research. If one or more equity research analysts ceases coverage of us or fails to publish reports on us regularly, demand for our stock could decrease, which in turn could cause our stock price or trading volume to decline.

If you purchase shares of our common stock in this offering, you will suffer immediate dilution of your investment.

We expect the initial public offering price of our common stock to be substantially higher than the net tangible book value per share of our common stock. Therefore, if you purchase shares of our common stock in this offering, you will pay a price per share that substantially exceeds our pro forma as adjusted net tangible book value per share after this offering. Based on an assumed initial public offering price of $ per share, which is the midpoint of the price range set forth on the cover page of this prospectus, you will experience immediate dilution of $ per share, representing the difference between our pro forma as adjusted net tangible book value per share after this offering and the assumed initial public offering price. After this offering, we will also have outstanding options and warrants to purchase common stock with exercise prices lower than the initial public offering price. To the extent these outstanding options and warrants are exercised, there will be further dilution to investors in this offering.

A significant portion of our total outstanding shares are restricted from immediate resale but may be sold into the market in the near future. This could cause the market price of our common stock to drop significantly, even if our business is doing well.

Sales of a substantial number of shares of our common stock in the public market could occur at any time. If our stockholders sell, or the market perceives that our stockholders intend to sell, substantial amounts of our common stock in the public market following this offering, the market price of our common stock could decline significantly.

Upon completion of this offering, we will have outstanding shares of common stock, assuming no exercise of outstanding options or warrants. Of these shares, the shares sold in this offering and additional shares will be freely tradable, additional shares of common stock will be eligible for sale in the public market beginning 90 days after the date of this prospectus under Rule 144 and Rule 701, and additional shares of common stock will be available for sale in the public market beginning 180 days after the date of this prospectus following the expiration of lock-up agreements between some of our stockholders and the underwriters. The representatives of the underwriters may release these stockholders from their lock-up agreements with the underwriters at any time and without notice, which would allow for earlier sales of shares in the public market.

In addition, promptly following the completion of this offering, we intend to file one or more registration statements on Form S-8 registering the issuance of approximately shares of common stock subject to options or other equity awards issued or reserved for future issuance under our equity incentive plans. Shares registered under these registration statements on Form S-8 will be available for sale in the public market subject to vesting arrangements and exercise of options, the lock-up agreements described above and, in the case of our affiliates, the restrictions of Rule 144.

Additionally, after this offering, the holders of an aggregate of approximately shares of our common stock and shares of our common stock issuable upon the exercise of outstanding warrants, or their transferees, will have rights, subject to some conditions, to require us to file one or more registration statements covering their shares or to include their shares in registration statements that we may file for ourselves or other stockholders. If we were to register the resale of these shares, they could be freely sold in the public market. If these additional shares are sold, or if it is perceived that they will be sold, in the public market, the trading price of our common stock could decline.

Provisions in our corporate charter documents and under Delaware law may prevent or frustrate attempts by our stockholders to change our management and hinder efforts to acquire a controlling interest in us, and the market price of our common stock may be lower as a result.

There are provisions in our certificate of incorporation and bylaws as they will be in effect following this offering that may make it difficult for a third party to acquire, or attempt to acquire, control of our company, even if a change in control was considered favorable by you and other stockholders. For example, our board of directors will have the authority to issue up to 5,000,000 shares of preferred stock. The board of directors can fix the price, rights, preferences, privileges, and restrictions of the preferred stock without any further vote or action by our stockholders. The issuance of shares of preferred stock may delay or prevent a change in control transaction. As a result, the market price of our common stock and the voting and other rights of our stockholders may be adversely affected. An issuance of shares of preferred stock may result in the loss of voting control to other stockholders.

Our charter documents will also contain other provisions that could have an anti-takeover effect, including:

- only one of our three classes of directors will be elected each year;
- stockholders will not be entitled to remove directors other than by a 66 2⁄3% vote and only for cause;
- stockholders will not be permitted to take actions by written consent;
- stockholders cannot call a special meeting of stockholders; and
- stockholders must give advance notice to nominate directors or submit proposals for consideration at stockholder meetings.

In addition, we are subject to the anti-takeover provisions of Section 203 of the Delaware General Corporation Law, which regulates corporate acquisitions by prohibiting Delaware corporations from engaging in specified business combinations with particular stockholders of those companies. These provisions could discourage potential acquisition proposals and could delay or prevent a change in control transaction. They could also have the effect of discouraging others from making tender offers for our common stock, including transactions that may be in your best interests. These provisions may also prevent changes in our management or limit the price that investors are willing to pay for our stock.

Concentration of ownership of our common stock among our existing executive officers, directors and principal stockholders may prevent new investors from influencing significant corporate decisions.

Upon completion of this offering, our executive officers, directors and current beneficial owners of 5% or more of our common stock and their respective affiliates will, in the aggregate, beneficially own approximately % of our outstanding common stock. As a result, these persons, acting together, would be able to significantly influence all matters requiring stockholder approval, including the election and removal of directors, any merger, consolidation, sale of all or substantially all of our assets, or other significant corporate transactions.

Some of these persons or entities may have interests different than yours. For example, because many of these stockholders purchased their shares at prices substantially below the price at which shares are being sold in this offering and have held their shares for a longer period, they may be more interested in selling our company to an acquirer than other investors, or they may want us to pursue strategies that deviate from the interests of other stockholders.

We are an "emerging growth company" and as a result of the reduced disclosure and governance requirements applicable to emerging growth companies, our common stock may be less attractive to investors.

We are an "emerging growth company" as defined in the Jumpstart Our Business Startups Act of 2012, or the JOBS Act, and we intend to take advantage of some of the exemptions from reporting requirements that are applicable to other public companies that are not emerging growth companies, including:

- being permitted to provide only two years of audited financial statements, in addition to any required unaudited interim financial statements, with correspondingly reduced "Management's Discussion and Analysis of Financial Condition and Results of Operations" disclosure;
- not being required to comply with the auditor attestation requirements in the assessment of our internal control over financial reporting;
- not being required to comply with any requirement that may be adopted by the Public Company Accounting Oversight Board regarding mandatory audit firm rotation or a supplement to the auditor's report providing additional information about the audit and the financial statements;
- reduced disclosure obligations regarding executive compensation; and
- not being required to hold a nonbinding advisory vote on executive compensation and stockholder approval of any golden parachute payments not previously approved.

We cannot predict if investors will find our common stock less attractive because we will rely on these exemptions. If some investors find our common stock less attractive as a result, there may be a less active trading market for our common stock and our stock price may be more volatile. We may take advantage of these reporting exemptions until we are no longer an emerging growth company. We will remain an emerging growth company until the earlier of (1) the last day of the fiscal year (a) following the fifth anniversary of the completion of this offering, (b) in which we have total annual gross revenue of at least $1.0 billion, or (c) in which we are deemed to be a large accelerated filer, which means the market value of our common stock that is held by non-affiliates exceeds $700 million as of the prior June 30th, and (2) the date on which we have issued more than $1.0 billion in non-convertible debt during the prior three-year period.

Under Section 107(b) of the JOBS Act, emerging growth companies can delay adopting new or revised accounting standards until such time as those standards apply to private companies. We have irrevocably elected not to avail ourselves of this exemption from new or revised accounting standards and, therefore, we will be subject to the same new or revised accounting standards as other public companies that are not emerging growth companies.

If we fail to maintain proper and effective internal controls, our ability to produce accurate financial statements on a timely basis could be impaired.

After the completion of this offering, we will be subject to the reporting requirements of the Securities Exchange Act of 1934, the Sarbanes-Oxley Act and the rules and regulations of The NASDAQ Stock Market. The Sarbanes-Oxley Act requires, among other things, that we maintain effective disclosure controls and procedures and internal control over financial reporting. Commencing with our fiscal year ending December 31, 2016, we must perform system and process evaluation and testing of our internal control over financial reporting to allow management to report on the effectiveness of our internal control over financial reporting in our Form 10-K filing for that year, as required by Section 404 of the Sarbanes-

Oxley Act. This will require that we incur substantial additional professional fees and internal costs to expand our accounting and finance functions and that we expend significant management efforts. Prior to this offering, we have never been required to test our internal controls within a specified period, and, as a result, we may experience difficulty in meeting these reporting requirements in a timely manner.

We may discover weaknesses in our system of internal financial and accounting controls and procedures that could result in a material misstatement of our financial statements. Our internal control over financial reporting will not prevent or detect all errors and all fraud. A control system, no matter how well designed and operated, can provide only reasonable, not absolute, assurance that the control system's objectives will be met. Because of the inherent limitations in all control systems, no evaluation of controls can provide absolute assurance that misstatements due to error or fraud will not occur or that all control issues and instances of fraud will be detected.

If we are not able to comply with the requirements of Section 404 of the Sarbanes-Oxley Act in a timely manner, or if we are unable to maintain proper and effective internal controls, we may not be able to produce timely and accurate financial statements. If that were to happen, the market price of our stock could decline and we could be subject to sanctions or investigations by The NASDAQ Stock Market, the Securities and Exchange Commission or other regulatory authorities.

We will have broad discretion in the use of proceeds from this offering and may invest or spend the proceeds in ways with which you do not agree and in ways that may not increase the value of your investment.

We will have broad discretion over the use of proceeds from this offering. You may not agree with our decisions, and our use of the proceeds may not yield any return on your investment. We expect to use the net proceeds to us from this offering to complete our Phase 3 clinical trial of CLS-1001 in uveitis patients, to complete our Phase 2 clinical trial of CLS-1003 in RVO patients, to prepare an IND and complete our planned Phase 1/2 clinical trial of CLS-1002 in wet AMD patients, to fund the research and development of any future programs, including drug discovery, and for working capital and general corporate purposes. Our failure to apply the net proceeds of this offering effectively could compromise our ability to pursue our growth strategy and we might not be able to yield a significant return, if any, on our investment of these net proceeds. You will not have the opportunity to influence our decisions on how to use our net proceeds from this offering.

Because we do not anticipate paying any cash dividends on our common stock in the foreseeable future, capital appreciation, if any, will be your sole source of gains and you may never receive a return on your investment.

You should not rely on an investment in our common stock to provide dividend income. We have not declared or paid cash dividends on our common stock to date. We currently intend to retain our future earnings, if any, to fund the development and growth of our business. In addition, our loan and security agreement with SVB currently prohibits us from paying dividends without SVB's consent, and the terms of any future debt agreements may likewise preclude us from paying dividends. As a result, capital appreciation, if any, of our common stock will be your sole source of gain for the foreseeable future. Investors seeking cash dividends should not purchase our common stock.

We plan to use potential future operating losses and our federal and state NOL carryforwards to offset future taxable income, if any. However, our ability to use existing NOL carryforwards could be limited as a result of issuances of equity securities.

As of December 31, 2014, we had approximately $20.4 million of federal and $24.6 million of state net operating loss, or NOL, carryforwards. If not utilized, these federal NOL carryforwards will begin to expire at various dates beginning in 2031, and these state NOL carryforwards will begin to expire at various dates beginning in 2027. To the extent we generate taxable income in the future, we plan to use our existing NOL carryforwards and future losses to offset income that would otherwise be taxable. However, under Section 382 of the U.S. Internal Revenue Code of 1986, as amended, as interpreted by the U.S. Internal Revenue Service, the amount of benefits from our NOL carryforwards may be impaired or limited if we incur a cumulative ownership change of more than 50% over a three-year period. The completion of this offering, private placements and other transactions that have occurred, and future offerings of our securities may trigger, or may have already triggered, such an ownership change. In addition, since we will need to raise substantial additional funding to finance our operations, we may undergo further ownership changes in the future. We have not conducted an analysis as to whether such a change of ownership has occurred, but if such a change has occurred or occurs in the future, we will be limited regarding the amount of NOL carryforwards that can be utilized annually in the future to offset taxable income. Any such annual limitation may significantly reduce the value of our NOL carryforwards before they expire, which could result in greater tax liabilities than we would incur in the absence of such a limitation.

We will incur increased costs and demands upon management as a result of being a public company.

As a public company listed in the United States, we will incur significant additional legal, accounting and other costs. We estimate the additional costs we will incur as a result of being a public company to be approximately $1.5 million to $2.5 million annually. These additional costs could negatively affect our financial results. In addition, changing laws, regulations and standards relating to corporate governance and public disclosure, including regulations implemented by the SEC and The NASDAQ Stock Market, may increase legal and financial compliance costs and make some activities more time consuming. These laws, regulations and standards are subject to varying interpretations and, as a result, their application in practice may evolve over time as new guidance is provided by regulatory and governing bodies. We intend to invest resources to comply with evolving laws, regulations and standards, and this investment may result in increased general and administrative expenses and a diversion of management’s time and attention from revenue-generating activities to compliance activities. If, notwithstanding our efforts to comply with new laws, regulations and standards, we fail to comply, regulatory authorities may initiate legal proceedings against us and our business may be harmed.

Failure to comply with these rules might also make it more difficult for us to obtain some types of insurance, including director and officer liability insurance, and we might be forced to accept reduced policy limits and coverage or incur substantially higher costs to obtain the same or similar coverage. The impact of these events could also make it more difficult for us to attract and retain qualified persons to serve on our board of directors, on committees of our board of directors or as members of senior management.

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS AND INDUSTRY DATA

This prospectus contains forward-looking statements that involve substantial risks and uncertainties. The forward-looking statements are contained principally in the sections entitled "Prospectus Summary," "Risk Factors," "Management's Discussion and Analysis of Financial Condition and Results of Operations" and "Business," but are also contained elsewhere in this prospectus. In some cases, you can identify forward-looking statements by the words "may," "might," "will," "could," "would," "should," "expect," "intend," "plan," "objective," "anticipate," "believe," "estimate," "predict," "project," "potential," "continue" and "ongoing," or the negative of these terms, or other comparable terminology intended to identify statements about the future. These statements involve known and unknown risks, uncertainties and other factors that may cause our actual results, levels of activity, performance or achievements to be materially different from the information expressed or implied by these forward-looking statements. Although we believe that we have a reasonable basis for each forward-looking statement contained in this prospectus, we caution you that these statements are based on a combination of facts and factors currently known by us and our expectations of the future, about which we cannot be certain. Forward-looking statements include statements about:

- our plans to develop and commercialize our product candidates;
- our planned clinical trials for our CLS-1001, CLS-1003 and CLS-1002 programs;
- the timing of the availability of data from our clinical trials;
- the timing of our planned regulatory filings;
- the timing of and our ability to obtain and maintain regulatory approvals for our product candidates;
- our expectation that CLS-1001, if approved, would be the first drug specifically indicated for macular edema associated with non-infectious uveitis;
- the clinical utility of our product candidates;
- our commercialization, marketing and manufacturing capabilities and strategy;
- our intellectual property position;
- our ability to identify additional drug candidates with significant commercial potential that are compatible with SCS injection and which are consistent with our commercial objectives; and
- our estimates regarding future revenues, expenses and needs for additional financing.

You should refer to the "Risk Factors" section of this prospectus for a discussion of important factors that may cause our actual results to differ materially from those expressed or implied by our forward-looking statements. As a result of these factors, we cannot assure you that the forward-looking statements in this prospectus will prove to be accurate. Furthermore, if our forward-looking statements prove to be inaccurate, the inaccuracy may be material. In light of the significant uncertainties in these forward-looking statements, you should not regard these statements as a representation or warranty by us or any other person that we will achieve our objectives and plans in any specified time frame, or at all. We undertake no obligation to publicly update any forward-looking statements, whether as a result of new information, future events or otherwise, except as required by law.

You should read this prospectus and the documents that we reference in this prospectus and have filed as exhibits to the registration statement, of which this prospectus is a part, completely and with the understanding that our actual future results may be materially different from what we expect. We qualify all of our forward-looking statements by these cautionary statements.

This prospectus includes statistical and other industry and market data that we obtained from industry publications and research, surveys and studies conducted by third parties. Industry publications and third party research, surveys and studies generally indicate that their information has been obtained from sources believed to be reliable, although they do not guarantee the accuracy or completeness of such information.

USE OF PROCEEDS

We estimate that the net proceeds from our issuance and sale of shares of our common stock in this offering will be approximately $ million, or approximately $ million if the underwriters exercise their option to purchase additional shares in full, based upon an assumed initial public offering price of $ per share, which is the midpoint of the range set forth on the cover page of this prospectus, after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us.

Each $1.00 increase or decrease in the assumed initial public offering price of $ per share, which is the midpoint of the range set forth on the cover page of this prospectus, would increase or decrease the net proceeds to us from this offering by $ million, assuming that the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same. We may also increase or decrease the number of shares we are offering. Each increase or decrease of 1.0 million in the number of shares we are offering at the assumed initial public offering price would increase or decrease the net proceeds to us from this offering by $ million.

We currently estimate that we will use the net proceeds from this offering, together with our existing cash and cash equivalents, as follows:

- approximately $ million to complete our ongoing Phase 3 clinical trial of CLS-1001 in uveitis patients;
- approximately $ million to complete our ongoing Phase 2 clinical trial of CLS-1003 in RVO patients;
- approximately $ million to prepare our IND for, and complete our planned Phase 1/2 clinical trial of, CLS-1002 in wet AMD patients; and
- the remainder to fund continued research and development of our earlier-stage programs, including drug discovery for potential new applications for our SCS microinjection technology, and for working capital and other general corporate purposes.

In the ordinary course of our business, we expect to from time to time evaluate the acquisition of, investment in or in-license of complementary products, technologies or businesses, and we could use a portion of the net proceeds from this offering for such activities. We currently do not have any agreements, arrangements or commitments with respect to any potential acquisition, investment or license.

This expected use of net proceeds from this offering represents our intentions based upon our current plans and business conditions, which could change in the future as our plans and business conditions evolve. The amounts and timing of our actual expenditures may vary significantly depending on numerous factors, including the progress of our development, the status of and results from clinical trials, as well as any collaborations that we may enter into with third parties for our product candidates, and any unforeseen cash needs.

Our management will have broad discretion in the application of the net proceeds from this offering, and investors will be relying on the judgment of our management regarding the application of the net proceeds of this offering. The timing and amount of our actual expenditures will be based on many factors, including cash flows from operations and the anticipated growth of our business. Pending these uses, we plan to invest these net proceeds in short-term, interest bearing obligations, investment-grade instruments, certificates of deposit or direct or guaranteed obligations of the United States. The goal with respect to the investment of these net proceeds is capital preservation and liquidity so that such funds are readily available to fund our operations.

DIVIDEND POLICY

We have never declared or paid any dividends on our common stock. We anticipate that we will retain all of our future earnings, if any, for use in the operation and expansion of our business and do not anticipate paying cash dividends in the foreseeable future.

CAPITALIZATION

The following table sets forth our cash and cash equivalents and our capitalization as of September 30, 2015:

- on an actual basis;
- on a pro forma basis to give effect to:
  - our issuance of 5,073,598 shares of Series C convertible preferred stock in November and December 2015 at a purchase price of $3.7917 per share and our receipt of $19.2 million in net cash proceeds therefrom;
  - the conversion of all outstanding shares of our convertible preferred stock, including the 5,073,598 shares of Series C preferred stock issued in November and December 2015, into an aggregate of 20,638,557 shares of our common stock, which will occur automatically upon the closing of this offering;
  - the filing of our amended and restated certificate of incorporation upon the closing of this offering; and
  - the exercise of all outstanding warrants to purchase shares of common stock that will otherwise expire upon the closing of this offering for an aggregate of 248,175 shares of common stock; and
- on a pro forma as adjusted basis to give further effect to our sale of shares of common stock in this offering at an assumed initial public offering price of $ per share, which is the midpoint of the range set forth on the cover page of this prospectus, after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us.

The following information is illustrative only of our cash and cash equivalents and capitalization following the completion of this offering and will change based on the actual initial public offering price and other terms of this offering determined at pricing. You should read this table together with "Management's Discussion and Analysis of Financial Condition and Results of Operations" and our financial statements and the related notes appearing elsewhere in this prospectus.

	As of September 30, 2015		
	Actual	Pro forma	Pro forma as adjusted
	(in thousands)		
Cash and cash equivalents	$ 4,186	$	$
Long-term debt, including current portion	$ 5,915		
Convertible preferred stock:			
Series A convertible preferred stock, $0.001 par value; 5,198,826 shares authorized, issued and outstanding, actual; no shares authorized, issued or outstanding, pro forma and pro forma as adjusted	4,086		
Series A-1 convertible preferred stock, $0.001 par value; 4,373,481 shares authorized, 4,356,931 shares issued and outstanding, actual; no shares authorized, issued or outstanding, pro forma and pro forma as adjusted	7,890		
Series B convertible preferred stock, $0.001 par value; 7,413,365 shares authorized, 6,009,202 shares issued and outstanding, actual; no shares authorized, issued or outstanding, pro forma and pro forma as adjusted	15,252		
Series C convertible preferred stock, $0.001 par value; no shares authorized, issued or outstanding, actual, pro forma or pro forma as adjusted	—		
Stockholders' equity (deficit):			
Common stock, $0.001 par value; 30,000,000 shares authorized, 5,839,334 shares issued and outstanding, actual; shares authorized, shares issued and outstanding, pro forma; shares authorized, shares issued and outstanding, pro forma as adjusted	5		
Preferred stock, $0.001 par value; no shares authorized, issued or outstanding, actual; shares authorized, no shares issued or outstanding, pro forma or pro forma as adjusted	—		
Additional paid-in-capital	2,628		
Accumulated deficit	(34,193)		
Total stockholders' equity (deficit)	(31,560)		
Total capitalization	$ 1,583	$	$

Each $1.00 increase or decrease in the assumed initial public offering price of $ per share, which is the midpoint of the range set forth on the cover page of this prospectus, would increase or decrease the pro forma as adjusted amount of each of cash and cash equivalents, additional paid-in capital, total stockholders' equity and total capitalization by $ million, assuming that the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same. Each increase or decrease of 1.0 million in the number

of shares we are offering at the assumed initial public offering price would increase or decrease the pro forma as adjusted amount of each of cash and cash equivalents, additional paid-in capital, total stockholders' equity and total capitalization by $ million.

The number of shares of common stock outstanding in the table above does not include:

- 2,266,776 shares of our common stock issuable upon the exercise of stock options outstanding under our 2011 stock incentive plan as of September 30, 2015, at a weighted average exercise price of $0.77 per share;
- 73,693 shares of our common stock issuable upon exercise of warrants outstanding as of September 30, 2015, at a weighted average exercise price of $3.12 per share; and
- shares of our common stock reserved for future issuance under our equity incentive plans following this offering.

DILUTION

If you invest in our common stock in this offering, your interest will be diluted to the extent of the difference between the initial public offering price per share and the pro forma as adjusted net tangible book value per share of our common stock immediately after this offering. Net tangible book value per share is determined by dividing our total tangible assets less total liabilities and convertible preferred stock by the number of outstanding shares of our common stock.

As of September 30, 2015, we had a net tangible book deficit of $( ) million, or $( ) per share of common stock. On a pro forma basis, after giving effect to the issuance of 5,073,598 shares of our Series C convertible preferred stock issued in November and December 2015 and the conversion of the outstanding shares of our convertible preferred stock, including the Series C convertible preferred stock, into 20,638,557 shares of our common stock upon the completion of this offering, and the exercise of all outstanding warrants to purchase shares of common stock that will otherwise expire upon the closing of this offering for 248,175 shares of common stock, our pro forma net tangible book value would have been $ million, or $ per share of common stock.

After giving effect to the issuance and sale of shares of our common stock in this offering at an assumed initial public offering price of $ per share, which is the midpoint of the range set forth on the cover page of this prospectus, and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us, our pro forma as adjusted net tangible book value as of September 30, 2015 would have been $ million, or $ per share of common stock. This represents an immediate increase in the pro forma net tangible book value of $ per share to existing stockholders, and an immediate dilution in the pro forma net tangible book value of $ per share to investors purchasing shares of our common stock in this offering. The following table illustrates this per share dilution:

Assumed initial public offering price per share		$
Actual net tangible book deficit per share as of September 30, 2015	$	
Increase per share attributable to conversion of convertible preferred stock and exercise of warrants		
Pro forma net tangible book value per share before this offering		
Increase in pro forma net tangible book value per share attributable to this offering		
Pro forma as adjusted net tangible book value per share after this offering		
Dilution per share to investors participating in this offering		$

The dilution information discussed above is illustrative only and will change based on the actual initial public offering price and other terms of this offering determined at pricing. Each $1.00 increase or decrease in the assumed initial public offering price of $ per share, which is the midpoint of the range set forth on the cover page of this prospectus, would increase or decrease our pro forma as adjusted net tangible book value by $ million, or $ per share, and the dilution per share to investors participating in this offering by $ per share, assuming that the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same. Each increase or decrease of 1.0 million shares in the number of shares offered by us at the assumed initial public offering price would increase or decrease our pro forma as adjusted net tangible book value per share after this offering by $ per share and decrease or increase the dilution to investors participating in this offering by $ per share.

If the underwriters exercise their option in full to purchase additional shares of common stock in this offering, the pro forma as adjusted net tangible book value per share after the offering would be $ per share, the increase in the pro forma net tangible book value per share to existing stockholders would be $ per share and the dilution to new investors purchasing common stock in this offering would be $ per share.

The following table sets forth as of September 30, 2015, on the pro forma basis described above, the differences between the number of shares of common stock purchased from us, the total consideration paid and the weighted average price per share paid by existing stockholders and by investors purchasing shares of our common stock in this offering at an assumed initial public offering price of $ per share, which is the midpoint of the range set forth on the cover page on this prospectus, before deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us:

	Shares purchased		Total consideration		Weighted average price per share
	Number	Percent	Amount	Percent	
Existing stockholders		%	$	%	$
New investors					
Total		100%	$	100%	

Each $1.00 increase or decrease in the assumed initial public offering price of $ per share, which is the midpoint of the range set forth on the cover page of this prospectus, would increase or decrease the total consideration paid by new investors by $ million, and increase or decrease the percent of total consideration paid by new investors by percentage points, assuming that the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same.

The table above also excludes:

- 2,266,776 shares of our common stock issuable upon the exercise of stock options outstanding under our 2011 stock incentive plan as of September 30, 2015, at a weighted average exercise price of $0.77 per share;
- 73,693 shares of our common stock issuable upon exercise of warrants outstanding as of September 30, 2015, at a weighted average exercise price of $3.12 per share; and
- shares of our common stock reserved for future issuance under our equity incentive plans following this offering.

The shares of our common stock reserved for future issuance under our equity benefit plans may be subject to automatic annual increases in accordance with the terms of the plans. To the extent that options or warrants are exercised, new options or other equity awards are issued under our equity incentive plans, or we issue additional shares of common stock in the future, there will be further dilution to investors participating in this offering. In addition, we may choose to raise additional capital because of market conditions or strategic considerations, even if we believe that we have sufficient funds for our current or future operating plans. If we raise additional capital through the sale of equity or convertible debt securities, the issuance of these securities could result in further dilution to our stockholders.

SELECTED FINANCIAL DATA

The following tables set forth our selected financial data for the periods indicated. The following selected statement of operations data for the years ended December 31, 2013 and 2014 and the selected balance sheet data as of December 31, 2013 and 2014 are derived from our audited financial statements appearing elsewhere in this prospectus. The selected statement of operations data for the nine months ended September 30, 2014 and 2015 and the selected balance sheet data as of September 30, 2015 are derived from unaudited condensed financial statements appearing elsewhere in this prospectus. The data should be read together with "Management's Discussion and Analysis of Financial Condition and Results of Operations" and in conjunction with the financial statements, related notes, and other financial information included elsewhere in this prospectus.

The unaudited condensed financial statements include all adjustments, consisting of normal recurring accruals, which management considers necessary for a fair presentation of the financial position and the results of operations for these periods. Our historical results are not necessarily indicative of the results to be expected in the future, and our operating results for the nine months ended September 30, 2015 are not necessarily indicative of the results that may be expected for the entire year ending December 31, 2015 or any other future period.

	Year Ended December 31,		Nine Months Ended September 30,	
	2013	2014	2014	2015
	(in thousands, except share and per share data)			
Statement of Operations Data:				
Operating expenses:				
Research and development	$ 5,045	$ 6,692	$ 4,776	$ 6,964
General and administrative	2,193	3,131	2,398	5,337
Total operating expenses	7,238	9,823	7,174	12,301
Loss from operations	(7,238)	(9,823)	(7,174)	(12,301)
Other income (expense):				
Interest expense	(23)	(371)	(353)	(174)
Interest income	7	5	1	6
Total other expense	(16)	(366)	(352)	(168)
Net loss	$ (7,254)	$ (10,189)	$ (7,526)	$ (12,469)
Net loss per share of common stock — basic and diluted	$ (2.45)	$ (2.66)	$ (2.00)	$ (2.54)
Weighted average shares outstanding, basic and diluted	2,956,285	3,825,052	3,769,091	4,910,055
Pro forma net loss per share — basic and diluted		$ (0.53)		$ (0.61)
Pro forma weighted average shares outstanding — basic and diluted		19,390,011		20,475,014

	As of December 31,		As of September 30,
	2013	2014	2015
		(in thousands)	
Balance Sheet Data:			
Cash and cash equivalents	$ 1,909	$ 8,269	$ 4,186
Total assets	2,137	10,299	4,516
Long-term debt	268	—	5,915
Total liabilities	1,004	2,677	8,848
Total convertible preferred stock	11,871	26,835	27,228
Total stockholders' deficit	(10,738)	(19,213)	(31,560)

MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

You should read the following discussion and analysis of our financial condition and results of operations together with our financial statements and the related notes and other financial information included elsewhere in this prospectus. Some of the information contained in this discussion and analysis or set forth elsewhere in this prospectus, including information with respect to our plans and strategy for our business, includes forward-looking statements that involve risks and uncertainties. You should review the "Risk Factors" section of this prospectus for a discussion of important factors that could cause actual results to differ materially from the results described in or implied by the forward-looking statements contained in the following discussion and analysis.

Overview

We are a late-stage clinical biopharmaceutical company developing first-in-class drug therapies to treat blinding diseases of the eye. Our current product candidates focus on diseases affecting the retina and choroid, especially diseases associated with macular edema, and are injected into the suprachoroidal space, or SCS, using our proprietary SCS Microinjector. With the SCS injection procedure, our product candidates are more directly administered to the retina and choroid as compared to other ocular drug delivery techniques such as intravitreal injections. We believe SCS injection may provide a number of benefits, including lower frequency of necessary administration and faster onset of therapeutic effect. We hold the exclusive rights to develop and commercialize drugs for injection into the SCS. Our most advanced product candidates, CLS-1001 and CLS-1003, are based on commonly used ophthalmic drugs, which we believe will allow us to more efficiently and predictably pursue the regulatory approval of these product candidates under Section 505(b)(2) of the Federal Food, Drug, and Cosmetic Act.

For CLS-1001, we enrolled the first patient in a pivotal Phase 3 clinical trial of CLS-1001 in November 2015. We expect to enroll approximately 150 patients with macular edema associated with non-infectious uveitis in this trial and expect to report data in the second half of 2017, We believe, based on our end-of-Phase 2 review with the FDA in May 2015, that this Phase 3 clinical trial will be the only pivotal clinical trial necessary to support the filing of an NDA to the FDA. In the second half of 2015, we completed enrollment of a 22-patient Phase 2 clinical trial and expect to report the results of this trial in January 2016. In our completed Phase 1/2 clinical trial, we observed a range of improvements in BCVA of between one and five lines on a standard eye chart. At the end of week 12, the average improvement in BCVA exceeded two lines, which is considered clinically meaningful. At the end of week 26, four of the eight patients in the trial had still not required additional treatment. For those four patients, the average improvement in BCVA was nearly three lines at week 26.

Under our CLS-1003 program for macular edema associated with RVO, a sight-threatening disorder resulting from the blockage of a retinal vein, we have completed enrollment of a 46-patient Phase 2 clinical trial. We expect to report data from this trial in the second quarter of 2016. In our CLS-1002 program for the treatment of wet age-related macular degeneration, or wet AMD, we have selected a lead compound, axitinib, that has activity against both vascular endothelial growth factor, or VEGF, and platelet derived growth factor, or PDGF, to be administered by SCS injection, which we believe could be more effective than current treatments for wet AMD. We plan to develop a proprietary suspension formulation of axitinib and submit an IND in the second half of 2016.

If our product candidates are approved, we plan to commercialize them with a specialty team of 30 to 40 sales and medical marketing professionals to target the approximately 1,700 retinal specialists in the

United States, and we may also pursue collaborations with third parties to commercialize any of our drugs approved for marketing outside the United States.

We have incurred net losses since our inception in May 2011. Our operations to date have been limited to organizing and staffing our company, raising capital, undertaking preclinical studies and other research and development initiatives and, beginning in 2013, conducting clinical trials of our most advanced product candidates. To date, we have not generated any revenue and have primarily financed our operations through the private placement of our equity securities, issuance of convertible promissory notes and loan agreements. We have raised net cash proceeds of $24.5 million from the sale of convertible preferred stock, $3.4 million from the sale of convertible promissory notes and $6.0 million from a long-term loan agreement through September 30, 2015. In November and December 2015, we raised an additional $19.2 million from the sale of convertible preferred stock. As of September 30, 2015, we had an accumulated deficit of $34.2 million. We recorded net losses of $7.3 million and $10.2 million for the years ended December 31, 2013 and 2014, respectively, and $7.5 million and $12.5 million for the nine months ended September 30, 2014 and 2015, respectively. We anticipate that a substantial portion of our capital resources and efforts in the foreseeable future will be focused on completing the development and obtaining regulatory approval and preparing for potential commercialization of our product candidates.

We expect to continue to incur significant and increasing operating losses at least for the next several years. We do not expect to generate product revenue unless and until we successfully complete development and obtain regulatory approval for one or more of our product candidates. Our net losses may fluctuate significantly from quarter to quarter and year to year, depending on the timing of our clinical trials and our expenditures on other research and development activities. We anticipate that our expenses will increase substantially as we:

- complete our ongoing Phase 3 clinical trial of CLS-1001;
- complete our ongoing Phase 2 clinical trial of CLS-1003 and our planned Phase 1/2 clinical trial of CLS-1002, as well as future clinical trials for these programs;
- continue the research and development of our other product candidates;
- seek to evaluate and develop additional product candidates;
- seek regulatory approvals for any product candidates that successfully complete clinical trials;
- ultimately establish a sales, marketing and distribution infrastructure and scale up external manufacturing capabilities to commercialize any product candidates for which we may obtain regulatory approval;
- maintain, expand and protect our intellectual property portfolio;
- hire additional clinical, manufacturing and scientific personnel;
- add operational, financial and management information systems and personnel, including personnel to support our drug development and potential future commercialization efforts; and
- begin to operate as a public company.

We anticipate that we will use approximately $ million of the net proceeds from this offering for clinical and non-clinical costs associated with the completion of our ongoing Phase 3 clinical trial for CLS-1001, approximately $ million for clinical and non-clinical costs associated with completing our

Phase 2 clinical trial for CLS-1003 and approximately $ million for the preparation of an IND and to complete our planned Phase 1/2 clinical trial of CLS-1002. We intend to use the remainder of the proceeds of this offering to fund the research and development of our earlier-stage programs, including drug discovery and for working capital and general corporate purposes. We expect that these funds will not be sufficient to enable us to complete all necessary development and commercially launch both of these product candidates. Accordingly, we will be required to obtain further funding through other public or private offerings of our capital stock, debt financing, collaboration and licensing arrangements or other sources. Adequate additional funding may not be available to us on acceptable terms, or at all. If we are unable to raise capital when needed or on attractive terms, we would be forced to delay, reduce or altogether cease our research and development programs or future commercialization efforts. Although it is difficult to predict future liquidity requirements, we believe that the net proceeds of this offering, together with our existing cash and cash equivalents, will be sufficient to fund our operations for at least the next 12 months. However, our ability to successfully transition to profitability will be dependent upon achieving a level of revenues adequate to support our cost structure. We cannot assure you that we will ever be profitable or generate positive cash flow from our operating activities.

Components of Operating Results

Revenue

We have not generated any revenue from the sale of any drugs, and we do not expect to generate any revenue unless or until we obtain regulatory approval of and commercialize our product candidates. Over time, we may also seek to earn revenue by out-licensing our proprietary microinjection technology for SCS drug administration to third-party strategic collaborators.

Research and Development

Since our inception, we have focused on our development programs. Research and development expenses consist primarily of costs incurred for the research and development of our preclinical and clinical product candidates, which include:

- employee-related expenses, including salaries, benefits, travel and share-based compensation expense for research and development personnel;
- expenses incurred under agreements with contract research organizations, or CROs, as well as contract manufacturing organizations and consultants that conduct clinical trials and preclinical studies;
- costs associated with preclinical activities and development activities;
- costs associated with technology and intellectual property licenses;
- costs for our research and development facility; and
- depreciation expense for assets used in research and development activities.

We expense research and development costs to operations as incurred. The costs for some of our development activities, such as clinical trials, are recognized based on the terms of underlying agreements, as well as an evaluation of the progress to completion of specific tasks using data such as patient enrollment, clinical site activations and additional information provided to us by our vendors about their actual costs occurred.

Expenses related to activities, such as manufacturing and stability and toxicology studies, that are supportive of a product candidate itself, are classified as direct non-clinical costs. Expenses related to clinical trials and similar activities, including costs associated with CROs, are classified as direct clinical costs. Expenses related to activities that support more than one development program or activity, such as salaries, share-based compensation and depreciation, are not classified as direct clinical costs or non-clinical costs and are separately classified as unallocated.

For the years ended December 31, 2013 and 2014 and the nine months ended September 30, 2014 and 2015, substantially all of our research and development expenses have been related to the non-clinical and clinical development of CLS-1001, CLS-1003 and CLS-1002. From inception through September 30, 2015, we have incurred $21.3 million in research and development expenses, of which only $0.2 million was expended prior to January 1, 2012. Prior to January 1, 2012, we did not allocate any research and development expenses to any specific product candidate.

The following table shows our research and development expenses by type of activity for the years ended December 31, 2013 and 2014, the nine months ended September 30, 2014 and 2015, and the period from May 26, 2011 (date of inception) to September 30, 2015.

	Year Ended December 31,		Nine Months Ended September 30,		Period from May 26, 2011 (Date of Inception) to September 30, 2015
	2013	2014	2014	2015	
	(in thousands)				
CLS-1001:					
Direct non-clinical	$1,326	$1,617	$ 1,492	$ 516	$ 4,385
Direct clinical	173	828	403	1,135	2,136
Total	1,499	2,445	1,895	1,651	6,521
CLS-1002:					
Direct non-clinical	153	251	204	968	1,372
Direct clinical	44	6	6	3	176
Total	197	257	210	971	1,548
CLS-1003:					
Direct non-clinical	45	102	100	2	149
Direct clinical	—	633	251	1,051	1,684
Total	45	735	351	1,053	1,833
Unallocated	3,304	3,255	2,320	3,289	11,360
Total research and development expense	$5,045	$6,692	$ 4,776	$ 6,964	$ 21,262

Our expenses related to clinical trials are based on estimates of patient enrollment and related expenses at clinical investigator sites as well as estimates for the services received and efforts expended under contracts with research institutions, consultants and CROs that conduct and manage clinical trials on our behalf. We generally accrue expenses related to clinical trials based on contracted amounts applied to the level of patient enrollment and activity according to the protocol. If future timelines or contracts are modified based upon changes in the clinical trial protocol or scope of work to be performed, we would modify our estimates of accrued expenses accordingly on a prospective basis. Historically, any such modifications have not been material.

Research and development activities are central to our business model. Product candidates in later stages of clinical development generally have higher development costs than those in earlier stages of clinical

development, primarily due to the increased size and duration of later-stage clinical trials. We expect our research and development expenses to increase over the next several years as we progress CLS-1001, CLS-1003, CLS-1002 and any future product candidates through clinical development. However, it is difficult to determine with certainty the duration and completion costs of our current or future preclinical programs and clinical trials of our product candidates, or if, when or to what extent we will generate revenues from the commercialization and sale of any of our product candidates that obtain regulatory approval. We may never succeed in achieving regulatory approval for any of our product candidates.

The duration, costs and timing of clinical trials and development of our product candidates will depend on a variety of factors that include, but are not limited to, the following:

- number of trials required for approval and any requirement for extension trials;
- per patient trial costs;
- the number of patients that participate in the trials;
- the number of sites included in the trials;
- the countries in which the trial is conducted;
- the length of time required to enroll eligible patients;
- the number of doses that patients receive;
- the drop-out or discontinuation rates of patients;
- potential additional safety monitoring or other studies requested by regulatory agencies;
- the duration of patient follow-up; and
- the efficacy and safety profile of the product candidate.

In addition, the probability of success for each product candidate will depend on numerous factors, including competition, manufacturing capability and commercial viability. We will determine which programs to pursue and how much to fund each program in response to the scientific and clinical success of each product candidate, as well as an assessment of each candidate's commercial potential.

General and Administrative

General and administrative expenses consist primarily of salaries and other related costs, including share-based compensation, for personnel in executive, finance, accounting, business development, and human resources functions. Other significant costs include facility costs not otherwise included in research and development expenses, legal fees relating to intellectual property and corporate matters and fees for accounting and consulting services.

We anticipate that our general and administrative expenses will increase in the future to support our continued research and development activities, potential commercialization of our product candidates and increased costs of operating as a public company. These increases will likely include increased costs related to the hiring of additional personnel and fees to outside consultants, lawyers and accountants, among other expenses. Additionally, we anticipate increased costs associated with being a public company including expenses related to services associated with maintaining compliance with NASDAQ listing rules and SEC requirements, insurance, and investor relations costs. In addition, if CLS-1001 or any of our other product candidates obtains regulatory approval for marketing, we expect to incur expenses associated with building

a sales and marketing team. However, we do not expect to receive any such regulatory approval until at least 2018.

Other Income (Expense)

Other income consists of interest income earned on our cash and cash equivalents. Interest income is not considered significant to our financial statements, but we expect our interest income to increase following this offering as we invest the net proceeds from this offering pending their use in operations.

Other expense consists of interest accrued under promissory notes, amortization of debt discounts arising from the preferred stock purchase warrant and the loan agreements described in the footnotes to our financial statements appearing elsewhere in this prospectus.

Critical Accounting Policies and Significant Judgments and Estimates

Our management's discussion and analysis of our financial condition and results of operations is based on our financial statements, which have been prepared in accordance with accounting principles generally accepted in the United States of America, or GAAP. The preparation of these financial statements requires us to make estimates, judgments and assumptions that affect the reported amounts of assets and liabilities, disclosure of contingent assets and liabilities as of the dates of the balance sheets and the reported amounts of expenses during the reporting periods. In accordance with GAAP, we evaluate our estimates and judgments on an ongoing basis. Significant estimates include assumptions used in the determination of share-based compensation and some of our research and development expenses. We base our estimates on historical experience and on various other factors that we believe are reasonable under the circumstances, the results of which form the basis for making judgments about the carrying value of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions or conditions.

We define our critical accounting policies as those accounting principles generally accepted in the United States of America that require us to make subjective estimates and judgments about matters that are uncertain and are likely to have a material impact on our financial condition and results of operations, as well as the specific manner in which we apply those principles. While our significant accounting policies are more fully described in Note 2 to our financial statements appearing elsewhere in this prospectus, we believe the following are the critical accounting policies used in the preparation of our financial statements that require significant estimates and judgments.

Accrued Expenses

As part of the process of preparing our financial statements, we are required to estimate accrued expenses. This process involves reviewing open contracts and purchase orders, communicating with applicable vendor personnel to identify services that have been performed on our behalf and estimating the level of service performed and the associated cost incurred for the service when we have not yet been invoiced or otherwise notified of actual cost. We make estimates of our accrued expenses as of each balance sheet date in our financial statements based on facts and circumstances known to us. We periodically confirm the accuracy of our estimates with the service providers and make adjustments if necessary. Examples of estimated accrued expenses include fees paid to CROs and investigative sites in connection with clinical trials.

We accrue our expenses related to clinical trials based on our estimates of the services received and efforts expended pursuant to contracts with multiple research institutions and CROs that conduct research

activities or manage clinical trials on our behalf. The financial terms of these agreements are subject to negotiation, vary from contract to contract and may result in uneven payment flows. Payments under some of these contracts depend on factors such as the successful enrollment of patients and the completion of clinical trial milestones. In accruing service fees, we estimate the time period over which services will be performed and the level of effort to be expended in each period. If the level of effort varies from our estimate, we will adjust the accrual accordingly. If we underestimate or overestimate the level of services performed or the costs of these services, our actual expenses could differ from our estimates. Although we do not currently anticipate the future settlement of existing accruals to differ materially from our estimates, our understanding of the status and timing of services performed relative to the actual status and timing of services performed may vary and could result in us reporting amounts that are too high or too low for any period. There have been no material changes in estimates for the periods presented in our financial statements.

Fair Value Measurements

We record some of our financial assets and liabilities at fair value in accordance with the provisions of Accounting Standards Codification, or ASC, Topic 820 on fair value measurements. As defined in the guidance, fair value, defined as an exit price, represents the amount that would be received to sell an asset or pay to transfer a liability in an orderly transaction between market participants. As a result, fair value is a market-based approach that should be determined based on assumptions that market participants would use in pricing an asset or a liability. As a basis for considering these assumptions, the guidance defines a three-tier value hierarchy that prioritizes the inputs used in the valuation methodologies in measuring fair value.

- Level 1 — Unadjusted quoted prices in active, accessible markets for identical assets or liabilities.
- Level 2 — Other inputs that are directly or indirectly observable in the marketplace.
- Level 3 — Unobservable inputs that are supported by little or no market activity.

The fair value hierarchy also requires an entity to maximize the use of observable inputs and minimize the use of unobservable inputs when measuring fair value.

Our material financial instruments at December 31, 2013, December 31, 2014 and September 30, 2015 consisted primarily of cash and cash equivalents, long-term debt and stock purchase warrant liabilities. The fair value of cash and cash equivalents approximate their respective carrying values due to the short-term nature of these instruments. The fair value of long-term debt approximates the carrying value due to variable interest rates that correspond to market rates. We have determined the preferred stock purchase warrant, the value of which is recorded within other non-current liabilities, to be valued under Level 3.

Share-Based Compensation

We recognize compensation costs related to stock options and restricted stock granted to employees, directors and consultants ratably over the requisite service period, which in most cases is the vesting period of the award for employees, based on the estimated fair value of the awards on the date of grant. Compensation expense for options granted to non-employees is determined as the fair value of consideration received or the fair value of the equity instruments issued, whichever is more reliably measured. The fair value of the awards granted to non-employees is re-measured each period until the related service is complete.

Share-based compensation expense was $0.3 million and $0.4 million for the years ended December 31, 2013 and 2014, respectively, and $0.3 million and $0.5 million for the nine months ended September 30, 2014 and 2015, respectively.

Significant Factors, Assumptions and Methodologies Used in Determining Fair Value

Determining the appropriate fair value measurement of share-based awards requires the use of subjective assumptions. In the absence of a public trading market for our common stock, and in preparation for this offering, we have conducted retrospective assessments and contemporaneous valuations of our common stock, as described below in "— Common Stock Valuations." The determination of the fair value measurement of options using the Black-Scholes option pricing model is affected by our estimated common stock fair values as well as assumptions regarding a number of other subjective variables. These other variables include the expected term of the options, our expected stock price volatility over the expected term of the options, stock option exercise and cancellation behaviors, risk-free interest rates and expected dividends.

We estimated the fair value of stock options at the grant date using the following assumptions:

- *Fair Value of our Common Stock.* Since no public market exists for our stock, we must estimate its fair value, as discussed in "— Common Stock Valuations" below.
- *Volatility*. As we do not have a trading history for our common stock, we utilize data from a representative group of publicly traded companies to estimate expected stock price volatility. We selected representative companies from the pharmaceutical industry with similar characteristics to us, including stage of product development and therapeutic focus.
- *Expected Term*. We used the simplified method as prescribed by the SEC Staff Accounting Bulletin No. 107, *Share-Based Payment*, as we do not have sufficient historical exercise and post-vesting termination data to provide a reasonable basis upon which to estimate the expected term of stock options granted to employees.
- *Risk-Free Rate*. The risk-free interest rate is based on the yields of U.S. Treasury securities with maturities similar to the expected time to liquidity.
- *Forfeitures*. Forfeitures are estimated such that we only recognize expense for the shares expected to vest, and adjustments are made if actual forfeitures differ from those estimates. We estimated our annual forfeiture rates to be zero for 2013 and 2014.
- *Dividend Yield*. We have never declared or paid any cash dividends and do not presently plan to pay cash dividends in the foreseeable future.

The table below lists the weighted average assumptions utilized in the Black-Scholes option pricing model for the years ended December 31, 2013 and 2014 and for the nine month periods ended September 30, 2014 and 2015.

	Year Ended December 31,		Nine Months Ended September 30,	
	2013	2014	2014	2015
Expected term (years)	7.00	7.00	7.00	7.00
Expected stock price volatility	97.02%	85.64%	87.85%	89.00%
Risk-free interest rate	1.69%	1.99%	2.10%	2.04%
Dividend yield	0.00%	0.00%	0.00%	0.00%

The estimation of the number of stock awards that will ultimately vest requires judgment, and to the extent actual results or updated estimates differ from our current estimates, such amounts will be recorded as a cumulative adjustment in the period in which estimates are revised.

Common Stock Valuations

We are a private company with no active public market for our common stock. Our common stock valuations are determined by our board of directors in its sole discretion based on recommendations from management and, beginning in 2014, taking into account advice and assistance provided by a third-party valuation consultant engaged to assist us in connection with such valuations. The valuations of our common stock were determined utilizing guidelines outlined in the American Institute of Certified Public Accountants' Accounting and Valuation Guide, Valuation of Privately-Held-Company Equity Securities Issued as Compensation.

Our common stock valuations were performed using a hybrid method, which used market approaches to estimate our enterprise value. We selected the hybrid method based on the availability and the quality of information to develop the assumptions for the methodology. The hybrid method is a probability-weighted expected return method, or PWERM, where the equity value in one or more of the scenarios is calculated using an option-pricing method, or OPM. The PWERM is a scenario-based methodology that estimates the fair value of common stock based upon an analysis of future values for the company, assuming various outcomes. Under this method, the common stock value is based on the probability-weighted present value of expected future investment returns, considering each of the possible outcomes available, as well as the rights of each class of stock. The OPM treats common stock and preferred stock as call options on the total equity value of a company, with exercise prices based on the value thresholds at which the allocation among the various holders of a company's securities changes. Under this method, the common stock has value only if the funds available for distribution to stockholders exceed the value of the preferred stock liquidation preference at the time of a liquidity event, such as a strategic sale or merger.

In the hybrid method used in each of our third-party valuations, we considered several future event scenarios, including various OPM scenarios and IPO scenarios. The relative probability of each type of future event scenario was based on our analysis of market conditions at the time, including then-current IPO valuations of similarly situated companies and expectations as to the timing and likely prospects of the future event scenarios. To determine our enterprise values under the OPM scenarios, we used the OPM backsolve approach. To determine our enterprise values under the IPO scenarios, we used the guideline public company method under the market approach, which analyzed enterprise values at the IPO date of publicly traded biopharmaceutical companies. To derive the fair value of the common stock for each future event scenario under the hybrid method, the proceeds to the common stockholders were calculated based on the conversion rights and preferences of the preferred stock. We then applied a discount for lack of marketability to the common stock to account for the lack of access to an active public market.

The assumptions used in the valuation models that ultimately determine the fair value of our common stock as of the valuation date are based on numerous objective and subjective factors combined with management judgment, including the following:

- our results of operations, financial position and the status of our research and development efforts;
- the composition of, and changes to, our management team and board of directors;
- the lack of liquidity of our common stock as a private company;
- our stage of development and business strategy and the material risks related to our business and industry;
- our discounted future cash flows, based on our projected operating results;

- the potential impact on our common stock of liquidation preference rights of our convertible preferred stock;
- the valuation of publicly traded companies in the life sciences and pharmaceutical industry sectors, as well as recently completed mergers and acquisitions of peer companies;
- any external market conditions affecting the life sciences and pharmaceutical industry sectors;
- the likelihood of achieving a liquidity event for the holders of our common stock and stock options, such as an initial public offering, or IPO, or a sale of our company, given prevailing market conditions;
- the state of the IPO market for similarly situated privately held biotechnology companies; and
- any recent contemporaneous valuations prepared in accordance with methodologies outlined in the Practice Aid.

The following table presents the grant dates and related exercise prices of stock options that we granted from January 1, 2014 through the date of this prospectus, along with the corresponding exercise price for each option grant and the fair values per share utilized to calculate share-based compensation expense.

Date of Grant	Number of Shares Underlying Options	Exercise Price Per Option	Common Stock Fair Value Per Share on Grant Date
8/12/2014	70,000	$ 1.40	$ 1.40
11/26/2014	100,000	1.55	1.55
12/9/2014	132,500	1.55	1.55
12/19/2014	525,000	1.55	1.55
6/18/2015	90,000	2.80	2.80
8/14/2015	35,000	2.80	2.80
12/3/2015	512,184	2.53	2.87(1)

(1) We assessed the fair value of our common stock subsequent to the grant date of these awards, as described below.

In the course of preparing for this offering, in December 2015, we performed a retrospective fair value assessment and concluded that the fair value of our common stock underlying stock options we granted in December 2015 was $2.87 per share. This reassessed value, which we applied to calculate share-based compensation expense associated with the December 2015 option grants for accounting purposes, was based in part upon a revised valuation of our common stock as of September 30, 2015, performed on a retrospective basis with the assistance of a third-party specialist, taking into account an increased probability of executing a successful initial public offering in 2016. This revised common stock valuation was performed using the hybrid method.

Determination of Estimated Offering Price

The midpoint of the preliminary range for the initial public offering as determined by us and the underwriters was $ per share. In comparison, our estimate of the fair value of our common stock was $2.87 per share as of the December 3, 2015 option grants. We note that, as is typical in IPOs, the preliminary range was not derived using a formal determination of fair value, but was determined based upon discussions between us and the underwriters. Among the factors that were considered in setting this range were our

prospects and the history of and prospects for our industry, the general condition of the securities markets and the recent market prices of, and the demand for, publicly traded common stock of generally comparable companies. We believe that the difference between the fair value of our common stock as of December 3, 2015 and the midpoint of the price range for this offering is the result of these factors as well as the fact that the estimated IPO price range necessarily assumes that the initial public offering has occurred, a public market for our common stock has been created and that our preferred stock converted into common stock in connection with the IPO, and therefore excludes any discount for lack of marketability of our common stock, which was factored into the valuation used as a basis for our December 3, 2015 option grants.

Based on an assumed initial public offering price of $ per share, the midpoint of the price range set forth on the cover page of this prospectus, the intrinsic value of all stock options outstanding as of September 30, 2015 was $ million, of which $ million and $ million related to stock options that were vested and unvested, respectively, at that date.

Results of Valuation Models May Vary

Valuation models require the input of highly subjective assumptions and estimates. These judgments and estimates include assumptions regarding our future operating performance, the time to completing an IPO or other liquidity event and the determinations of the appropriate valuation methods. Because our common stock has characteristics significantly different from that of publicly traded common stock and because changes in the subjective input assumptions can materially affect our fair value estimates, the existing models do not necessarily provide a reliable, single measure of the fair value of our common stock. If we had made different assumptions, our share-based compensation expense, our net loss and net loss per share could have been significantly different. The foregoing valuation methodologies are not the only valuation methodologies available and will not be used to value our common stock once this offering is complete. We cannot make assurances as to any particular valuation for our stock. Accordingly, investors are cautioned not to place undue reliance on the foregoing valuation methodologies as an indicator of future stock prices.

Tax Valuation Allowance

We recorded deferred tax assets of $7.9 million, related to our net operating losses, as of December 31, 2014, which have been fully offset by a valuation allowance due to uncertainties surrounding our ability to realize these tax benefits. We record a valuation allowance if it is more likely than not that a deferred tax asset will not be realized. We provided a full valuation allowance on our deferred tax assets that primarily consist of cumulative net operating losses, or NOLs, of $20.4 million for the period from our inception on May 26, 2011 to December 31, 2014. We incurred a net loss of $12.5 million for the nine months ended September 30, 2015. Due to our three-year cumulative loss position, history of operating losses and losses expected to be incurred in the foreseeable future, we considered it necessary to provide for a full valuation allowance against our net deferred tax assets.

Our deferred tax assets are primarily composed of federal and state tax NOL carryforwards. As of December 31, 2014, we had federal NOL carryforwards of $20.4 million and state NOL carryforwards of $24.6 million available to reduce future taxable income, if any. These federal NOL carryforwards will begin to expire at various dates starting in 2031. The state NOL carryforwards will begin to expire at various dates starting in 2027. In general, if we experience a greater than 50 percentage point aggregate change in ownership of specified significant stockholders over a three-year period, utilization of our pre-change NOL carryforwards will be subject to an annual limitation under Section 382 of the U.S. Internal Revenue Code of 1986, as amended, or the Code, and similar state laws. Such limitations may result in expiration of a

portion of the NOL carryforwards before utilization and may be substantial. If we experience a Section 382 ownership change in connection with this offering or as a result of future changes in our stock ownership, some of which changes are outside our control, the tax benefits related to the NOL carryforwards may be further limited or lost.

Results of Operations for the Nine Months Ended September 30, 2014 and 2015

The following table sets forth our results of operations for the nine months ended September 30, 2014 and 2015.

	Nine Months Ended September 30,		Period-to-Period Change
	2014	2015	
	(in thousands)		
Operating expenses:			
Research and development	$ 4,776	$ 6,964	$ 2,188
General and administrative	2,398	5,337	2,939
Total operating expenses	7,174	12,301	5,127
Loss from operations	(7,174)	(12,301)	(5,127)
Other income (expense):			
Interest expense	(353)	(174)	179
Interest income	1	6	5
Total other expense	(352)	(168)	184
Net loss	$(7,526)	$(12,469)	$ (4,943)

Research and development. Research and development expense increased from $4.8 million for the nine months ended September 30, 2014 to $7.0 million for the nine months ended September 30, 2015, an increase of 46%. This was primarily attributable to a $0.7 million increase in costs related to the ongoing Phase 2 clinical trial and the initiation of the Phase 3 clinical trial for CLS-1001, a $0.8 million increase in costs for the ongoing Phase 2 clinical trial of CLS-1003 in RVO patients and a $0.8 million increase in costs for preclinical studies of CLS-1002 for wet AMD. This was partially offset by a $1.0 million decrease in pre-clinical costs for CLS-1001. We also incurred increased personnel and related costs of $0.5 million during the nine months ended September 30, 2015 as compared to the nine months ended September 30, 2014.

General and administrative. General and administrative expense increased by $2.9 million, from $2.4 million for the nine months ended September 30, 2014 to $5.3 million for the nine months ended September 30, 2015. The increase was primarily attributable to recognizing $1.9 million of expenses related to previously deferred offering costs, a $0.4 million increase in personnel costs, including share-based compensation, and $0.4 million in professional fees including fees related to the audit of our financial statements in preparation for this offering.

Interest expense. Interest expense decreased from $0.4 million in the nine months ended September 30, 2014 to $0.2 million in the nine months ended September 30, 2015. The decrease was primarily related to the accelerated amortization of debt discount related to the convertible promissory notes upon their conversion to Series B convertible preferred stock that occurred in the prior period. This was partially offset by the accretion of the financing costs, and the accretion of the warrants and the final payment related to the loan agreements.

Results of Operations for the Years Ended December 31, 2013 and 2014

The following table sets forth our results of operations for the years ended December 31, 2013 and 2014.

	Year Ended December 31,		Period-to-Period Change
	2013	2014	
	(in thousands)		
Operating expenses:			
Research and development	$ 5,045	$ 6,692	$ 1,647
General and administrative	2,193	3,131	938
Total operating expenses	7,238	9,823	2,585
Loss from operations	(7,238)	(9,823)	(2,585)
Other income (expense):			
Interest expense	(23)	(371)	(348)
Interest income	7	5	(2)
Total other expense	(16)	(366)	(350)
Net loss	$(7,254)	$(10,189)	$ (2,935)

Research and development. Research and development expense increased from $5.0 million for the year ended December 31, 2013 to $6.7 million for the year ended December 31, 2014, an increase of 33%. The increase was primarily attributable to a $0.6 million increase in costs related to the design, testing and manufacture of our SCS Microinjector, a $0.7 million increase in costs related to the Phase 2 program for CLS-1001 and a $0.6 million increase in costs for the startup of the Phase 2 clinical trial of CLS-1003 in RVO patients. We also incurred increased personnel costs during the year ended December 31, 2014 as compared to the prior year, offset by lower costs of preclinical studies for CLS-1001.

General and administrative. General and administrative expense increased by $0.9 million, from $2.2 million for the year ended December 31, 2013 to $3.1 million for the year ended December 31, 2014, an increase of 43%. The increase was primarily attributable to increases in personnel costs, including share-based compensation and fees related to the audit of our financial statements.

Interest expense. Interest expense increased by $0.3 million for the year ended December 31, 2014. This increase was primarily due to the acceleration of the amortization of the debt discount related to the convertible promissory notes upon their conversion to Series B convertible preferred stock.

Liquidity and Capital Resources

Sources of Liquidity

We have incurred losses and experienced negative operating cash flows since our inception and anticipate that we will continue to incur losses for at least the next several years. We expect that our research and development and general and administrative expenses will increase over historical levels and, as a result, we will need additional capital to fund our operations, which we may obtain from additional public offerings, debt financing, collaboration and licensing arrangements or other sources.

For the period from our inception on May 26, 2011 to September 30, 2015, we have cumulative net cash used by operating activities of $29.3 million and cumulative net losses of $34.2 million. Since our inception, we have funded operations primarily through the sale of convertible preferred stock, a long-term loan agreement and the issuance of convertible promissory notes. We have raised net cash proceeds of

$24.5 million from the sale of convertible preferred stock, $6.0 million from a long-term loan agreement and $3.4 million from the sale of convertible promissory notes through September 30, 2015. As of December 31, 2014 and September 30, 2015, we had cash and cash equivalents of $8.3 million and $4.2 million, respectively. We invest any cash in excess of our immediate requirements primarily with a view to liquidity and capital preservation. As of December 31, 2014 and September 30, 2015, our funds were held in cash and money market funds. In November and December 2015, we raised an additional $19.2 million from the sale of convertible preferred stock.

On April 15, 2015, we entered into a loan and security agreement with Silicon Valley Bank, or SVB, for borrowings of up to $6.0 million. Under the terms of the loan agreement, an initial tranche of $4.0 million was advanced on April 15, 2015 and an additional tranche of $2.0 million was advanced on May 15, 2015. Amounts outstanding under the loan agreement accrue interest at SVB's prime rate less 0.50%, or 2.75% as of September 30, 2015. We are obligated only to make payments of accrued interest until May 2016, after which outstanding principal and accrued interest will be payable in 30 monthly installments through October 2018. We will also be obligated to make a final payment of $330,000 to SVB upon the maturity date of the loan in October 2018. We may voluntarily prepay amounts outstanding under the loan agreement, subject to the payment of a termination fee equal to $120,000, which termination fee decreases over time to $30,000 after the second anniversary of the initial advance.

Our obligations under the SVB loan are secured by substantially all of our assets except for our intellectual property, and we may not encumber our intellectual property without SVB's prior written consent. The loan agreement with SVB contains negative covenants restricting our activities, including limitations on dispositions, mergers or acquisitions, incurring indebtedness or liens, paying dividends or making investments and other specified business transactions. There are no financial covenants associated with the loan agreement. Our obligations under the loan agreement are subject to acceleration upon the occurrence of specified events of default, including a material adverse change in our business, operations or financial or other condition.

In connection with the loan agreement, we issued a warrant to SVB to purchase 57,143 shares of our convertible preferred stock at an exercise price of $3.50 per share. As of the date of this prospectus, the warrant remains outstanding and upon the closing of the offering will be exercisable for 57,143 shares of common stock at an exercise price of $3.50 per share. Unless earlier exercised, the warrant will expire in April 2025.

In April 2014, we issued $3.0 million in aggregate principal amount of convertible promissory notes, or the bridge notes, to our existing stockholders, including two of our executive officers and one of our directors in their individual capacities. The bridge notes accrued interest at an annual rate of 7%, with principal plus interest due upon maturity in April 2015 unless earlier converted. The bridge notes were convertible upon the occurrence of a qualified financing. Our August 2014 Series B convertible preferred stock financing was a qualified financing as contemplated by the bridge notes, and the principal and interest under all of the bridge notes was converted automatically into an aggregate of 1,137,652 shares of Series B convertible preferred stock in connection with this financing. These shares of Series B convertible preferred stock are convertible into shares of our common stock upon the completion of this offering. In connection with the issuance of the bridge notes, we also issued warrants to the lenders to purchase an aggregate of 248,175 shares of our common stock at an exercise price of $0.01 per share. These warrants expire upon the closing of this offering, and therefore we expect that these warrants will be exercised in connection with the completion of this offering and that we will issue 248,175 shares of our common stock upon their exercise.

In April 2013, we entered into a loan agreement with an entity affiliated with the State of North Carolina under which we borrowed an aggregate of $125,000. The outstanding balance bore interest at an annual rate of 4.25%. All unpaid principal, together with unpaid and accrued interest, were due and payable in February 2016 or, if earlier, upon the occurrence of specified events. We repaid this note in full in May 2014. In connection with the initial loan, we also issued this lender a warrant to purchase 16,550 shares of our Series A-1 convertible preferred stock, which will become a warrant to purchase 16,550 shares of our common stock following the completion of this offering.

Funding Requirements

Our primary uses of capital are, and we expect will continue to be, compensation and related expenses, third-party clinical research and development services, laboratory and related supplies, clinical costs, legal and other regulatory expenses and general overhead costs.

The successful development of our product candidates is highly uncertain. As such, at this time, we cannot reasonably estimate or know the nature, timing and estimated costs of the efforts that will be necessary to complete the remainder of the development of CLS-1001, CLS-1002, CLS-1003 or any of our other product candidates. We are also unable to predict when, if ever, material net cash inflows will commence from product sales. This is due to the numerous risks and uncertainties associated with developing drugs, including the uncertainty of:

- successful enrollment in, and completion of clinical trials;
- receipt of marketing approvals from applicable regulatory authorities;
- establishing commercial manufacturing capabilities or making arrangements with third-party manufacturers;
- obtaining and maintaining patent and trade secret protection and regulatory exclusivity for our product candidates; and
- launching commercial sales of the products, if and when approved, whether alone or in collaboration with others.

A change in the outcome of any of these variables with respect to the development of any of our product candidates would significantly change the costs and timing associated with the development of that candidate.

Until such time, if ever, as we can generate substantial product revenue, we expect to finance our cash needs through a combination of equity offerings, debt financings and potential collaboration, license and development agreements. We do not currently have any committed external source of funds. To the extent that we raise additional capital through the sale of equity or convertible debt securities, your ownership interest will be diluted, and the terms of these securities may include liquidation or other preferences that adversely affect your rights as a common stockholder. Debt financing and preferred equity financing, if available, may involve agreements that include covenants limiting or restricting our ability to take specific actions, such as incurring additional debt, making capital expenditures or declaring dividends.

If we raise additional funds through collaborations, strategic alliances or marketing, distribution or licensing arrangements with third parties, we may be required to relinquish valuable rights to our technologies, future revenue streams, research programs or product candidates or to grant licenses on terms that may not be favorable to us. If we are unable to raise additional funds through equity or debt financings when needed, we may be required to delay, limit, reduce or terminate our drug development or future commercialization efforts or grant rights to develop and market product candidates that we would otherwise prefer to develop and market ourselves.

We will also incur costs as a public company that we have not previously incurred or have previously incurred at lower rates, including but not limited to, increased costs and expenses for fees to members of our board of directors, increased personnel costs, increased directors and officers insurance premiums, audit and legal fees, investor relations fees and expenses for compliance with reporting requirements under the Exchange Act and rules implemented by the SEC and NASDAQ. We estimate that we will annually incur approximately $1.5 million to $2.5 million in expenses to comply with these requirements.

Outlook

Based on our research and development plans and our timing expectations related to the progress of our programs, we expect that the net proceeds from this offering, together with our existing cash and cash equivalents, will enable us to fund our operating expenses and capital expenditure requirements for at least the next 12 months. We have based this estimate on assumptions that may prove to be wrong, and we could use our capital resources sooner than we expect. Additionally, the process of testing product candidates in clinical trials is costly, and the timing of progress in these trials is uncertain.

Cash Flows

During the nine months ended September 30, 2014 and 2015, our operating activities used net cash of $6.4 million and $10.1 million, respectively. The use of net cash in each period primarily resulted from our net losses. The increase in net loss for the nine months ended September 30, 2015 as compared to the nine months ended September 30, 2014 was primarily attributable to higher research and development expenses and increased personnel-related costs. The other changes from operating activities were caused primarily by changes in our accounts payable and other accrued liabilities, share-based compensation and deferred offering costs. The net cash used in investing activities during the nine months ended September 30, 2014 and 2015 related to the purchase of fixed assets. The net cash provided by financing activities during the nine months ended September 30, 2014 consisted primarily of $3.0 million received from the issuance of the bridge notes and $12.8 million from the sale of our Series B convertible preferred stock. The net cash provided by financing during the nine months ended September 30, 2015 was primarily due to the $6.0 million long-term debt agreement with SVB.

During the years ended December 31, 2013 and 2014, our operating activities used net cash of $6.8 million and $9.1 million, respectively. The use of net cash in each period primarily resulted from our net losses. The increase in net loss for the year ended December 31, 2014 as compared to the year ended December 31, 2013 was primarily attributable to higher research and development expenses. The other changes from operating activities were caused primarily by changes in our accounts payable, share-based compensation, deferred offering costs and other accrued liabilities. During the years ended December 31, 2013 and 2014, we did not engage in any material investing activities other than the purchase of property and equipment. The net cash provided by financing activities during the year ended December 31, 2013 consisted primarily of $7.8 million from the sale of our Series A-1 convertible preferred stock, net of issuance costs, while the net cash provided by financing activities during the year ended December 31, 2014 consisted primarily of $3.0 million received from the issuance of the bridge notes and $12.7 million from the sale of our Series B convertible preferred stock.

Contractual Obligations

The following table summarizes our significant contractual obligations as of December 31, 2014, all of which consisted of obligations under leases for our corporate headquarters in Alpharetta, Georgia and our research facility in Durham, North Carolina.

	Payment due by period (in thousands)				
	Total	Less than 1 year	1-3 years	3-5 years	More than 5 years
Operating lease obligations	$293	$ 180	$ 113	$ —	$ —

On April 15, 2015, we entered into a loan agreement with a bank for borrowings up to $6.0 million, with a floating interest rate equal to the Wall Street Journal's prime rate minus 0.5%. Under the terms of the loan agreement, an initial tranche of $4.0 million was advanced on April 15, 2015 and an additional tranche of $2.0 million was advanced on May 15, 2015. We are required to pay accrued interest only for a period of 12 months from the date of each advance, followed by 30 equal monthly payments of principal and accrued interest. A final payment of $0.3 million, or 5.5% of the aggregate borrowed amount, is due at maturity of the loan in 2018.

We have no material non-cancelable purchase commitments with contract manufacturers or service providers, as we have generally contracted on a cancelable purchase order basis.

Off-Balance Sheet Arrangements

We did not have during the periods presented, and we do not currently have, any off-balance sheet arrangements, as defined under SEC rules.

Recent Accounting Pronouncements

We have considered all recently issued accounting pronouncements and do not believe the adoption of such pronouncements will have a material impact on our financial statements.

JOBS Act

In April 2012, the Jumpstart Our Business Startups Act of 2012, or the JOBS Act, was enacted. Section 107(b) of the JOBS Act provides that an emerging growth company can take advantage of an extended transition period for complying with new or revised accounting standards. Thus, an emerging growth company can delay the adoption of certain accounting standards until those standards would otherwise apply to private companies. We have irrevocably elected not to avail ourselves of this extended transition period, and, as a result, we will adopt new or revised accounting standards on the relevant dates on which adoption of such standards is required for other public companies.

Quantitative and Qualitative Disclosures about Market Risk

The market risk inherent in our financial instruments and in our financial position represents the potential loss arising from adverse changes in interest rates. As of December 31, 2013 and 2014 and September 30, 2015, we had cash and cash equivalents of $1.9 million, $8.3 million and $4.2 million, respectively. We generally hold our cash in interest-bearing money market accounts. Our primary exposure to market risk is interest rate sensitivity, which is affected by changes in the general level of U.S. interest rates. Due to the short-term maturities of our cash equivalents and the low risk profile of our investments, an immediate 100 basis point change in interest rates would not have a material effect on the fair market value of our cash equivalents.

We do not engage in any hedging activities against changes in interest rates. Our outstanding debt instruments carry a fixed interest rate and, as such, are not subject to interest rate risk.

We do not have any foreign currency or other derivative financial instruments.

BUSINESS

Overview

We are a late-stage clinical biopharmaceutical company developing first-in-class drug therapies to treat blinding diseases of the eye. Our current product candidates focus on diseases affecting the retina and choroid, especially diseases associated with macular edema, and are injected into the suprachoroidal space, or SCS, adjacent to the choroid, using our proprietary SCS Microinjector. With the SCS injection, our product candidates are more directly administered to the retina and choroid as compared to other ocular drug delivery techniques, such as intravitreal injections. We believe SCS injection may provide a number of benefits, including lower frequency of necessary administration and faster onset of therapeutic effect. We hold the exclusive rights to develop and commercialize drugs for injection into the SCS. Our most advanced product candidates, CLS-1001 and CLS-1003, are based on commonly used ophthalmic drugs, which we believe will allow us to more efficiently and predictably pursue the regulatory approval of these product candidates under Section 505(b)(2) of the Federal Food, Drug, and Cosmetic Act. Under Section 505(b)(2), if we can establish that reliance on the U.S. Food and Drug Administration's, or FDA's, previous findings of safety or effectiveness or both for an approved product is scientifically appropriate, or there is scientific literature to support the product's safety or effectiveness, it may eliminate the need for us to conduct some of the preclinical studies or clinical trials for the new product candidate that might otherwise have been required. We estimate that there are nearly five million people in the United States diagnosed with our target indications and that worldwide annual sales of drugs to treat these indications were approximately $7 billion in 2014.

Our CLS-1001 program is being developed for the treatment of macular edema associated with non-infectious uveitis, a condition that we estimate affects 350,000 patients in the United States. CLS-1001 consists of an SCS injection of CLS-TA, our proprietary, preservative-free formulation of the corticosteroid triamcinolone acetonide, or TA, specifically designed to be administered through our SCS Microinjector. We enrolled the first patient in our Phase 3 clinical trial in November 2015. We expect to enroll approximately 150 patients in this trial and report the data in the second half of 2017. We believe, based on our end-of-Phase 2 review with the FDA in May 2015, that this Phase 3 clinical trial will be the only pivotal clinical trial necessary to support the filing of a New Drug Application, or NDA, with the FDA. In the second half of 2015, we completed enrollment of a 22 patient Phase 2 clinical trial and expect to report the results of this trial in January 2016. In our completed Phase 1/2 clinical trial, we observed a range of improvement in best corrected visual acuity, or BCVA, of between one and five lines on a standard eye chart. At the end of week 12, the average improvement in BCVA exceeded two lines, which is considered clinically meaningful. At the end of week 26, four of the eight patients in the trial had still not required additional treatment. For those four patients, the average improvement in BCVA was nearly three lines at week 26.

We are developing CLS-1003 for the treatment of macular edema associated with retinal vein occlusion, or RVO, a condition that we estimate affects 2.2 million patients in the United States. We have completed enrollment of a 46-patient Phase 2 clinical trial and expect to report data from this trial in the second quarter of 2016. In our CLS-1003 program, we are exploring the concomitant SCS injection of CLS-TA and an intravitreal injection of Eylea, a corticosteroid and an anti-VEGF agent, respectively, to provide the potential benefits of improved visual acuity, reduced macular edema and reduced injection frequency. Corticosteroids and anti-VEGF agents have known advantages in treating RVO.

We are developing CLS-1002 for the treatment of wet age-related macular degeneration, or wet AMD, a condition that we estimate affects 1.2 million patients in the United States. We have selected a lead compound, axitinib, that has activity against both vascular endothelial growth factor, or VEGF, and platelet derived growth

factor, or PDGF, to be administered by SCS injection, which we believe could be more effective than current treatments for wet AMD. Axitinib, also known by its brand name Inlyta, is currently marketed by Pfizer and is approved by the FDA for the treatment of advanced renal cell carcinoma, but not for any ophthalmology indications. We plan to develop a proprietary suspension formulation of axitinib and file an investigational new drug application, or IND, with the FDA in the second half of 2016. We are also considering a development program for drug compounds that may be able to treat diabetic macular edema, or DME.

We are also working with third parties through collaborations and licenses to develop eye disease treatments using our proprietary SCS Microinjector and method of drug administration to the choroid and retina through the SCS. We are collaborating with Santen Pharmaceuticals, Ltd., or Santen, to develop compounds for SCS injection that are designed to treat DME, wet AMD and RVO. Additionally, we are collaborating with Santen to explore the potential benefits of SCS injection of compounds known to reduce elevated intraocular pressure, or IOP, associated with glaucoma, and formulated for IOP reduction over a sustained period of time. We have also entered into an agreement with Spark Therapeutics, Inc., or Spark, pursuant to which we are collaborating with Spark to investigate the use of our SCS Microinjector to administer gene therapy to the back of the eye for the potential treatment of orphan diseases of the eye.

Our current and planned development programs aim to restore or improve visual function primarily by reducing the macular edema associated with a number of diseases affecting the retina, the tissue that lines the inside of the eye and is the part of the eye primarily responsible for vision, and the choroid, the layer adjacent to the retina that supplies the retina with blood, oxygen and nourishment. These diseases include uveitis, RVO, wet AMD and DME. Macular edema is the build-up of fluid that can cause abnormal swelling of the macula, the portion of the retina responsible for central vision and color perception. This swelling can rapidly result in deterioration of vision and can eventually lead to blindness.

The most common treatments for eye diseases with associated macular edema affecting the retina and choroid are corticosteroids and drugs that inhibit VEGF signaling, known as anti-VEGF drugs. These corticosteroids and anti-VEGF drugs are often injected into the vitreous, a jelly-like substance that occupies the central portion of the eye. Intravitreal injections rely on drug to diffuse outward from the vitreous to the retina and choroid. This diffusion can result in lower concentrations of drug in these targeted areas. At the same time, this diffusion can also result in drug spreading to unintended parts of the eye, where, for some drugs, it can cause significant side effects. By contrast, with our SCS Microinjector, drug is injected into and spreads within the SCS, which is the space located between the choroid and the outer protective layer of the eye known as the sclera, to reach the back of the eye.

We believe administration of drug using our SCS Microinjector may provide improved bioavailability to the targeted retina and choroid, with drug remaining more localized and away from other parts of the eye, where the drug could cause side effects. Corticosteroids are effective both at treating the inflammatory aspect of ocular disease and at reducing macular edema, but when delivered intravitreally, they have been associated with significant side effects, such as cataract formation or exacerbation and elevated IOP, which can lead to glaucoma. Anti-VEGF drugs, while highly effective in reducing macular edema, require frequent administration, in some cases as often as monthly. We believe that our differentiated approach of injecting ocular drugs into the SCS may result in fewer side effects and improved bioavailability of drug at the diseased retina and choroid, as compared to intravitreal administration, a faster onset of therapeutic effect, a similar efficacy profile with lower drug amounts required, and longer duration of therapeutic effect with less frequent required injections. The procedure for SCS injection with our SCS Microinjector is conducted in an in-office setting and is similar to the procedure for intravitreal injection, and we therefore expect our products, if they achieve regulatory approval, to be incorporated into retinal specialists' standard medical practice.

Under our CLS-1001 program, we have completed a Phase 1/2 clinical trial and have completed dosing in a Phase 2 clinical trial in patients with non-infectious uveitis, a condition characterized by inflammation of the choroid and surrounding tissues not caused by an infectious agent. The most common treatment for non-infectious uveitis involves the use of corticosteroids or other immunosuppressive agents that are used systemically or locally. A commonly used corticosteroid is triamcinolone acetonide, or TA. CLS-1001 consists of an SCS injection of CLS-TA, our proprietary, preservative-free formulation of TA, specifically designed to be administered through our proprietary SCS Microinjector. In our Phase 1/2 clinical trial, we evaluated the efficacy and safety of an SCS injection of Triesence, a TA formulation that is pharmaceutically equivalent to CLS-TA and that has been approved by the FDA to treat non-infectious uveitis. While the trial was primarily a safety and tolerability study, we also assessed efficacy measures, including BCVA improvement and reduction in retinal thickness, which is a common measure of macular edema. During the course of the trial, we observed a range of improvements in BCVA of between one and five lines on a standard eye chart with each line of improvement corresponding to five letters. At the end of week 12, the average improvement in BCVA exceeded two lines, which is considered clinically meaningful. At the end of week 26, four of the eight patients in the trial had still not required additional treatment. For those four patients, the average improvement in BCVA was nearly three lines at week 26. At the end of weeks 12 and 26 of the trial, the average reduction in retinal thickness for patients was greater than 100 microns from their respective baselines, with a reduction of 50 microns being considered clinically meaningful. In the trial, SCS injection of Triesence was generally well tolerated, with none of the eight dosed patients developing cataracts or experiencing elevated IOP through week 26.

Because our CLS-1001 program uses our formulation of TA for the treatment of uveitis, and TA is known to be effective in treating uveitis, we believe that our product candidate will be at least as effective as commonly used formulations of TA for locally treating the disease, including the associated macular edema, with a reduced incidence of side effects, such as uncontrolled elevated IOP and cataracts. Our preclinical studies suggest that SCS injection of TA may provide improved bioavailability of drug at the diseased retina and choroid compared to other local intraocular or periocular administration methods, which may result in faster onset of therapeutic effect and a better efficacy profile with lower drug amounts required. Our preclinical ocular drug distribution studies suggest the potential for CLS-1001 to effectively treat uveitis for at least 90 days following a single SCS injection and the Phase 1/2 clinical trial observations potentially support a duration of action longer than 90 days since four of the eight patients did not require additional treatment over the 180-day observation period in that trial. Currently used ocular injections of TA are typically effective for approximately 90 days.

In the second half of 2015, we completed enrollment of a Phase 2 clinical trial in patients with macular edema associated with non-infectious uveitis to evaluate the safety and efficacy of our CLS-TA injected into the SCS. We enrolled 22 patients in this Phase 2 clinical trial. The last patient's last visit has been completed and we expect to report data in January 2016.

In November 2015, we enrolled the first patient in a pivotal Phase 3 clinical trial with our CLS-TA injected into the SCS. We intend to enroll approximately 150 patients with macular edema associated with non-infectious uveitis in this trial and expect to report data from this trial in the second half of 2017. Based on our end-of-Phase 2 review with the FDA in May 2015, we believe this will be the only pivotal clinical trial necessary to support a 505(b)(2) NDA filing in the CLS-1001 program. If approved, CLS-TA would be the first drug specifically indicated for macular edema associated with non-infectious uveitis.

Under our CLS-1003 program, we have completed enrollment of Phase 2 clinical trial for the treatment of macular edema associated with RVO, a sight-threatening disorder resulting from the blockage of a retinal

vein. We enrolled 46 patients in this trial. The current standard of care for RVO involves monthly intravitreal injections of an anti-VEGF drug, such as Lucentis (ranibizumab), Eylea (aflibercept) or Avastin (bevacizumab). Corticosteroids are also indicated for the treatment of macular edema associated with RVO.

In our Phase 2 clinical trial, we are evaluating the safety and efficacy of the injection of our CLS-TA into the SCS, together with the anti-VEGF agent Eylea injected into the vitreous, as compared to an intravitreal injection of Eylea alone. We believe that SCS injection of our CLS-TA, in combination with intravitreal anti-VEGF treatment, may provide the potential benefits of improved visual acuity, reduced macular edema and reduced injection frequency. In addition, we believe that the side effect profile of CLS-1003 will be similar to that of current intravitreal anti-VEGF treatments alone, as SCS injections of CLS-TA should allow the corticosteroid to remain substantially localized in the retina and choroid without introducing the side effects that are commonly observed with other routes of administration of corticosteroids.

Under our CLS-1002 program, for the treatment of wet AMD, we plan to develop a proprietary suspension formulation of axitinib, a single molecule with dual anti-VEGF and anti-PDGF activity, for injection into the SCS with our SCS Microinjector. Wet AMD is a condition involving the abnormal formation and growth of new blood vessels in the choroid, their intrusion into the outer layers of the retina and the leakage of blood and fluid into the retina. The current standard of care for the treatment of wet AMD is intravitreal injection of anti-VEGF drugs as a standalone therapy, as often as seven times per year. Additionally, anti-PDGF molecules, when injected into the vitreous immediately following an anti-VEGF intravitreal injection, have shown clinical promise from Phase 1 and Phase 2 trials conducted by others in improving upon the visual acuity outcomes of the anti-VEGF agent alone. Because wet AMD manifests in the retina and choroid, we believe that SCS injection of drug more directly to the retina and choroid may result in faster onset of therapeutic effect as compared to intravitreal injection. We believe that SCS injection also has the potential to access the new blood vessels in the choroid, which could reduce the necessary frequency of treatment, since damage to the retina may be preventable or reduced before these new blood vessels can intrude into the retina and cause damage. We plan to further study these effects in any future clinical trials that we conduct as part of our CLS-1002 program.

Our drug candidates, SCS Microinjector, and method of drug administration into the SCS are protected by five issued U.S. patents and over 50 patent applications filed in the United States and major international markets, including the European Union, Canada, India, Japan, China and Australia. Our issued patents are broadly directed to methods of administering drugs of any type, including anti-inflammatory drugs, anti-VEGF drugs, anti-PDGF drugs and gene therapy, into the SCS by injection and are not scheduled to expire until 2027, 2029 and 2034. Our patent applications relate to SCS injection technology and methods, our current therapeutic drug candidates and formulations, various therapeutic uses, including treatment of specific indications such as macular edema associated with non-infectious uveitis and RVO, as well as wet AMD and DME, and administration of specific classes of drugs to the SCS, including anti-inflammatory drugs and anti-VEGF drugs. Our pending patent applications are not projected to expire until between 2027 and 2035.

If our product candidates are approved, we plan to commercialize them with a specialty team of 30 to 40 sales and medical marketing support professionals to target the approximately 1,700 retinal specialists in the United States, and we may also pursue collaborations with third parties to commercialize any of our drugs approved for marketing outside the United States.

The members of our management team have held senior leadership positions at a number of pharmaceutical and biotechnology companies with approved ophthalmic drugs, including Alcon, Alimera

Sciences, CIBA Vision and ISTA Pharmaceuticals. Members of our team have contributed to the development, regulatory approval and commercialization of several retinal products, such as Triesence, Iluvien, Nevanac, Visudyne and Xibrom.

Strategy

Our goal is to be a leading biopharmaceutical company focused on the development and commercialization of therapeutics to treat blinding diseases of the eye, with a particular emphasis on diseases affecting the retina and the choroid. The key elements of our strategy are:

- ***Advancing CLS-1001 and CLS-1003 to FDA approval under the Section 505(b)(2) NDA regulatory pathway.*** Our most advanced product candidates, CLS-1001 and CLS-1003, utilize CLS-TA, our proprietary formulation of TA, a corticosteroid that has been used for decades to treat ocular inflammatory conditions. We believe this approach will allow us to more efficiently and predictably pursue the regulatory approval of these product candidates under Section 505(b)(2) of the Federal Food, Drug, and Cosmetic Act. In the CLS-1001 uveitis program, we recently commenced a pivotal Phase 3 clinical trial of CLS-TA injected into the SCS for the treatment of macular edema associated with non-infectious uveitis and expect to report data from this trial in the second half of 2017. Based on our end-of-Phase 2 review with the FDA in May 2015, we expect this trial to be the only pivotal clinical trial necessary to support a 505(b)(2) NDA filing for CLS-TA. Separately, in our CLS-1003 program, we have completed enrollment of a 46-patient Phase 2 clinical trial of CLS-TA injected into the SCS concomitantly with intravitreally injected Eylea for the treatment of macular edema associated with RVO, with data expected in the second quarter of 2016.
- ***Maximizing the commercial potential of our product candidates.*** If either CLS-1001 or CLS-1003 is approved, we plan to build a specialized team of 30 to 40 sales and medical marketing support professionals to target the approximately 1,700 retinal specialists in the United States. We expect that this sales force would be able to effectively sell more than one of our products, in the event that multiple product candidates are approved for marketing. We have retained the worldwide commercialization rights to all of our product candidates, except we have granted a third party the exclusive right to commercialize our product candidates in Russia and specified adjacent territories pursuant to a license agreement, as described later in this prospectus. We may pursue additional collaborations with third parties to commercialize any of our drugs approved for marketing outside the United States, either through territorial licenses or distributor relationships.
- ***Advancing our CLS-1002 wet AMD development program.*** We plan to develop a proprietary suspension formulation of axitinib, a compound with dual anti-VEGF and anti-PDGF activity, for the treatment of wet AMD by injection into the SCS. We believe a single injection of a drug with dual anti-VEGF and anti-PDGF activity to the choroid and retina through the SCS may provide superior visual outcomes compared to an intravitreal anti-VEGF treatment alone and could reduce the number of injections required to treat wet AMD. We plan to file an IND for our proprietary formulation of axitinib in the second half of 2016.
- ***Developing a product candidate to treat DME.*** DME, like uveitis and RVO, is characterized by an inflammatory aspect. After the data from the CLS-1003 Phase 2 clinical trial have been analyzed, we intend to initiate clinical trials to develop a product candidate to treat DME modeled after our approach for addressing the treatment of RVO.

- ***Developing additional therapies through collaborations with third parties***. We plan to explore collaborations with third parties to develop SCS-injected treatments for eye diseases. These collaborations may take the form of in-licenses of the third parties' drugs or drug candidates for our own development for SCS-injected treatments, or out-licenses for third parties to use our intellectual property covering SCS-injected treatments as part of the development of their own drugs. For example, we are collaborating with Santen to develop compounds designed to treat macular edema and neovascularization associated with wet AMD, RVO and DME. Additionally, we are collaborating with Santen to explore the potential benefits of SCS injection of compounds known to reduce elevated IOP associated with glaucoma for a sustained period of time. We have also entered into an agreement with Spark pursuant to which we are collaborating with Spark to investigate the use of our SCS Microinjector to administer gene therapy to the back of the eye.
- ***Maintaining and strengthening our intellectual property portfolio.*** Our intellectual property strategy aims to control the commercialization of SCS access, with patents and patent applications covering SCS injection methods, novel formulations of drugs and microinjectors used to access the SCS, and methods of treatment of diseases through the SCS. Our current patents and patent applications provide us with exclusivity in the United States and major international markets, and are not projected to expire until between 2027 and 2034. We will seek to broaden the scope of and increase the geographic reach of our patent protection throughout the world.

The Clearside Approach

We are developing drug candidates for the treatment of back of the eye diseases to be administered to the retina and choroid through the SCS using our proprietary SCS Microinjector. We believe that our novel, patented approach of SCS drug injection may provide a number of potential benefits, including:

- ***Improved bioavailability at the site of disease and faster onset of therapeutic effect.*** In preclinical studies, we observed higher amounts of drug present in the retina and choroid following SCS injection, both at early time points and over the course of the experimental timeframe, as compared to the amounts of the same drug present over time in the retina and choriod following intravitreal injection. We believe this suggests that treatment using SCS injection of a drug may have a faster onset of therapeutic effect than intravitreal drug injection, along with similar or better efficacy, in diseases such as uveitis, RVO, wet AMD and DME.
- ***Similar efficacy profile with lower drug amounts required.*** In a preclinical study in an animal model of uveitis, SCS injection of TA achieved similar efficacy results with only 10% of the drug amount commonly administered through intravitreal injection. We believe this suggests our approach may allow us to develop ocular therapies with similar efficacy, but with lower amounts of active drug, compared to current therapies.
- ***Less frequent injections.*** Current treatments for RVO require monthly intravitreal injections of anti-VEGF drugs, while current treatments for wet AMD require such injections as often as seven times per year. For RVO patients, we believe that a combination of a standard intravitreal injection of an anti-VEGF drug that addresses the vascular aspect of the disease, together with an SCS injection of CLS-TA, which addresses the inflammatory aspect of RVO, may have efficacy similar to that of monthly intravitreal anti-VEGF injections but with a reduction in the frequency of treatment to once every 90 days. In wet AMD, we believe that more direct administration of drugs with anti-VEGF or dual anti-VEGF and anti-PDGF activity to the neovascularization in the choroid through SCS injection may

substantially block the process of additional new vascular growth within the choroid before the vessels break into the retina and create further damage through leakage. If treatment through the SCS can block retinal damage before it occurs, we believe it could delay vision loss for a longer duration of time than the current standard intravitreal administration of anti-VEGF drugs and, accordingly, could require less frequent administration while providing at least the same levels of efficacy.

- ***Enhanced safety profile.*** Intravitreal injections result in drugs diffusing throughout the eye, including to the lens, iris and ciliary body at the front of the eye, which for some drugs, such as corticosteroids, has been associated with safety issues, such as cataracts and elevated IOP levels. Intravitreal administration of TA has been associated with cataracts and increases in IOP levels in 20% to 60% of patients. Because SCS injection of drugs in preclinical studies appeared to result in drug remaining localized in the retina and choroid without substantial diffusion to the vitreous or the front portion of the eye, we believe SCS injection has the potential to reduce the incidence of these side effects. None of the eight patients dosed in our Phase 1/2 clinical trial in non-infectious uveitis experienced cataracts, abnormally high levels of IOP or other treatment-related serious adverse events over the course of 26 weeks following a single SCS injection of TA.
- ***Incorporated into standard medical practice.*** If approved for marketing, our drugs will be packaged together with our SCS Microinjector for use by retinal specialists in their offices. Our product candidates are designed to be administered using a similar procedure as is used for intravitreal injections. Accordingly, we expect our products, if approved, will be incorporated into retinal specialists' standard medical practice.

The current development status of our product candidates is summarized in the chart below:

Development Program	Indication	Route of Administration and Active Ingredient	Status and Upcoming Milestones
CLS-1001	Macular edema associated with non-infectious uveitis	SCS injection of CLS-TA	• Initiated ~150-patient single pivotal Phase 3 clinical trial in November 2015 with CLS-TA, with data expected in the second half of 2017 • Completed enrollment of a 22-patient Phase 2 clinical trial with CLS-TA, with data expected in January 2016 • Completed Phase 1/2 clinical trial
CLS-1003	Macular edema associated with RVO	SCS injection of CLS-TA together with intravitreal injection of the anti-VEGF agent, Eylea	• Completed enrollment of a 46-patient Phase 2 clinical trial, with data expected in the second quarter of 2016
CLS-1002	Wet AMD	SCS injection of the anti-VEGF and anti-PDGF agent, axitinib	• IND submission expected in the second half of 2016

We have discussed our proposed development program with the FDA for the CLS-1001 program using CLS-TA for the treatment of macular edema associated with non-infectious uveitis, but have not yet done so for our CLS-1003 and CLS-1002 development programs.

CLS-1001 Program Targeting Macular Edema Associated with Non-infectious Uveitis

In the CLS-1001 program, we are developing CLS-TA for treatment of macular edema associated with non-infectious uveitis, a condition characterized by macular edema in addition to other complications due to a variety of inflammatory conditions in the eye other than infection. CLS-1001 consists of an SCS injection of CLS-TA, our proprietary formulation of TA. In November 2015, we enrolled the first patient in a pivotal Phase 3 clinical trial in which we intend to enroll approximately 150 patients. We currently expect to report data from this trial in the second half of 2017 and then submit a Section 505(b)(2) NDA to the FDA. We have completed enrollment of a Phase 2 clinical trial for this indication that we have conducted with CLS-TA. We enrolled 22 patients in the Phase 2 clinical trial. We expect to report data from this Phase 2 trial in January 2016. We have also completed a Phase 1/2 clinical trial in eight uveitis patients. We believe that CLS-TA will be at least as effective in treating uveitis, including the associated macular edema, as commonly used treatments with corticosteroids. However, we believe that it may provide improved bioavailability of drug at the diseased retina and choroid, which may result in faster onset of therapeutic effect, a similar efficacy profile with lower drug amounts required, and longer duration of therapeutic effect, potentially resulting in a reduced frequency of necessary injections. We also believe that CLS-TA may result in fewer side effects compared to commonly used corticosteroid treatments.

Market Opportunity for Treatment of Macular Edema Associated with Non-infectious Uveitis

Uveitis is one of the most frequent causes of blindness in the developed world. Based on prevalence data published in the journal *Ophthalmology* in 2004 and United States census data for 2010, we estimate approximately 350,000 individuals in the United States suffer from some form of uveitis. Typically diagnosed in individuals between the ages of 20 and 50, uveitis can occur in one or both eyes and accounts for approximately 10% of cases of blindness in the United States, according to a study published in *Journal of Ophthalmology*. Uveitis can be either infectious or non-infectious. Non-infectious uveitis accounts for approximately 80% of all uveitis cases. Macular edema related to uveitis is the predominant cause of blindness or visual impairment among patients with uveitis, accounting for approximately 30% of cases of blindness in uveitis patients.

Limitations of Currently Available Therapies for Macular Edema Associated with Non-Infectious Uveitis

Although there are drugs approved for the treatment of non-infectious uveitis, there are currently no approved drugs that specifically target macular edema associated with non-infectious uveitis. Corticosteroids are the most commonly used treatments for non-infectious uveitis. Corticosteroids administered through eye drops, although used to treat some uveitis patients, are generally ineffective in treating patients with macular edema associated with non-infectious uveitis. Corticosteroids administered orally or systemically can be effective in treating patients with macular edema associated with non-infectious uveitis, but their use is associated with significant side effects. As a result of the shortcomings associated with these methods of administering corticosteroids, the most common method for treating macular edema associated with non-infectious uveitis is intravitreal injection or implant of a corticosteroid, such as TA, dexamethasone or fluocinolone acetonide. Examples of intravitreal corticosteroid treatments include Ozurdex®, Retisert®, Kenalog® and Triesence. Ozurdex is a single-use biodegradable dexamethasone implant that has been approved by the FDA as a treatment for non-infectious uveitis affecting the back of the eye, but has been associated with increased IOP in 25% of patients and cataracts in 5% of patients following administration. Retisert, a non-biodegradable fluocinolone acetonide implant that requires surgical administration, has also been approved by the FDA as a treatment for non-infectious uveitis, but more than 75% of patients receiving

Retisert require additional medications within three years of receiving Retisert therapy to effectively treat their uveitis, more than 35% of patients require surgical intervention in order to control increase in IOP levels, and nearly all patients develop cataracts and require cataract surgery following treatment.

Triesence and Kenalog are the main injectable formulations of TA that are used for the treatment of intraocular inflammatory conditions. Prescription of Kenalog is off-label because it has not been approved by the FDA to treat intraocular conditions. TA has been associated with increases in IOP or cataract formation or progression in 20% to 60% of patients when injected intravitreally.

Immunosuppressive agents are also sometimes used to control the inflammation associated with non-infectious uveitis, but due to their ability to systemically impair the body's immune system and their association with additional side effects, physicians are cautious in using these agents. Anti-VEGF therapies are also used to treat macular edema in a variety of diseases, but are generally not used in uveitis patients because they do not treat the inflammation inherent to uveitis or many of the other complications associated with uveitis.

Potential Benefits of CLS-1001

If approved by the FDA, CLS-TA would be the first treatment specifically indicated for macular edema associated with non-infectious uveitis. Because the CLS-1001 program is based on CLS-TA, our formulation of TA, a corticosteroid known to be effective in treating uveitis, we believe that our product candidate will be effective in treating the disease, including the associated macular edema, with a reduced incidence of side effects, such as uncontrolled, elevated IOP and cataracts. Our preclinical studies suggest that SCS injection of TA may provide improved bioavailability of drug at the retina and choroid, both at early time points and over the course of 90 days following treatment. We believe improved bioavailability could result in faster onset of therapeutic effect and a similar efficacy profile with lower drug amounts required. Our clinical observations from the Phase 1/2 trial suggest the potential for CLS-1001 to be effective at treating uveitis for at least 90 days following a single SCS injection, as four of the eight treated patients did not receive any additional therapy for at least 26 weeks following a single SCS injection of TA. Currently used intraocular injections of TA are typically effective for approximately 90 days. In contrast to intravitreal injections, based on our preclinical studies, we believe that SCS injection will allow the drug to remain more localized in the diseased retina and choroid. As a result of this localization, we believe that CLS-1001 may be effective in treating non-infectious uveitis, including the associated macular edema, without significant drug exposure to other eye tissues, thereby potentially reducing the incidence of side effects associated with commonly used corticosteroid treatments. We will evaluate this result in our future clinical trials in the CLS-1001 program.

Our Clinical and Preclinical Development of CLS-1001

Based on our consultation with the FDA, we have conducted or are conducting the following clinical trial and preclinical studies, in each case using TA injected using a prototype of our SCS Microinjector, as part of our CLS-1001 development program:

- a Phase 3 clinical trial in patients with macular edema associated with non-infectious uveitis evaluating SCS injection of CLS-TA with our SCS Microinjector, from which we expect to report data in the second half of 2017;
- a 22 patient Phase 2 clinical trial in patients with macular edema associated with non-infectious uveitis evaluating SCS injection of CLS-TA with our SCS Microinjector, of which we have completed enrollment and from which we expect to report data in January 2016;

- a completed Phase 1/2 clinical trial in non-infectious uveitis patients evaluating SCS injections of Triesence, a commercially available TA formulation, with our SCS Microinjector;
- a completed preclinical study comparing the pharmacokinetic effects of SCS and intravitreal injection of Triesence in rabbits;
- a completed preclinical study comparing the pharmacokinetic effects of SCS injection of CLS-TA and Triesence in rabbits;
- a completed preclinical study evaluating the pharmacodynamic effects of SCS and intravitreal injection of Triesence in a pig model of uveitis; and
- completed preclinical studies evaluating the toxicology of single and repeated SCS injection of CLS-TA and Triesence in rabbits.

Details of these clinical trials and preclinical studies are summarized below.

Phase 1/2 Clinical Trial

In February 2015, we completed a Phase 1/2 multi-center, open-label clinical trial designed to evaluate the safety and tolerability of a single injection of Triesence into the SCS in patients diagnosed with non-infectious uveitis. The trial was conducted under an IND we submitted to the FDA in December 2012 for the potential treatment of sympathetic ophthalmia, temporal arteritis, uveitis and ocular inflammatory conditions unresponsive to topical corticosteroids. The IND was amended in March 2014 to update the specific treatment indication to be macular edema following non-infectious uveitis. The primary purpose of this trial was to demonstrate the overall safety of treating uveitis patients by injecting a commercially available formulation of TA into the SCS, rather than intravitreally.

Clinical Trial Design. We enrolled eight patients at three centers in this trial. Eligibility criteria included adult patients with non-infectious uveitis experiencing either macular edema or vitreous haze, another common complication of uveitis. We enrolled patients with either of these complications of uveitis in order to assess the safety and tolerability of SCS injection of TA and to determine whether SCS injection of TA could improve patient vision by reducing the effects of either of these conditions. Eligible patients had IOP levels of no greater than 22 millimeters of mercury, or mmHg, a common measure of pressure. Normal IOP levels are generally between 10 and 12 mmHg at the low end and 20 and 22 mmHg at the high end. IOP levels above 22 mmHg are considered to be elevated, increasing the patient's risk of developing glaucoma.

Each patient enrolled received a single SCS injection of 4.0 mg of Triesence, a common intravitreal dose of TA, at a location at the front of the eye similar to the location typically used for intravitreal injection. Patients returned for a follow-up examination on the day after the injection and then for eight additional evaluations at weeks 1, 2, 4, 8, 12, 16, 20 and 26 following the treatment. Patients could receive other treatment for non-infectious uveitis at any time during the trial with any accepted therapy, if the patient's condition deteriorated or if the treating physician otherwise determined it to be advisable. In the event a patient received other treatment, we continued to follow the patient for the duration of the trial for safety purposes, but, in accordance with the trial protocol, we no longer considered efficacy measures after the administration of other treatment as part of the evaluation of the SCS injection's effect on that patient.

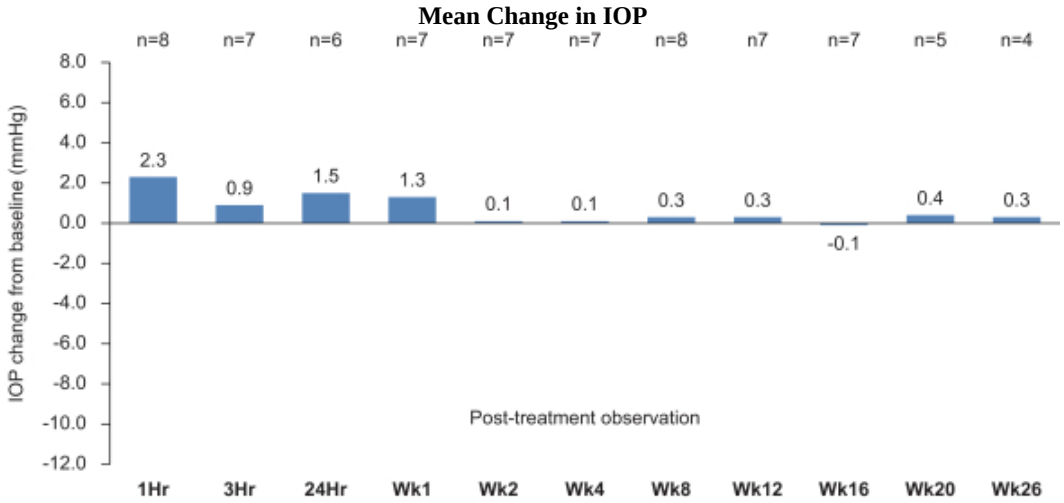
This Phase 1/2 clinical trial was not powered to show efficacy results with statistical significance. Statistical significance means that an effect is unlikely to have occurred by chance. Clinical trial results are considered statistically significant when the probability of the results occurring by chance, rather than from the efficacy of the product candidate, is sufficiently low. Since the trial was not powered to show results with statistical

significance, the results from the trial may be attributable to chance and not to the clinical efficacy of TA. This trial design is typical of Phase 1 and some Phase 2 clinical trials, the principal purpose of which is to provide the basis for the design of larger, definitive trials with the inclusion of more patients to show statistical significance.

Endpoints. Our Phase 1/2 clinical trial was primarily a safety and tolerability study, although we also assessed efficacy measures. The main safety endpoint related to changes from baseline in IOP. We also assessed efficacy endpoints relating to changes in best-corrected visual acuity, or BCVA, and changes in retinal thickness, which is a common measurement of macular edema. BCVA is a common measurement of a patient's ability to see at distances. In this trial, BCVA was measured using a standard eye chart known as a Logarithm of the Minimum Angle of Resolution, or LogMAR, chart. A LogMAR chart has five letters per line, and improvement in BCVA of one line on the LogMAR chart corresponds to an improvement of 0.1 LogMAR units. A LogMAR score of zero corresponds to 20/20 vision, while a LogMAR score of 0.3 corresponds to 20/40 vision and a score of 0.6 corresponds to 20/80 vision.

Safety Results. The chart below shows the mean change in IOP for the eight patients treated in the trial, as measured at different time points post-treatment. All eight patients completed the full 26-week observation period. No patient experienced a clinically meaningful increase in IOP, defined as a 10 mmHg increase in IOP from baseline, or an absolute increase in IOP to a level above 30 mmHg, which symptoms are typically seen starting between six and 12 weeks after topical or intravitreal administration of steroid to the eye. For example, the prescribing information for the intravitreally administered corticosteroid, Ozurdex, notes that in clinical trials of over 300 patients, 28% of patients receiving Ozurdex experienced at least a 10 mmHg increase in IOP from baseline at a follow-up visit, and 33% of patients treated with Ozurdex experienced an increase in IOP to a level above 25 mmHg. Additionally, in our Phase 1/2 clinical trial, no patient required medication to lower increased IOP during the course of the trial.

The number of patients included in the results for each time point in the chart below, indicated with the notation "n=", varies because, at some time points up to week 4, one or two patients either missed a follow-up visit or a measurement was inadvertently skipped, resulting in only six or seven of the eight patients being measured. In addition, the number of patients included in the results for the time points in the chart below also varies because observations for the four patients who received other treatment for their non-infectious uveitis during the follow-up observation period of the trial are only included up to the point that these patients received such other treatment. One patient received additional treatment following the week 8 observation, two patients received additional treatment following the week 16 observation and a fourth patient received additional treatment following the week 20 observation.



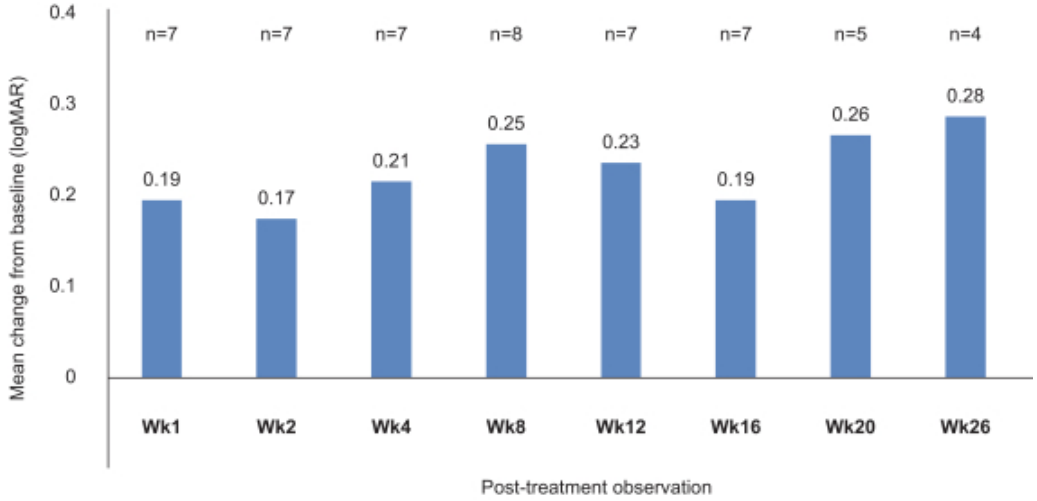
In addition to these IOP observations, the drug was generally well tolerated in this clinical trial. One patient with a history of pulmonary embolisms was hospitalized following a pulmonary embolism 10 weeks after treatment. The principal investigator considered this serious adverse event to be unrelated to the treatment, an assessment that was reviewed and approved by an independent medical monitor. The condition resolved after three days.

Efficacy Results — Visual Acuity. In this trial, BCVA was measured at weeks 1, 2, 4, 8, 12, 16, 20 and 26 following treatment. Efficacy results were recorded until the patient required another treatment, after which the patient's BCVA was no longer measured in accordance with the trial protocol. Of the eight patients who received drug in this trial, one patient was given additional treatment following the week 8 observation, two patients were given additional treatment following the week 16 observation, and one patient was given additional treatment following the week 20 observation. The remaining four patients needed no additional treatment during the 26-week post-treatment observation period.

The chart below summarizes the mean improvement in BCVA observed at each evaluation time point in the trial, measured using a LogMAR chart. A LogMAR chart has five letters per line, and improvement in BCVA of one line on the LogMAR chart corresponds to an improvement of 0.1 LogMAR units. During the course of the trial, we observed a range of improvement in BCVA of between one and five lines on the LogMAR chart. At the end of week 12, the average improvement in BCVA exceeded two lines, which is considered clinically meaningful. At the end of week 26, four of the eight patients in the trial had still not required additional treatment. For those four patients, the average improvement in BCVA was nearly three lines at week 26.

As described above, the number of patients included in the results for the time points in the chart below varies because of missed follow-up visits and because observations for the four patients who received other treatment for their non-infectious uveitis during the follow-up observation period of the trial are only included up to the point that these patients received such other treatment.

Improvement in Best Corrected Visual Acuity



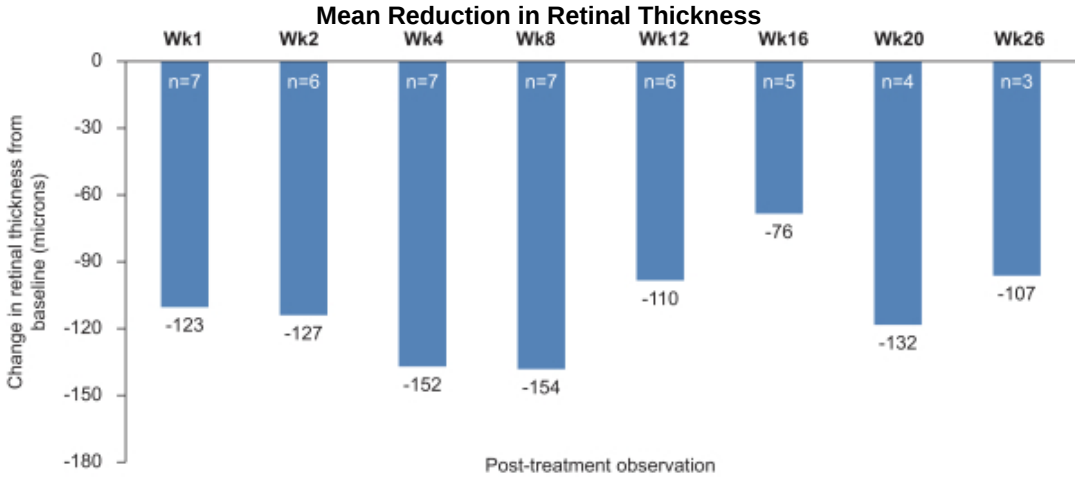
The table below summarizes, for the patients at each time point who had not received other treatment, the number of patients who achieved improvements of at least two and three lines from their baseline measurements:

	Week 1 (n=7)	Week 2 (n=7)	Week 4 (n=7)	Week 8 (n=8)	Week 12 (n=7)	Week 16 (n=7)	Week 20 (n=5)	Week 26 (n=4)
≥2 logMAR lines	3	3	5	6	5	4	4	4
≥3 logMAR lines	2	2	2	5	3	3	2	2

Efficacy Results — Retinal Thickness. Of the eight patients treated in the trial, seven were experiencing macular edema associated with their uveitis at the time of treatment and were therefore also evaluated for change in retinal thickness after the injection. A reduction in retinal thickness in patients with macular edema occurs with the removal of excess fluid from the retina, reflecting a reduction of the swelling of the macula and other parts of the retina, affected by the edema. The eighth patient was only experiencing vitreous haze associated with uveitis, an inflammatory symptom of uveitis where inflammatory cells cloud the vitreous, but in this case, the patient did not have macular edema, and change in retinal thickness is therefore not a relevant measurement for this patient.

The chart below summarizes the mean change in retinal thickness observed in the four patients that completed the 26-week post-observation period without other treatment. At weeks 12 and 26 of the trial, the average reduction in retinal thickness for patients was greater than 100 microns from their respective baselines, which is considered clinically meaningful. One micron is equal to one-thousandth of one millimeter.

In addition to the number of patients varying at each time point as a result of missing follow-up visits or skipped measurements, as described above under "—Safety Results," of the seven patients that were experiencing macular edema, the number of patients included in the results for the time points in the chart below also varies because efficacy observations for the two patients who received other treatment for their non-infectious uveitis during the follow-up observation period of the trial are only included up to the point that these patients received such other treatment.



We believe these results are encouraging because we observed consistent response after the SCS injection. It is important to note that the improvements in BCVA and reductions in retinal thickness were achieved only in a small patient population, with data from only eight patients, in an open-label setting, were not statistically significant and might not be replicated in larger-scale trials that we intend to conduct.

Phase 2 Clinical Trial

We have completed the enrollment and dosing of patients in a Phase 2 multi-center, masked, randomized, internally controlled clinical trial designed to evaluate the safety and efficacy of a single 4.0 mg or a single 0.8 mg dose of CLS-TA administered through the SCS with our SCS Microinjector. We are using and expect to use CLS-TA in all ongoing and future clinical trials intended to support a 505(b)(2) NDA submission for the CLS-1001 program.

Clinical Trial Design. We enrolled 22 patients at 14 sites in this trial. Eligibility criteria included males and non-pregnant females over the age of 18 with macular edema associated with non-infectious uveitis, with fluid in the retina and with retinal thickness above 310 microns. Patients were excluded if they had other ocular conditions in the study eye.

Patients were randomized to receive a single SCS injection of either 4.0 mg or 0.8 mg of CLS-TA on a 1:1 ratio. Patients returned for follow-up examinations between seven days and 11 days, at four weeks and at eight weeks following dosing.

Endpoints. The primary endpoint in this trial is to evaluate whether there is a change in retinal thickness of at least 75 microns from baseline at eight weeks following the SCS injection of CLS-TA. A

50 micron change is considered clinically meaningful. Secondary endpoints include evaluation of changes in BCVA. We are also evaluating safety endpoints, including changes in intraocular pressure, in this trial. We expect to report the results of this trial in January 2016.

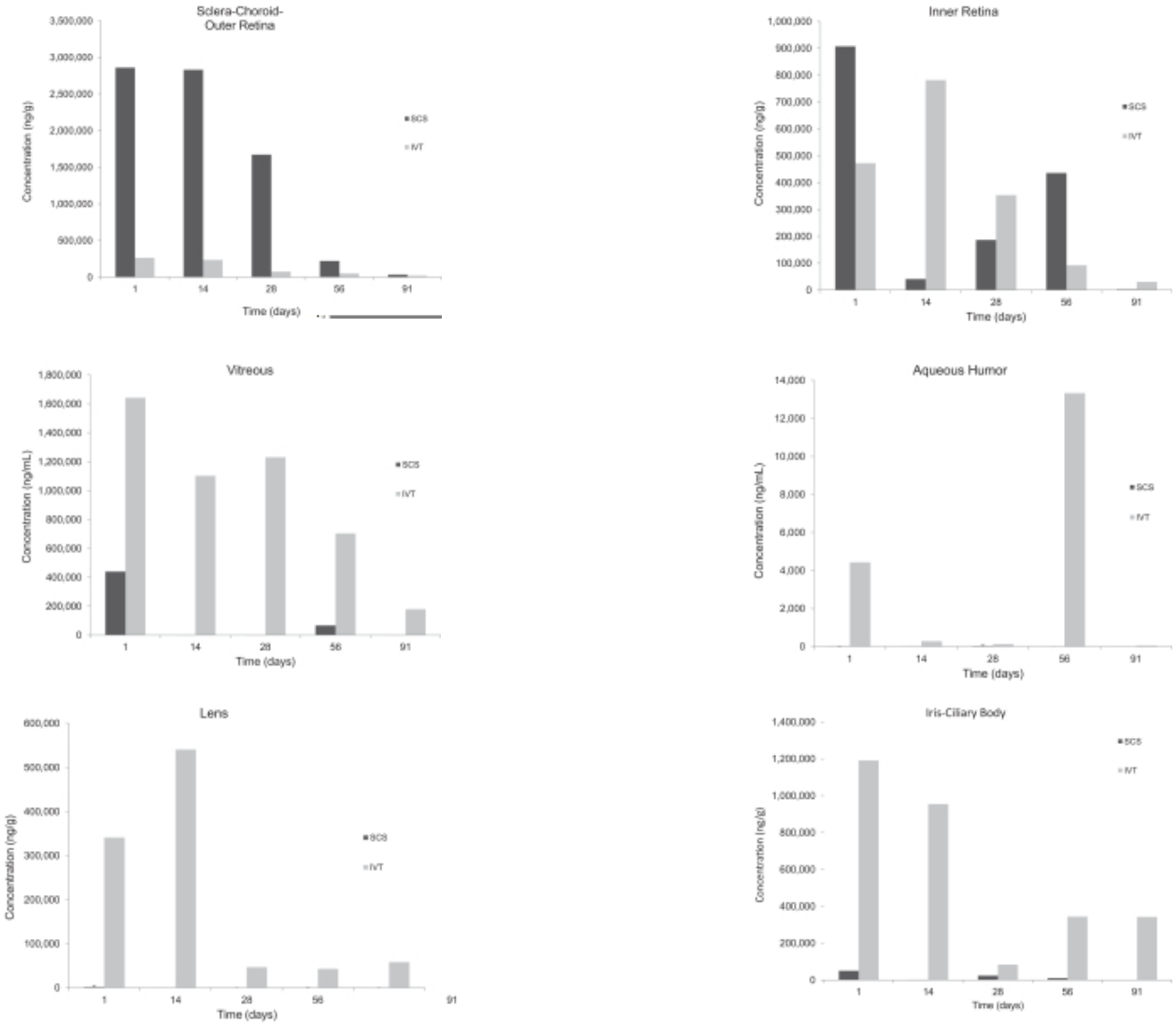
Preclinical Study Comparing the Pharmacokinetic Effects of SCS and Intravitreal Injection of Triesence in Rabbits

We conducted a preclinical study in rabbits to compare the pharmacokinetic results of SCS injections and intravitreal injections of Triesence, a commercially available TA formulation. Pharmacokinetics refers to the process by which a drug is distributed and metabolized in the body, which provides information on drug levels in specific tissues and how these levels change over time. To compare these results, we observed the relative distributions of Triesence in the different tissues and areas of the eye for each method of administration.

In this study, 50 rabbits received a single dose of 4.0 mg of Triesence on day 1 of the study injected either intravitreally or into the SCS. The rabbits were then observed for periods of up to 90 days and the concentration of TA in various parts of the eye was measured at days 14, 28, 56 and 91.

The tables below illustrate the results of this study. For each tissue type or area of the eye, the values shown represent the average concentration of drug observed in the rabbits at the particular measurement points during the study, when comparing the two routes of injection. For clarity of presentation, the tables below include varying concentration scales.

Concentration of TA Following Either SCS or Intravitreal (IVT) Injection



In the inner sclera, choroid and outer retina, significantly higher concentrations of TA injected into the SCS were present throughout the 91-day period as compared to TA injected intravitreally. The opposite was the case in the iris, ciliary body, lens and aqueous humor, all of which are located at the front of the eye, as

well as in the vitreous, with each of these tissues showing higher levels of TA throughout the 91-day period when injected intravitreally as compared to its injection into the SCS. Only minimal levels of TA were present in the iris, ciliary body, lens and aqueous humor when injected into the SCS. Although there was variability in the relative concentrations in the inner retina, which is the part of the retina adjacent to the vitreous, at different time points, the concentrations were generally comparable across both administration methods. In this study, we also compared the drug levels in the blood plasma for each method of administration. Minimal levels of drug in the blood plasma were detected following each method of administration.

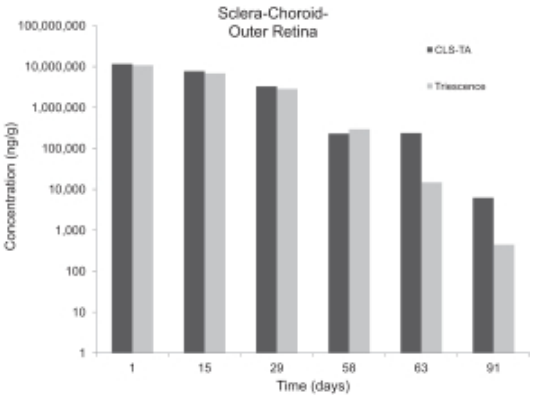
We believe these preclinical study results suggest that drugs administered through the SCS can remain substantially localized within the targeted retina and choroid, and away from other parts of the eye, where they could result in a higher incidence of side effects. We also believe these results suggest that SCS injection provides substantially better bioavailability for at least 90 days in the targeted retina and choroid than intravitreal injection. We intend to further evaluate this bioavailability data in future clinical trials before any potential submission of our marketing application to the FDA.

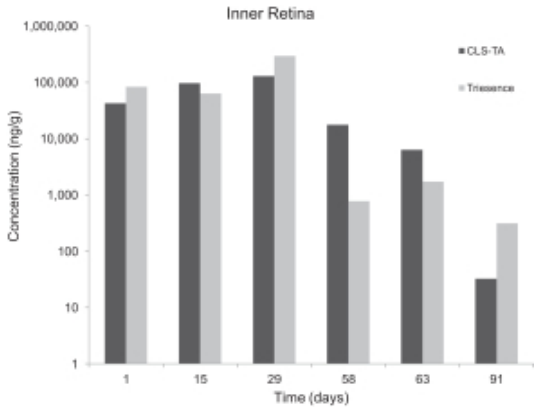
Preclinical Study Comparing the Pharmacokinetic Effects of SCS Injection of CLS-TA and Triesence in Rabbits

In order to establish that our CLS-TA behaves in the same manner as Triesence despite the differences in formulation, we conducted a preclinical pharmacokinetic study in rabbits, comparing the pharmacokinetic profile of our CLS-TA with the profile of Triesence, each injected into the SCS. In the study, 25 rabbits received a single dose of 4.0 mg of either our CLS-TA or Triesence injected into the SCS on day 1. The rabbits were then observed for periods of up to 90 days and the resulting concentrations of each of the two TA formulations in various parts of the eye was measured at days 15, 29, 58, 63 and 91.

In this study, our CLS-TA and Triesence had comparable distributions throughout the eye over the 90-day period. As shown in the graphs below, both our CLS-TA and Triesence, administered through the SCS, remained present in the retina and choroid throughout the 90-day period following injection.

Concentration of Either CLS-TA or Triesence Following SCS Injection

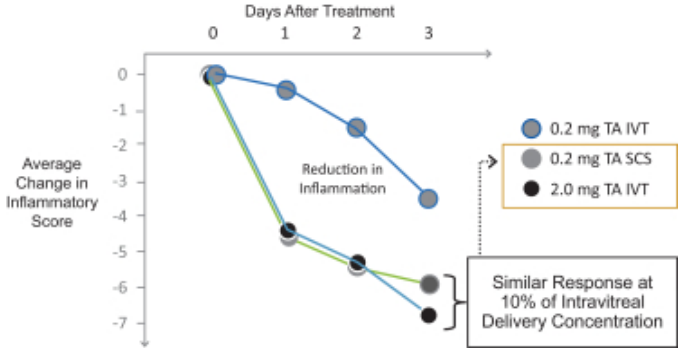




Preclinical Study Evaluating the Pharmacodynamic Effects of SCS and Intravitreal Injection of Triesence in a Pig Model of Uveitis

In this preclinical study, the results of which were published in the journal *Investigative Ophthalmology and Vision Science*, we studied the pharmacodynamics of Triesence injected into the SCS and injected intravitreally in a pig model of uveitis. Pharmacodynamics refers to the biochemical and physiological effects of a drug on the body. In this study, 20 pigs were assigned to one of three drug treatment arms: two intravitreal and one SCS. The intravitreal injections were with doses of either 0.2 mg or 2.0 mg of Triesence and the SCS injection was with a dose of 0.2 mg of Triesence. The pigs were observed for three days after injection to measure their average change in inflammatory score, as measured by an established scale for measuring inflammation in the eye, the modified McDonald-Shadduck grading system. After three days, both the 2.0 mg intravitreal and the 0.2 mg SCS doses were observed to be more effective at reducing uveitic inflammation than the 0.2 mg intravitreal injection. Additionally, the 0.2 mg SCS dose and 2.0 mg intravitreal dose achieved similar reductions in inflammatory scores each day. Therefore, SCS injection of Triesence had a similar pharmacodynamic response to intravitreal injection at only 10% of the dose. The graph below illustrates these results.

Reduction in Inflammation Following Either SCS or Intravitreal Injection of Triesence in a Pig Model of Uveitis



Preclinical Studies Evaluating the Toxicology of SCS Injection of CLS-TA and Triesence in Rabbits

We have conducted toxicology studies in rabbits in which both our CLS-TA and Triesence were well tolerated when injected into the SCS. In one study, 110 rabbits received a single SCS injection of either 3.2 mg or 5.2 mg of Triesence or of a vehicle control without active drug. The rabbits were then evaluated for the following 17 weeks. In the other study, 48 rabbits received an initial SCS injection of either 4.0 mg of our CLS-TA or of vehicle control and were then evaluated for the following 13 weeks. A subgroup of the 48 rabbits received a second SCS injection of our CLS-TA after the first 13 weeks and this subgroup was evaluated for an additional 13 weeks, resulting in a total observation period of 26 weeks. In both studies, the rabbits were observed for tolerability assessments as well as mortality and clinical observations, body weight and food and water consumption.

In these studies, all doses of our CLS-TA and Triesence were well-tolerated. In the study in which rabbits received our CLS-TA, a slight increase in IOP was observed. There were no other treatment-related or administration-related side effects, and in each case localization of TA in the back of the eye was observed, with minimal exposure in the front of the eye.

Pivotal Phase 3 Clinical Trial

In November 2015, we initiated a pivotal Phase 3 randomized, controlled, multi-center clinical trial in patients with macular edema associated with non-infectious uveitis and we expect to report data from this trial in the second half of 2017. Based on our end-of-Phase 2 review with the FDA in May 2015, we believe that this trial will be the only pivotal clinical trial necessary to support a submission of a Section 505(b)(2) NDA for this indication.

We intend to conduct the trial at approximately 50 investigational sites and to enroll approximately 150 patients with macular edema associated with non-infectious uveitis, randomized either to a treatment arm consisting of approximately 90 patients or to a sham injection procedure arm consisting of approximately 60 patients. We expect to use a sham injection procedure as a comparator for CLS-TA suprachoroidal treatment, as opposed to an active drug, because there are no approved therapies for macular edema associated with non-infectious uveitis against which to compare CLS-TA. All of the patients in the treatment arm will receive a 4.0 mg dose of our CLS-TA injected into the SCS using our SCS Microinjector. In order to simulate an injection to maintain masking, the sham injection procedure will include all steps involved in the SCS injection procedure, except that a microinjector with a needleless hub will be used to apply pressure to the eye. Patients in each arm will receive their designated procedure at the beginning of the trial and a second procedure of the same type at week 12. All patients will be followed and evaluated for a period of six months following the initial procedure.

The primary efficacy endpoint of the trial will be mean change in BCVA from baseline at week 26. Secondary efficacy endpoints will include additional measures of change in visual acuity and reductions in retinal thickness from baseline. Safety measures will be monitored over the 26-week observation period and will include the incidence of adverse events and serious adverse events, including cataracts and increases in IOP.

Additional Studies

We will also be following patients from the Phase 3 trial in an extension trial to obtain additional information on the duration of action of CLS-TA. In this extension trial, patients from the Phase 3 trial who have not received any other therapy will have the opportunity to be enrolled, and will receive no further treatments for their uveitis. Since the last treatment in the Phase 3 trial would have occurred at week 12 following the initial procedure, we expect to enroll patients starting at their week 24 exit visit and to follow eligible patients for an additional 24 weeks or until they receive additional treatment at the election of the physician.

We intend to enroll an additional 35 patients in a separate clinical trial in order to collect additional safety information to add to our overall safety database to reach the number required for our planned NDA submission. These additional patients will be evaluated over six months following dosing with CLS-TA.

Regulatory Approval Pathway of CLS-1001

If the results of our single pivotal Phase 3 clinical trial are favorable, we intend to seek regulatory approval of CLS-TA by utilizing Section 505(b)(2) of the FDCA. As part of our NDA submission under Section 505(b)(2), we intend to rely on the results from our three clinical trials, as well as the FDA's previous findings of safety and efficacy for TA and an analysis of available data from clinical literature.

We also intend to base any foreign marketing applications, in part, on data obtained through these trials.

CLS-1003 Program Targeting Macular Edema Associated with Retinal Vein Occlusion

We are developing CLS-1003 for treatment of macular edema associated with RVO, a sight-threatening disorder resulting from the blockage of a retinal vein. In the CLS-1003 program, we are using an SCS injection of CLS-TA together with an intravitreal injection of the anti-VEGF drug, Eylea. We believe that we may provide a differentiated therapeutic benefit for RVO patients with our combination treatment that potentially couples the advantages of visual acuity gain and macular edema reduction along with a quarterly, rather than monthly, dosing schedule, compared to currently used intravitreal anti-VEGF injections alone.

We initiated a 46-patient Phase 2 clinical trial in February 2015 in which we are comparing a combination treatment arm of patients who receive both a suprachoroidal injection of CLS-TA and an intravitreal injection of Eylea to a control arm in which patients receive only intravitreal injections of Eylea. We have completed enrollment of this Phase 2 clinical trial and expect to report data from this trial in the second quarter of 2016.

Market Opportunity for Treatment of RVO

RVO is a sight-threatening disorder resulting from a blockage of one of the veins carrying blood out of the retina. RVO is estimated to affect more than 16 million adults worldwide, according to a 2010 study published in the journal *Ophthalmology*, and we estimate RVO affects 2.2 million individuals in the United States. In RVO, the blockage of a retinal vein can lead to poor blood circulation, low oxygen, and sometimes inflammation. A blocked vein will leak its contents of blood and fluid. Bleeding within the retina and swelling from fluid can create macular edema.

Limitations of Currently Available Therapies for Macular Edema Associated with RVO

There are three primary treatments currently used for the treatment of RVO: intravitreal injections of anti-VEGF medications, intravitreal corticosteroid injections and laser surgery. The current standard treatment for macular edema associated with RVO involves intravitreal injections of anti-VEGF drugs, such as Lucentis, Eylea or Avastin. Lucentis and Eylea are indicated for monthly administration and Avastin is used in a similar fashion, but off-label. These monthly treatments are required throughout the course of the disease, which could last for years. Anti-VEGF drugs are effective in significantly improving vision in approximately 30% to 40% of patients with macular edema associated with RVO, and have limited side effects.

Corticosteroid treatment, specifically TA injected intravitreally, was previously evaluated in a series of randomized, multi-center clinical trials, called the SCORE studies, conducted by the National Eye Institute. In these studies, approximately 20% of patients with macular edema associated with RVO had meaningful gains in visual acuity after one year with a dosing frequency of one intravitreal injection of TA every four months. However, several side effects were observed, including cataracts and elevated IOP. Because of these side effects, intravitreal administration of corticosteroids, such as TA, is not the preferred therapy, even though it has been observed to be effective in reducing macular edema associated with RVO. Another corticosteroid therapy, Ozurdex, an extended release dexamethasone implanted in the vitreous, has been approved by the FDA for the treatment of RVO, but has also been associated with increased IOP in 25% of patients and cataracts in 5% of patients.

Before the introduction of anti-VEGF drugs, laser surgery was the leading therapy for treating macular edema associated with RVO. Laser surgery can be used to help control bleeding and swelling, which can reduce the loss of sight, but cannot improve vision. Laser surgery, however, cannot be used long term because it permanently damages the retina.

Potential Benefits of CLS-1003

In our CLS-1003 program, we are exploring the concomitant SCS injection of CLS-TA and intravitreal injection of Eylea, a corticosteroid and an anti-VEGF agent, respectively, to provide the potential benefits of improved visual acuity, reduced macular edema and reduced injection frequency. Corticosteroids and anti-VEGF agents have known advantages in treating RVO. Based on the SCORE studies described above and our findings in preclinical studies, we believe that each SCS injection of CLS-TA may provide a duration of effect longer than anti-VEGF therapy alone, while also potentially reducing the frequency of necessary anti-VEGF treatments from once every 30 days to once every 90 days, due to the benefits of both corticosteroid and anti-VEGF treatment. In addition, we believe that the side effect profile of CLS-1003 will be similar to that of current intravitreal anti-VEGF treatments alone, as SCS injections of CLS-TA should allow the corticosteroid to remain substantially localized in the retina and choroid without introducing the side effects that are commonly observed with other routes of administration of corticosteroids. Combination therapy with a corticosteroid and an anti-VEGF agent has been shown to reduce treatment frequency to once every four months along with improved visual acuity outcomes based on a clinical trial conducted by a third party.

Clinical Trials

We have completed the enrollment of a Phase 2 clinical trial in which the goal will be to demonstrate that patients treated with CLS-TA injected into the SCS together with Eylea injected intravitreally may require less frequent treatments than monotherapy of Eylea injected intravitreally. We enrolled 46 patients at 14 sites in the United States in this trial. All patients in the trial initially receive one intravitreal injection of 2.0 mg of Eylea, in a total volume of 50 microliters, and are then randomized on a 1:1 basis to receive an SCS injection of either 4.0 mg of our CLS-TA, in a total volume of 100 microliters, or a sham SCS procedure in the same visit. After randomization, patients will be seen in the clinic once per month for three months. Patients in each of the two treatment arms will be evaluated for the need to receive additional intravitreal injections of Eylea at the subsequent visits one and two months after the initial injection if they continue to experience increases in macular edema or reductions in visual acuity in accordance with strictly defined guidelines for receiving additional intravitreal Eylea injections, as determined by a masked, centralized reading center. If they do not experience increases in macular edema or reductions in visual acuity at these subsequent visits, they will not receive additional intravitreal Eylea treatment.

The primary objective of the trial is to evaluate the safety and efficacy of a single SCS injection of CLS-TA together with the initial intravitreal injection of Eylea, compared to the control group initially receiving only an intravitreal Eylea injection. The primary efficacy endpoints in the trial include determining the number of required Eylea treatments in each arm, which we believe will provide an indication of whether concomitant therapy provides any advantage to the patient in reducing the number of required Eylea treatments. Secondary efficacy endpoints include measures of change in visual acuity and reductions in retinal thickness from baseline. The safety endpoints are the incidence of adverse events and serious adverse events, including increases in IOP. We believe that the combination of an SCS injection of CLS-TA and an intravitreal injection of Eylea will provide the potential benefits of improved visual acuity, reduced macular edema and reduced injection frequency.

We have also completed a GLP toxicology study in rabbits with an SCS injection of CLS-TA together with an intravitreal injection of the anti-VEGF drug Eylea.

Regulatory Approval Pathway

We expect to correspond with the FDA following the completion of our Phase 2 clinical trial to discuss the details of the regulatory approval pathway for CLS-1003. If the results of our Phase 2 clinical trial are positive, we expect to be able to follow a 505(b)(2) NDA regulatory approval pathway and to conduct one or two pivotal Phase 3 clinical trials in order to support an NDA submission for CLS-1003 in macular edema associated with RVO. We expect that we would be able to commence any such Phase 3 clinical trial in the first half of 2017. In pursuing the 505(b)(2) regulatory pathway, we intend to rely on the results from our CLS-1003 development program, the FDA's previous findings of safety and efficacy for TA, the FDA's previous findings of safety and efficacy for Eylea and peer-reviewed literature.

CLS-1002 Program Targeting Wet Age-Related Macular Degeneration

Under our CLS-1002 program, we intend to develop a treatment for wet AMD that, through SCS injection with our SCS Microinjector, could provide visual acuity benefits, macular edema reduction and potentially reduce the frequency of necessary treatments compared to the current standard of care. Wet AMD is a condition involving the abnormal formation and growth of new blood vessels in the choroid, their intrusion into the outer layers of the retina and leakage of blood and fluid into the retina. We have selected a lead compound, axitinib, a single molecule with both anti-VEGF and anti-PDGF activity, and plan to develop a proprietary suspension formulation of axitinib to be administered by SCS injection, which we believe could be more effective than current treatments for wet AMD. We believe that SCS injection of our proprietary formulation of axitinib could result in improvements in visual acuity compared to intravitreal injection of anti-VEGF drugs, while potentially reducing the frequency of necessary treatment. We plan to file an IND for our proprietary formulation of axitinib in the second half of 2016.

Market Opportunity for Treatment of Wet AMD

Wet AMD is a leading cause of severe vision loss and blindness in people over the age of 50 in the developed world. If untreated, the blood vessel growth and leakage associated with wet AMD can eventually lead to blindness. The majority of patients with wet AMD experience severe vision loss in the affected eye within approximately two years after diagnosis of the disease. According to a study published in 2004 in the journal *Ophthalmology*, approximately 1.2 million people in the United States suffer from wet AMD. Based on estimates from AMD Alliance International, a non-profit organization focused on AMD awareness, and census growth data, we estimate there are approximately 230,000 new cases of wet AMD each year in the United States. Because the risk of developing wet AMD increases with age, we expect that the overall aging of the population will result in a significant increase in the number of wet AMD cases, both in the United States and worldwide.

Limitations of Currently Available Therapies for Wet AMD

The current standard of care for the treatment of wet AMD is administration by intravitreal injection of anti-VEGF drugs as a standalone therapy. The anti-VEGF drugs most commonly used include Lucentis and Eylea, both of which have been approved by the FDA for the treatment of wet AMD, and Avastin, which is used off-label for the disease.

Because anti-VEGF therapies inhibit abnormal blood vessel growth and leakage, they are effective in reducing the macular edema associated with wet AMD. Anti-VEGF therapies have demonstrated the ability to prevent further visual loss in approximately 90% of treated patients. A retrospective study published in 2012 in the journal *Archives of Ophthalmology* concluded that the prevalence of both legal blindness and moderate visual impairment in patients two years after being diagnosed with wet AMD had decreased substantially following the introduction of anti-VEGF therapy. However, because anti-VEGF drugs do not appear to cause any regression of the underlying neovascularization associated with wet AMD, the current standard of care requires regular injections, typically as often as seven times per year, and therapy may be required indefinitely. Further, while anti-VEGF treatment is effective at preventing vision loss, only 30% of patients improve their visual acuity by 15 letters or more. Anti-VEGF treatments have been associated with subretinal fibrosis, or the formation of excess connective tissue under the retina, as well as retinal scarring in some patients, with 45% of patients experiencing scarring after two years of anti-VEGF therapy according to a 2014 study published by the American Academy of Ophthalmology. Additionally, monthly treatment with anti-VEGF agents have been associated with increased risk of geographic atrophy, according to a 2013 study published by the American Academy of Ophthalmology.

In addition to anti-VEGF therapies, anti-PDGF drugs are being developed as potential treatments for wet AMD. Because PDGF is a major factor in the formation and stabilization of blood vessel growth in the choroid, therapies inhibiting PDGF may also be effective in addressing the abnormal growth of new blood vessels associated with wet AMD. In clinical trials conducted by others, an intravitreal injection of a PDGF inhibitor together with an intravitreal injection of Lucentis improved visual acuity in approximately 60% of patients with wet AMD compared to approximately 30% of patients receiving intravitreal injections of Lucentis alone. However, no anti-PDGF therapy has been approved by the FDA for the treatment of wet AMD, either alone or in combination with an anti-VEGF agent. Even if approved, we expect that anti-PDGF therapy would also require indefinite monthly injections.

Even though anti-VEGF and anti-PDGF therapies may be effective in treating wet AMD, intravitreal injection of these drugs relies on the process of diffusion of the drug from the vitreous outward to the retina and, eventually, the choroid, which results in lower bioavailability and the need for frequent retreatment.

Potential Benefits of CLS-1002

Axitinib, the lead compound selected for further clinical development as part of our CLS-1002 program, has dual anti-VEGF and anti-PDGF activity. Based on prior clinical data from trials conducted by a third party, we believe that anti-PDGF properties together with anti-VEGF properties may provide superior visual outcomes to standalone anti-VEGF drugs. We believe that the SCS injection of drugs with anti-VEGF, or dual anti-VEGF and anti-PDGF, activity more directly to the neovascularization in the choroid through SCS injection could block the process of additional new vascular growth within the choroid before the vessels break into and create further damage through leakage into the retina. We believe that such SCS injection of treatment may, therefore, provide faster onset of therapeutic effect and delay vision loss for a longer duration of time than the current standard intravitreal administration and will require less frequent injections. We will test this hypothesis in any future clinical trials that we may conduct as part of our clinical development program for CLS-1002.

Clinical and Preclinical Development of CLS-1002

We have completed the following clinical trial and preclinical studies as part of our CLS-1002 development program:

- a completed Phase 1 clinical trial in wet AMD patients evaluating the safety and tolerability of SCS injection of Avastin, an anti-VEGF drug, with our SCS Microinjector;
- a completed preclinical efficacy study of SCS injection of a compound with dual anti-VEGF and anti-PDGF activity in a rabbit model of wet AMD; and
- a completed preclinical safety study of SCS injection of compounds with dual anti-VEGF and anti-PDGF activity.

Details of the trial and studies are summarized below.

Completed Phase 1 Clinical Trial with Avastin

In order to evaluate the safety and tolerability of SCS injection of Avastin, an anti-VEGF drug, in humans with our SCS Microinjector, we conducted a Phase 1, single-center, open-label clinical trial in 2012 at the Hospital of the Association to Prevent Blindness in Mexico. Because of its established safety profile and its prevalence as an off-label treatment for wet AMD, we selected Avastin as the therapy to be evaluated in this exploratory trial. Four patients with wet AMD were enrolled in the trial, each of whom was between the ages of 63 and 73. Each patient received a 2.5 mg dose of Avastin in a 100 microliter injection in one eye using a prototype of our SCS Microinjector. The trial was conducted in accordance with current U.S. good clinical practices.

Trial Design. Eligibility criteria included adult patients with choroidal neovascularization associated with wet AMD that had previously responded to Avastin treatment, had retinal thickness in the study eye of between 275 and 600 microns in the central subfield, and had specified levels of visual acuity. In addition, patients could not have received any anti-VEGF treatment within 60 days of screening or have had any expectation of receiving such treatment during their participation in the study other than the single Avastin injection.

Once eligibility was established, each patient received a single SCS injection of Avastin and then returned for a follow-up examination on the day after the injection. Thereafter, patients returned for five additional evaluations at approximately weeks 1, 2, 3, 4 and 8 following the injection. No additional treatments were administered during the course of the trial.

Endpoints. The trial was primarily a safety and tolerability study. The safety endpoints included incidence, intensity and type of adverse events, as well as changes from baseline in IOP. We also measured efficacy endpoints, including change from baseline in BCVA letter score.

Safety results. SCS injection of Avastin in the trial was observed to be generally well tolerated. No increases in IOP or serious or unexpected adverse events were reported in any of the patients. Two patients experienced hyperemia, or redness in the study eye, which was mild in severity, was determined to be unrelated to treatment in the trial and resolved within a day without other treatment.

Efficacy results. Two of the four patients achieved an improvement in BCVA letter score of at least 13 letters at the end of the eight-week trial following the SCS injection of Avastin. One of these patients improved by 16 letters within one day of treatment and maintained that level of improvement for the

remainder of the trial. The second patient achieved an improvement of four letters by one week after treatment, which improved to 10 letters by week 3 after treatment and 13 letters by week 8. The other two patients in the trial maintained their BCVA letter score within four letters of their baseline at each measurement point in the trial. Overall, there was an average gain of nine letters in the four patients at the end of the eight-week observation period following the SCS injection of Avastin.

By comparison, in a trial conducted by the National Eye Institute, the Comparison of AMD Treatment Trial, or CATT, which was a Phase 3 randomized, masked, controlled, multi-center study, the efficacy of Avastin was compared to that of Lucentis, which has been approved by the FDA for the treatment of wet AMD. In the CATT trial, patients in the respective treatment arms received either monthly intravitreal injections of Lucentis or monthly intravitreal injections of Avastin over two years. After one year, patients receiving monthly Lucentis treatment experienced an average improvement in BCVA of 8.5 letters, while those receiving Avastin experienced an average improvement of 8.0 letters. After two years, the average improvement for the patients receiving Lucentis and Avastin was 8.8 letters and 7.8 letters, respectively.

Our Phase 1 trial was not designed to show any efficacy results with statistical significance and was conducted in an open-label, uncontrolled setting. While the data from this exploratory trial suggested potential improvement in visual acuity over eight weeks following SCS injection of Avastin, it is important to note that the results from this trial were observed in only four patients and might not be achieved by any other patient treated with a product candidate to be developed as part of our CLS-1002 program. Any later-stage trials intended to support an application for regulatory approval of a product candidate for this indication will need to show statistical significance in larger, well-controlled clinical trials.

Preclinical Efficacy Study of a Compound with Dual Anti-VEGF and Anti-PDGF Activity in a Rabbit Model of Wet AMD

We conducted a preclinical study assessing the effect on retinal leakage in a wet AMD rabbit model of a drug candidate with dual anti-VEGF and anti-PDGF activity administered by SCS injection. In this study, the treatment arm of three rabbits received an SCS injection of the drug and the control arm of three rabbits received an SCS injection of a vehicle without the active drug. After 28 days, retinal leakage was induced on the surface vessels of the inner retina in both arms and leakage was measured approximately two hours after this induction. The treatment arm showed 48% less retinal leakage than the vehicle arm. We believe this suggests that this dual anti-VEGF and anti-PDGF drug administered through the SCS may be effective in treating wet AMD by reducing leakage in the retina, and even in vessels in the inner retina, which is closest to the vitreous. We are continuing to evaluate this compound.

Preclinical Safety Study of SCS Injection of Compounds with Dual Anti-VEGF and Anti-PDGF Activity

We conducted a preclinical study assessing the safety of compounds with dual anti-VEGF and anti-PDGF activity administered by SCS injection. In this study, a total of 18 rabbits received an SCS injection of a number of compounds and were evaluated on days 1, 4 and 7. Overall, the compounds were well tolerated with only mild or transient ocular effects observed.

Planned Clinical Development

Based on the results of our Phase 1 clinical trial in four wet AMD patients and our preclinical rabbit study, we believe that wet AMD may be effectively treated through SCS injection, and we will evaluate this hypothesis as part of any clinical development program. We expect to perform pharmacokinetic and

toxicology studies, as well as additional preclinical testing, to support an IND filing for our proprietary formulation of axitinib in the second half of 2016.

Future Potential Product Candidates

We believe that our SCS-focused approach has the potential to become more broadly used for the treatment of other back of the eye diseases, and we intend to develop additional product candidates for SCS injection based on the results of our current and planned clinical trials. We will then seek to secure appropriate regulatory authorizations to begin additional clinical testing for any such product candidates. In addition to uveitis, RVO and wet AMD, there are a number of ophthalmic conditions affecting the retina and choroid with unmet medical need for which SCS injection of therapy may be beneficial, including:

- *Diabetic macular edema*, or DME, a common ocular complication of diabetes that results in swelling in the macula and is the primary cause of vision loss associated with diabetes;
- *Polypoidal choroidal vasculopathy*, or PCV, a disorder resulting from the abnormal growth of new blood vessels in the choroid adjacent to the macula. PCV is characterized by dilated and branching blood vessels in “polyp like” groups in the choroid that could lead to leakage;
- *Geographic atrophy*, an advanced form of AMD, is characterized by a loss of the layers of cells in the retina next to the choroid, eventually including the photoreceptor cells in the macula, leading to gradual irreversible loss of central vision and eventually blindness; and
- *Pseudophakic cystoid macular edema*, also known as Irvine-Gass syndrome, a common cause of visual impairment after cataract surgery.

According to the U.S. Centers for Disease Control and Prevention, or CDC, the number of Americans diagnosed with diabetes has increased from approximately 7.7 million in 1994 to approximately 21.0 million in 2010. All patients with diabetes are at risk of developing some form of diabetic eye disease. DME accounts for a majority of vision loss in patients with diabetic eye disease. According to a study published in the journal *Diabetes Care* in 2003, patients with diabetes have a 10% risk of developing clinically significant DME over a 10-year period. A study published in the journal *Ophthalmology* in 2009 found that over a 25-year period, approximately 17% of diabetics studied were diagnosed with DME. We estimate approximately 1.1 million individuals in the United States suffer from DME.

Currently, the only FDA-approved drugs for the treatment of DME are the anti-VEGF drugs Lucentis and Eylea and the intravitreal corticosteroid implants Ozurdex and Iluvien. Some retinal specialists also prescribe other anti-VEGF drugs for off-label use, such as Avastin, as well as corticosteroid therapies, primarily Kenalog and Triesence, and laser photocoagulation to treat DME. Laser photocoagulation is a procedure in which a laser is used to apply a burn or a pattern of burns to cauterize leaky blood vessels to reduce edema in the retina. Studies have shown that both anti-VEGF drugs and corticosteroids are effective in some DME patients. However, both anti-VEGF drugs and corticosteroids are limited by a need for multiple injections to maintain a therapeutic effect. This raises concerns, not only for patients, but also for caregivers who are affected by frequent doctor visits, as well as for healthcare providers who must monitor patients monthly. In addition, these therapies have safety concerns. Corticosteroids administered intravitreally have historically been associated with acceleration of cataract formation and significant increases in IOP, which may increase the risk of glaucoma, and monthly anti-VEGF treatments have been associated with increased risk of geographic atrophy. Laser photocoagulation can also have undesirable side effects, including partial loss of peripheral and night vision.

Our development program for DME will be modeled after our approach for the treatment of RVO. We expect that any clinical trials we may conduct for this indication will be designed based on the results observed in our Phase 2 clinical trial of CLS-1003 in RVO patients, in which we have taken a combination approach using both CLS-TA injected suprachoroidally and Eylea injected intravitreally.

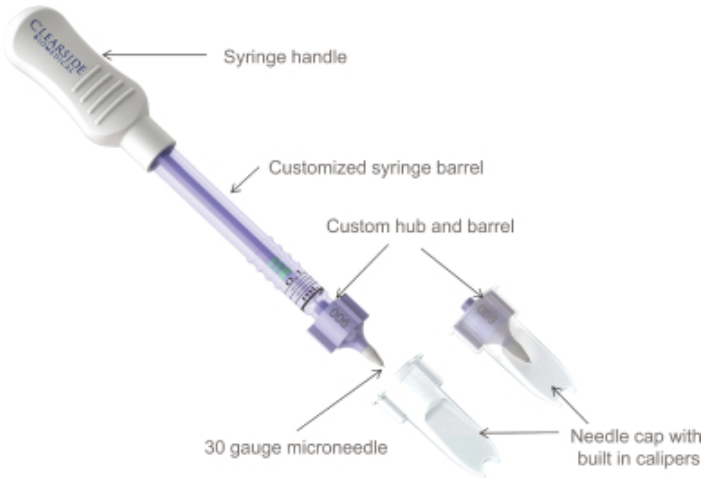
As part of our ongoing collaboration with Santen, we are evaluating the use of our SCS Microinjector to administer sustained-release formulations of known glaucoma drugs. Glaucoma is a progressive eye disease in which elevated levels of IOP are associated with damage to the optic nerve, which results in irreversible vision loss and potentially blindness. The National Eye Institute estimates that 2.7 million Americans suffered from glaucoma in 2010. Glaucoma is treated by the reduction of IOP, which has been shown to slow the progression of vision loss. Once glaucoma develops, it is a chronic condition that requires life-long treatment. The treatment of glaucoma, if successful, would be through the suprachoroidal administration of latanoprost or other drugs known to lower elevated IOP associated with glaucoma.

We are also evaluating the potential use of our SCS Microinjector to inject sustained-release formulations of other ocular therapies. We believe these formulations could include hydrogels, emulsions and liposomes, as well as treatments containing agents such as hyaluronic acid or micro- or nanoparticles.

The SCS Microinjector

Our drug candidates have been and will be specifically formulated to be injected with our SCS Microinjector into the SCS in order to spread around to the back of the eye. The single-use microinjector is intended to consistently inject drug into the SCS, in volumes similar to the amount of drug commonly used in an intravitreal injection. If approved for marketing by applicable regulatory authorities, the SCS Microinjector will be packaged with two 30-gauge hollow microneedles of varying lengths, each less than 1.2 millimeters, within a custom-designed hub that optimizes insertion and administration of drug into the eye. Based on our discussions with the FDA to date, we do not anticipate that the FDA will require a separate medical device authorization for the SCS Microinjector, but this could change during the course of its review of any marketing application that we may submit.

Our proprietary SCS Microinjector, shown below, can be used to inject a wide variety of drugs into the SCS.

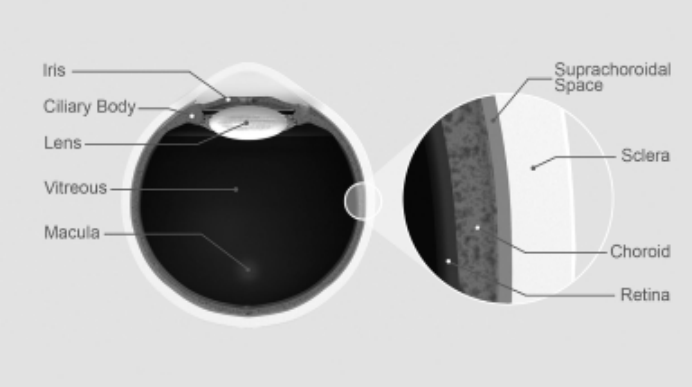


The SCS injection is designed to be carried out perpendicular to the sclera, at a site similar to an intravitreal injection, under local anesthesia. Once the microneedle penetrates the sclera and reaches the SCS, the boundary between the sclera and the choroid, the open bevel of the needle releases the drug between these two layers. Once drug is injected into the SCS, it spreads within the SCS to the back of the eye, where diseases manifest. The preparation and injection will require minimal training for the administering retinal specialist and can be accomplished in an in-office setting.

Current intravitreal injections are performed in a procedure similar to that of SCS injections, except that the hypodermic needles and syringes used in intravitreal injection procedures are designed so that the needle penetrates through all of the layers of the eye and drug is injected into the vitreous cavity, where the precise spatial location of the needle is not as important as when injecting into the SCS. Intravitreal injections are typically performed using a needle that is approximately five millimeters in length, or four times the length of our microneedle. Using a needle of this length, the physician penetrates past the sclera, choroid and retina until reaching the vitreous and does not receive any tactile feedback as to when the needle had reached one of the layers between the sclera and the vitreous. By contrast, our SCS Microinjector is designed to enable the release of the drug into the SCS.

Background on Eye Disease

The human eye possesses focusing elements in the front, the cornea and lens, and a light-sensing element in the back, the retina. Light falls on the photoreceptors that are part of the retina, called rods and cones, and is converted into electrical energy, which travels via the optic nerve to the brain. The central portion of the retina is the macula, which is the region responsible for seeing color and the acute central vision necessary for activities such as reading, face recognition, watching television and driving. The brain processes the complex signals sent from the retina into vision. The following diagram illustrates the principal elements of the anatomy of a healthy eye, including a detailed cross-section of the back of the eye, which refers to the portion of the eye behind the lens.



Role of the Choroid in Retinal Disease

Eye disease can be caused by many factors and can affect both the front and back of the eye. In its most extreme cases, eye disease can result in either partial or total blindness. In the developed world, the major diseases that result in blindness are those affecting the retina. Millions of people live with varying degrees of irreversible vision loss because they have a degenerative eye disorder that affects the retina. In

these conditions, the retina is damaged, affecting the retina's ability to send light signals to the brain. The choroid provides blood, oxygen and nourishment to the outer layers of the retina, but it is also thought to regulate retinal heat, to assist in the control of IOP and to absorb excess light so as to avoid reflection that can damage the retina.

The choroid can be subject to disorders that can lead to retinal damage and vision loss, including inflammatory disorders, vascular disorders and tumors. Our focus is on the first two categories of disorders. When the choroid and surrounding tissue become inflamed from an immune response, it can result in macular edema, or swelling in the macular region of the retina, which often results in distorted vision or even blindness. In addition, in the case of choroidal neovascularization, abnormal blood vessels forming from choroidal blood vessels may rupture and leak into the retina, also leading to macular edema.

Back of the Eye Diseases

Some of the more common diseases that originate or manifest in the retinal and choroidal areas of the eye include:

Uveitis

Uveitis is a group of ocular conditions that are characterized by inflammation that typically affects the choroid and surrounding tissues. Prolonged or severe inflammation in the back of the eye associated with uveitis can result in the breakdown of cells at the interface of the retina and choroid, leading to the leakage and accumulation of fluid in the macular region of the retina. This fluid build-up can cause macular edema, which can rapidly result in distortion of vision, and eventually blindness, given the macula's critical role in vision. Macular edema is the most frequent cause of visual impairment among patients with uveitis.

Uveitis is one of the most frequent causes of blindness in the developed world. Based on prevalence data published in the journal *Ophthalmology* in 2004 and United States census data for 2010, we estimate approximately 350,000 individuals in the United States suffer from some form of uveitis. Uveitis can be either infectious, caused by an immune response to fight an infection inside the eye, or non-infectious. Non-infectious uveitis accounts for approximately 80% of all uveitis cases.

Uveitis is commonly treated with corticosteroids. Corticosteroids administered through eye drops, although used to treat some uveitis patients, are generally ineffective in treating patients with macular edema associated with non-infectious uveitis. Corticosteroids administered orally or systemically can be effective in treating patients with macular edema associated with non-infectious uveitis, but their long-term use is associated with significant side effects. As a result of the shortcomings associated with these methods of administering corticosteroids, the most common method for treating macular edema associated with non-infectious uveitis is intravitreal injection or implant of a corticosteroid, such as TA, dexamethasone or fluocinolone acetonide.

Retinal Vein Occlusion

RVO is a sight-threatening visual disorder resulting from a blockage of one of the veins carrying blood out of the retina. In RVO, the blockage of a retinal vein can lead to poor blood circulation, low oxygen, and sometimes inflammation in the area that is normally drained by the affected vein. A blocked vein will leak its contents of blood and fluid. This leakage within the retina and the consequential swelling from fluid can cause macular edema. Persistent inadequately treated macular edema associated with RVO can blur vision, cause significant loss in visual acuity and eventually lead to blindness. Macular edema is the most common cause of vision loss in people who suffer from RVO.

RVO is estimated to affect more than 16 million adults worldwide, according to a 2010 study published in the journal *Ophthalmology*. We estimate RVO affects 2.2 million individuals in the United States.

RVO can be treated and vision can be restored in most cases when treatment is administered relatively soon after initial diagnosis and aggressive treatment is obtained. One common method of reducing the macular edema associated with RVO is to use an anti-VEGF drug. Anti-VEGF drugs are effective in drying the leaking fluid and, therefore, they are useful in eye conditions where edema is a complication of the disease. An added challenge of RVO is inflammation that arises in response to the vascular damage and further contributes to the swelling by causing even more fluid to accumulate in the retina. Since inflammation also plays a role in vein occlusion, corticosteroids may provide an added advantage in the reduction of macular edema associated with RVO because they block the inflammatory pathways and also act to stabilize membranes.

Age-related Macular Degeneration

AMD is a chronic, progressive disease of the macula that results in the loss of central vision. The most common symptoms are a central blurred or blank spot, distortion of objects or simply blurred vision. Peripheral vision usually remains intact. The disease typically affects patients initially in one eye, with a high likelihood of it occurring in the second eye over time. Because AMD is strongly correlated with aging, the disease may recur, notwithstanding treatment, as the aging process continues.

There are two forms of AMD, “dry” AMD and “wet” AMD. Dry AMD is the most common form, representing approximately 85% to 90% of all AMD cases. However, dry AMD cases can develop into wet AMD, and wet AMD accounts for 90% of the severe vision loss associated with advanced AMD.

Wet AMD occurs when new blood vessels in the choroid intrude into the retinal layers and leak fluid. The formation of these new blood vessels is referred to as choroidal neovascularization, since they arise from the capillaries in the choroid. Abnormal new blood vessels tend to be fragile and often bleed and leak fluid into the macula. Untreated, blood vessel growth and associated leakage typically lead to retinal distortion and eventual retinal damage and scarring, resulting in irreversible destruction of the macula and permanent loss of vision. This visual loss occurs rapidly with a progressive course.

According to a study published in 2004 in the journal *Ophthalmology*, approximately 1.2 million people in the United States suffer from wet AMD. Based on estimates from AMD Alliance International and census growth data, we estimate there are approximately 230,000 new cases of wet AMD each year in the United States. Because the risk of developing wet AMD increases with age, we expect that the overall aging of the population will result in a significant increase in the number of wet AMD cases, both in the United States and worldwide.

The current standard of care for the treatment of wet AMD is administration by intravitreal injection of anti-VEGF drugs as a standalone therapy. Because anti-VEGF therapies inhibit abnormal blood vessel growth and leakage, they are effective in reducing the macular edema associated with wet AMD. Anti-VEGF therapies are effective in reducing macular edema associated with wet AMD and have been shown to prevent visual loss in over 90% of treated patients. They are also associated with improvements of 15 or more letters of visual acuity in approximately 30% of treated patients. However, anti-VEGF treatments have been associated with subretinal fibrosis, or the formation of excess connective tissue under the retina, as well as retinal scarring in some patients. In addition to anti-VEGF therapies, anti-PDGF drugs are being developed as potential treatments for wet AMD. Even though anti-VEGF and anti-PDGF therapies may be effective in treating wet AMD, intravitreal administration of these drugs requires frequent retreatment. Patients typically receive injections as often as seven times per year to manage this chronic disease.

Diabetic Macular Edema

DME is a complication of diabetic retinopathy, a disease affecting the blood vessels of the retina. Diabetic retinopathy results in multiple abnormalities in the retina, including retinal thickening, hemorrhages, impeded blood flow, excessive leakage of fluid from blood vessels and, in the final stages, abnormal blood vessel growth. When the blood vessel leakage causes swelling in the macula, it is referred to as DME. Poorly controlled blood glucose levels, high blood pressure, abnormal kidney function causing fluid retention, high cholesterol levels and other general systemic factors are risk factors associated with DME. The principal symptom of DME is a severe loss of central vision.

According to the CDC, the number of Americans diagnosed with diabetes has increased from approximately 7.7 million in 1994 to approximately 21.0 million in 2010. According to a study published in the journal *Diabetes Care* in 2003, patients with diabetes have a 10% risk of developing clinically significant DME over a 10-year period. A study published in the journal *Ophthalmology* in 2009 found that over a 25-year period, approximately 17% of diabetics studied were diagnosed with DME. We estimate approximately 1.1 million individuals in the United States suffer from DME.

Currently, the only FDA-approved drugs for the treatment of DME are Iluvien, an injectible form of fluocinolone acetonide, the anti-VEGF drugs Lucentis and Eylea and the intravitreal corticosteroid implant Ozurdex. Some retinal specialists also prescribe other anti-VEGF drugs for off-label use, such as Avastin, as well as corticosteroid therapies, primarily Kenalog and Triesence, and laser photocoagulation to treat DME. Studies have shown that both anti-VEGF drugs and corticosteroids are effective in some DME patients. However, the early use of anti-VEGF drugs administered intravitreally is limited by a need for frequent injections to maintain a therapeutic effect and corticosteroids administered intravitreally have historically been associated with acceleration of cataract formation and significant increases in IOP, which may increase the risk of glaucoma. Laser photocoagulation can also have undesirable side effects, including partial loss of peripheral and night vision.

Challenges of Ophthalmic Drug Administration

Administration of drugs to treat back of the eye diseases is a significant issue in ophthalmology. Due to the effectiveness of the blood/eye barrier, it is difficult for oral or other systemically administered drugs to reach the eye in sufficient quantities to have a beneficial effect without adverse side effects to other parts of the body. It is also difficult to provide localized delivery of drug to the individual tissues of the eye through common eye drop or intravitreal injection techniques.

There is a need for more localized drug delivery to the back of the eye in a manner that is safe, effective and practical for long-term use. While there have been many attempts to administer drugs to the back of the eye, most do not achieve sufficient and consistent concentrations for the appropriate period of time. Currently, intravitreal injection remains as the standard for delivering drugs to the retina and choroid. We believe that our novel approach using SCS injection can address several of the shortcomings of current therapies.

Manufacturing

We do not have any manufacturing facilities. We utilize contract manufacturers to formulate and produce our drug candidates and to produce our SCS Microinjector used for our clinical trials. We procure the active pharmaceutical ingredient for our drugs from a third-party supplier. We expect to utilize third-party manufacturers to produce commercial quantities of our drugs and SCS Microinjector, if approved. We anticipate entering into commercial supply agreements with these or other manufacturers at a later date.

Commercialization

We intend to develop and, if approved by the FDA, to commercialize our product candidates in the United States, and we may enter into distribution or licensing arrangements for commercialization rights for other regions. Our management team, who will lead the commercialization of our lead product candidates, has substantial experience in sales and marketing based on their participation in the commercialization of ophthalmic drugs at large pharmaceutical companies including Alcon, Allergan, CIBA Vision, ISTA and Novartis.

For marketing in the United States, we intend to build a specialty team of 30 to 40 sales and medical marketing professionals to target the approximately 1,700 retinal specialists in the United States.

Competition

The biotechnology and pharmaceutical industries are characterized by rapidly advancing technologies, intense competition and a strong emphasis on proprietary drugs. While we believe that our technologies, knowledge, experience and scientific resources provide us with competitive advantages, we face potential competition from many different sources, including major pharmaceutical, specialty pharmaceutical and biotechnology companies, academic institutions and governmental agencies and public and private research institutions. Any product candidate that we successfully develop and commercialize will compete with existing therapies and new therapies that may become available in the future.

With respect to CLS-TA, we face competition from other commercially available forms of TA and other injectable and implantable corticosteroids. Bristol-Myers Squibb markets TA under the brand name Kenalog. Kenalog is indicated only for intramuscular or intraarticular injection, although it is used off-label for intraocular inflammation. There are also a number of generic equivalents of Kenalog. In addition, Alcon's injectable TA, Triesence, is approved in the United States for the treatment of uveitis and other inflammatory conditions unresponsive to topical corticosteroids, although it is not indicated for the treatment of macular edema associated with uveitis or RVO or DME. Ozurdex, marketed by Allergan, is a bioerodable extended release implant that delivers the corticosteroid dexamethasone and is approved for the treatment of non-infectious uveitis affecting the back of the eye and RVO in both the United States and in the European Union, and recently received approval from the FDA to treat DME. Bausch + Lomb markets Retisert, an intravitreal implant of the corticosteroid fluocinolone acetonide for the treatment of non-infectious uveitis. Iluvien, an injectable form of fluocinolone acetonide marketed by Alimera Sciences, has been approved in both the United States and the European Union for the treatment of DME.

Our product candidates will also compete with anti-VEGF drugs, which are the current standard of care for RVO, wet AMD and DME. Genentech's products Lucentis and Avastin are both anti-VEGF antibodies. Lucentis is currently approved in the United States and European Union for the treatment of wet AMD, macular edema following RVO and DME. Avastin is an anti-VEGF drug used off-label by retinal specialists in both the United States and in certain countries of the European Union in the treatment of numerous retinal diseases, but it is not indicated for ophthalmic use. In the United States, Regeneron's anti-VEGF product, Eylea, is approved for the treatment of wet AMD, macular edema following RVO and DME. In the European Union, Eylea is approved for the treatment of wet AMD, DME and macular edema secondary to RVO.

Ophthotech's drug candidate, Fovista, an anti-PDGF agent, is in Phase 3 clinical trials as a potential treatment for wet AMD to be administered together with an anti-VEGF drug. We are also aware of several other drug candidates in earlier stages of development as potential treatments for the diseases that we intend to target.

Many of our competitors have significantly greater financial resources and expertise in research and development, manufacturing, preclinical testing, conducting clinical trials, obtaining regulatory approvals and marketing approved drugs than we do. These competitors also compete with us in recruiting and retaining qualified scientific and management personnel and establishing clinical trial sites and patient recruitment for clinical trials, as well as in acquiring technologies complementary to, or necessary for, our programs. Smaller or early stage companies may also prove to be significant competitors, particularly through collaborative arrangements with large and established companies.

Our commercial opportunity could be reduced or eliminated if our competitors develop and commercialize drugs that are safer, more effective, have fewer or less severe side effects, are more convenient or are less expensive than any drugs that we may develop. Our competitors may also obtain FDA or other regulatory approval for their drugs more rapidly than we may obtain approval for ours, which could result in our competitors establishing a strong market position before we are able to enter the market or obtaining FDA market exclusivity, thereby delaying our product approvals. Competitors' patent protection could also potentially delay FDA approval of our product candidates for up to 30 months, and we will still be subject to potential patent litigation that might arise beyond the 30 months. The key competitive factors affecting the success of our product candidates, if approved for marketing, are likely to be their efficacy, safety, method of administration, convenience, price and the availability of coverage and reimbursement from government and other third-party payors.

Intellectual Property

Our success depends in part on our ability to obtain and maintain patent and other intellectual property and proprietary protection for our technologies and methods of accessing the SCS, drug candidates and formulations as well as patent and other intellectual property and proprietary protection for novel applications, uses, and technological innovations related to our drug candidates, proprietary delivery devices and core technologies. We also rely on trade secrets, know-how, and continuing technological innovation to develop and maintain our proprietary position.

Patents and Patent Applications

Our patent estate, on a worldwide basis, includes five granted U.S. patents broadly directed to methods of administering drugs into the SCS by injection. In addition, our patent estate includes ten patent applications pending in the United States, seven issued foreign patents, four pending international PCT applications and over 50 patent applications pending in major international markets, including the European Union, Canada, India, Japan, China and Australia, relating to our SCS delivery technology, as well as the formulations of our current therapeutic drug candidates and delivery device. Of these patents and patent applications, we license four of the five issued U.S. patents, two pending U.S. applications, five of the issued foreign patents, one of the pending international PCT applications and 15 foreign patent applications, each relating to methods of delivering drugs to the eye by microneedle administration, pursuant to a license agreement with Georgia Tech Research Corporation and Emory University that is described below. With respect to the in-licensed international PCT application, according to the terms of the license agreement, we advise Georgia Tech and Emory regarding the countries in which patent applications should be pursued. Subject to payment of required maintenance fees, annuities and other charges, our issued in-licensed U.S. patents are expected to expire between 2027 and 2029, without taking into account possible patent term adjustments or extensions. Applications relating to SCS delivery technology and methods, our current therapeutic drug candidates and formulations, various therapeutic uses, including treatment of specific

indications such as macular edema associated with non-infectious uveitis and RVO, wet AMD as well as DME and improvement of specified clinical parameters, are expected to expire between 2027 and 2035, without taking into account possible patent term adjustments or extensions.

The term of individual patents depends on the legal term for patents in the countries in which they are granted. In most countries, including the United States, the patent term is generally 20 years from the earliest claimed filing date of a non-provisional patent application in the applicable country. In the United States, a patent's term may, in certain cases, be extended by patent term adjustment, which compensates a patentee for administrative delays by the U.S. Patent and Trademark Office in examining and granting a patent, or may be shortened if a patent is terminally disclaimed over a commonly owned patent or a patent naming a common inventor and having an earlier expiration date. The Drug Price Competition and Patent Term Restoration Act of 1984, or the Hatch-Waxman Act, permits a patent term extension of up to five years beyond the expiration date of a U.S. patent as partial compensation for the length of time the drug is under regulatory review.

Our product candidates are protected against genericization through several levels of patents, including the patented approach of administration into the SCS. In the case of CLS-TA injected into the SCS, an applicant who files a paragraph 4 ANDA or 505(b)(2) NDA certifying they may circumvent our patents must also demonstrate comparability of the proposed drug, which we believe may require a clinical trial in macular edema associated with uveitis, against our product, unless a biowaiver is obtained.

Third-Party Patent Filings

Numerous U.S. and foreign issued patents and patent applications owned by third parties exist in the fields in which we are developing products, including patents and applications related to surgical methods of accessing the SCS and certain formulations of TA. Because patent applications can take many years to issue, there may be applications unknown to us, which may later result in issued patents that our product candidates or proprietary technologies may infringe.

Under U.S. law, a person may be able to patent a discovery of a new way to use a previously known compound, even if such compound itself is patented, provided the newly discovered use is novel and nonobvious. Such a method-of-use patent, however, if valid, only protects the use of a claimed compound for the specified methods claimed in the patent. This type of patent does not prevent persons from using the compound for any previously known use of the compound. Further, this type of patent does not prevent persons from making and marketing the compound for an indication that is outside the scope of the patented method.

License Agreement with Emory and Georgia Tech

In July 2012, we entered into a license agreement with Emory University, or Emory, and the Georgia Tech Research Corporation, or GTRC, under which we received a worldwide exclusive license to specified patents relating to methods and devices for drug delivery using a microinjector. The field of the license covers all ophthalmic uses of the microinjector for mammals and birds. Under this license agreement, we have agreed to direct all prosecution of intellectual property to the licensors' patent counsel and have agreed to pay for all intellectual property expenses associated with the licensed patents.

Under this license agreement, we made an initial $30,000 upfront payment and a $35,000 milestone payment upon dosing of the first human patient in a clinical trial. This license agreement requires us to make a $75,000 milestone payment upon the occurrence of a specified event relating to the

commercialization of a drug developed using the licensed patents. Beginning on the third anniversary of this license agreement, we will be obligated to pay an annual license maintenance fee of $25,000, which will continue until the first commercial sale of a product covered by the licensed patents. Additionally, we will owe a low single-digit royalty on any worldwide net product sales related to the licensed patents, with minimum annual royalties starting at $15,000 per year after commercialization. The minimum annual royalty increases each year after the first commercial sale, up to a maximum amount of $100,000 per year in the sixth calendar year and in subsequent years.

We are solely responsible for the development and commercialization of products related to the licensed patients. We are obligated to provide Emory and GTRC a written report detailing our activities related to the development and commercialization of products twice a year.

Royalties are calculated based on net sales of products covered by a patent licensed under the agreement, and are due on each such product sold as long as the patent covering that particular product is valid and unexpired. Unless otherwise terminated pursuant to its termination provisions, this license agreement will expire upon the expiration of the last to expire of the licensed patents. We have the right to terminate this license agreement at any time upon 60 days' written notice to Emory and GTRC. Emory and GTRC may also terminate this license agreement in the event of a material breach by us. This license agreement will immediately terminate if we challenge the validity or enforceability of any of the licensed patents in a court or other governmental agency of competent jurisdiction.

Research, Option and License Agreement with Spark

In April 2015, we entered into a research, option and license agreement with Spark under which we granted Spark the option to license exclusive rights to our SCS Microinjector technology and related intellectual property for use in delivering gene therapies to the back of the eye . Under this agreement, we and Spark intend to explore the feasibility of using our SCS Microinjector to deliver gene therapies to the choroid and the retina through the SCS for the treatment of several orphan diseases of the back of the eye. We believe that SCS injection of gene therapies could be a useful method of accessing the retina and choroid compared to current methods of subretinal infusion that are not easy to administer. Gene therapies incorporate a DNA molecule used to deliver foreign genetic material to a cell and a nucleic acid that confers a therapeutic benefit.

Under the agreement, Spark made a $500,000 upfront payment to us. If Spark elects to initiate an additional option period, Spark will be obligated to pay us an additional $1.0 million. Spark can exercise its option for a payment to us of $2.0 million or $3.0 million, depending upon the time of exercise. We are eligible to receive aggregate payments of up to $13.5 million from Spark upon the achievement of specified development and commercialization milestones as described in the agreement, as well as aggregate payments of up to $12.0 million upon the achievement of specified annual net sales milestones. In addition, we are eligible to receive low and mid single-digit percentage royalties on net sales of licensed products.

Subject to specified exceptions, if Spark exercises its option, the license will expire on a licensed product-by-licensed product basis and on a country-by-country basis upon the expiration of the specified licensed intellectual property. If Spark does not exercise its option, the agreement will terminate at the end of the last option exercise period. Spark has the right to terminate the agreement at any time upon written notice to us. We and Spark may also terminate this agreement upon 90 days' written notice in the event of an uncured material breach by the other party.

Trademarks, Trade Secrets and Know-How

Our trademark portfolio currently consists of one trademark registered in the European Union, one trademark registered in the European Union and New Zealand, and three pending U.S. trademark applications, as well as pending trademark applications in the European Union, Canada, Mexico, Brazil, Australia, China, India, Israel, Japan, New Zealand, Russia, Singapore, South Africa and South Korea. In addition to patent and trademark protection, we rely upon unpatented trade secrets and know-how and continuing technological innovation to develop and maintain our competitive position. We seek to protect our proprietary information, in part, using confidentiality agreements with our commercial partners, collaborators, employees, and consultants, and employees. These and other agreements, such as invention assignment agreements, grant us ownership of technologies that are developed through a relationship with a third party.

Government Regulation

In the United States, the FDA regulates drug and device products under the FDCA and its implementing regulations. Our product candidates are subject to regulation as combination products, which means that they are composed of both a drug product and device product. If marketed individually, each component would be subject to different regulatory pathways and reviewed by different Centers within the FDA. A combination product, however, is assigned to a Center that will have primary jurisdiction over its regulation based on a determination of the combination product's primary mode of action, which is the single mode of action that provides the most important therapeutic action. In the case of our product candidates, the primary mode of action is attributable to the drug component of the product, which means that the FDA's Center for Drug Evaluation and Research has primary jurisdiction over the premarket development, review and approval of our product candidates. Accordingly, we plan to investigate our products through the IND framework and seek approval through the NDA pathway. Based on our discussions with the FDA to date, we do not anticipate that the FDA will require a separate medical device authorization for our SCS Microinjector, but this could change during the course of its review of any marketing application that we may submit.

The process of obtaining regulatory approvals and the subsequent compliance with appropriate federal, state, local and foreign statutes and regulations requires the expenditure of substantial time and financial resources. Failure to comply with the applicable U.S. requirements at any time during the product development process, approval process or after approval may subject an applicant and/or sponsor to a variety of administrative or judicial sanctions, including refusal by FDA to approve applications, withdrawal of an approval, imposition of a clinical hold, import/export delays, issuance of warning letters and other types of letters, product recalls, product seizures, total or partial suspension of production or distribution, injunctions, fines, refusals of government contracts, restitution, disgorgement of profits, or civil or criminal investigations and penalties brought by FDA and the Department of Justice or other governmental entities.

Drugs

The clinical testing, manufacturing, labeling, storage, distribution, record keeping, advertising, promotion, import, export and marketing, among other things, of our product candidates are governed by extensive regulation by governmental authorities in the United States and other countries. The FDA, under

the Federal Food, Drug, and Cosmetic Act, or FDCA, regulates pharmaceutical products in the United States. The steps required before a drug may be approved for marketing in the United States generally include:

- preclinical laboratory tests and animal tests conducted under Good Laboratory Practices, or GLP;
- the submission to the FDA of an IND application for human clinical testing, which must become effective before human clinical trials commence;
- adequate and well-controlled human clinical trials to establish the safety and efficacy of the product and conducted in accordance with Good Clinical Practices, or GCP;
- the submission to the FDA of an NDA;
- FDA acceptance, review and approval of the NDA, which might include an Advisory Committee review; and
- satisfactory completion of an FDA inspection of the manufacturing facilities at which the product is made to assess compliance with current Good Manufacturing Practices, or cGMPs.

The testing and approval process requires substantial time, effort and financial resources, and the receipt and timing of any approval is uncertain. The FDA may suspend clinical trials at any time on various grounds, including a finding that the subjects or patients are being exposed to an unacceptable health risk.

Preclinical studies include laboratory evaluations of the product candidate, as well as animal studies to assess the potential safety and efficacy of the product candidate. The results of the preclinical studies, together with manufacturing information and analytical data, are submitted to the FDA as part of the IND, which must become effective before clinical trials may be commenced. The IND will become effective automatically 30 days after receipt by the FDA, unless the FDA raises concerns or questions about the conduct of the trials as outlined in the IND prior to that time. In this case, the IND sponsor and the FDA must resolve any outstanding concerns before clinical trials can proceed. The FDA may nevertheless initiate a clinical hold after the 30 days if, for example, significant public health risks arise.

Each clinical trial must be reviewed and approved by an independent institutional review board, or IRB, at each of the sites at which the trial will be conducted. The IRB will consider, among other things, ethical factors, the safety of human subjects and the possible liability of the institution.

Clinical trials are typically conducted in three sequential phases prior to approval, but the phases may overlap. These phases generally include the following:

Phase 1. Phase 1 clinical trials represent the initial introduction of a product candidate into human subjects, frequently healthy volunteers. In Phase 1, the product candidate is usually tested for safety, including adverse effects, dosage tolerance, absorption, distribution, metabolism, excretion and pharmacodynamics.

Phase 2. Phase 2 clinical trials usually involve studies in a limited patient population to (1) evaluate the efficacy of the product candidate for specific indications, (2) determine dosage tolerance and optimal dosage and (3) identify possible adverse effects and safety risks.

Phase 3. If a product candidate is found to be potentially effective and to have an acceptable safety profile in Phase 2 clinical trials, the clinical trial program will be expanded to Phase 3 clinical trials to further demonstrate clinical efficacy, optimal dosage and safety within an expanded patient population at geographically dispersed clinical trial sites.

Phase 4 clinical trials are conducted after approval to gain additional experience from the treatment of patients in the intended therapeutic indication and to document a clinical benefit in the case of drugs approved under accelerated approval regulations, or when otherwise requested by the FDA in the form of post-market requirements or commitments. Failure to promptly conduct any required Phase 4 clinical trials could result in withdrawal of approval.

The results of preclinical studies and clinical trials, together with detailed information on the manufacture, composition and quality of the product, are submitted to the FDA in the form of an NDA, requesting approval to market the product. The application must be accompanied by a significant user fee payment, although waivers may be granted in limited cases. The FDA has substantial discretion in the approval process and may refuse to accept any application or decide that the data is insufficient for approval and require additional preclinical, clinical or other studies.

Review of Application

Once an NDA has been accepted for filing, which occurs, if at all, 60 days after submission, the FDA sets a user fee goal date that informs the applicant of the specific date by which the FDA intends to complete its review. This is typically 10 months from the date of submission for drugs that are not new molecular entities, such as our product candidates. The review process can be extended by FDA requests for additional information or clarification. The FDA reviews NDAs to determine, among other things, whether the proposed product is safe and effective for its intended use, and whether the product is being manufactured in accordance with cGMPs to assure and preserve the product's identity, strength, quality and purity. Before approving an NDA, the FDA may inspect the facilities at which the product is manufactured and will not approve the product unless the manufacturing facility complies with cGMPs and may also inspect clinical trial sites for integrity of the data supporting safety and efficacy. The device component of our products will also be subject to review as part of the NDA review process and its manufacturers subject to inspection for compliance with device cGMPs embodied in the Quality System Regulation, or QSR. During the approval process, the FDA also will determine whether a risk evaluation and mitigation strategy, or REMS, is necessary to assure the safe use of the product. If the FDA concludes a REMS is needed, the sponsor of the application must submit a proposed REMS, and the FDA will not approve the application without an approved REMS, if required. A REMS can substantially increase the costs of obtaining approval. The FDA could also require a special warning, known as a black box warning, to be included in the product label in order to highlight a particular safety risk. The FDA may also convene an advisory committee of external experts to provide input on certain review issues relating to risk, benefit and interpretation of clinical trial data. The FDA may delay approval of an NDA if applicable regulatory criteria are not satisfied and/or the FDA requires additional testing or information. The FDA may require post-marketing testing and surveillance to monitor safety or efficacy of a product. FDA will issue either an approval of the NDA or a Complete Response Letter, detailing the deficiencies and information required for reconsideration of the application.

Post-Approval Requirements

Approved drugs that are manufactured or distributed in the United States are subject to pervasive and continuing regulation by the FDA, including, among other things, requirements relating to recordkeeping, periodic reporting, product distribution, advertising and promotion and reporting of adverse experiences with the product. After approval, most changes to the approved product, such as adding new indications or other labeling claims and some manufacturing and supplier changes are subject to prior FDA review and

approval. There also are continuing, annual user fee requirements for products and the establishments at which such products are manufactured, as well as new application fees for certain supplemental applications.

The FDA may impose a number of post-approval requirements as a condition of approval of an NDA. For example, the FDA may require post-marketing testing, including Phase 4 clinical trials, and surveillance to further assess and monitor the product's safety and effectiveness after commercialization. The FDA may also require a REMS, which could involve requirements for, among other things, a medication guide, special training for prescribers and dispensers, and patient registries.

In addition, entities involved in the manufacture and distribution of approved devices or drugs are required to register their establishments with the FDA and state agencies, and are subject to periodic unannounced inspections by the FDA and these state agencies for compliance with cGMP requirements. The FDA has promulgated specific requirements for drug cGMPs, device cGMPs embodied in the QSR and combination product cGMPs that, for drug/device combination products, specify the requirements within the drug cGMPs and the QSR with which manufacturers must comply. Changes to the manufacturing process are strictly regulated and often require prior FDA approval before being implemented. FDA regulations also require investigation and correction of any deviations from cGMP requirements and impose reporting and documentation requirements upon the sponsor and any third-party manufacturers that the sponsor may decide to use. Accordingly, manufacturers must continue to expend time, money, and effort in the area of production and quality control to maintain cGMP compliance.

Once an approval is granted, the FDA may withdraw the approval if compliance with regulatory requirements and standards is not maintained or if problems occur after the product reaches the market. Later discovery of previously unknown problems with a product, including adverse events of unanticipated severity or frequency, or with manufacturing processes, or failure to comply with regulatory requirements, may result in revisions to the approved labeling to add new safety information; imposition of post-market studies or clinical trials to assess new safety risks; or imposition of distribution or other restrictions under a REMS program. Other potential consequences include, among other things:

- restrictions on the marketing or manufacturing of the product, complete withdrawal of the product from the market or product recalls;
- fines, warning letters or holds on post-approval clinical trials;
- refusal of the FDA to approve applications or supplements to approved applications, or suspension or revocation of product approvals;
- product seizure or detention, or refusal to permit the import or export of products; or
- injunctions or the imposition of civil or criminal penalties.

The FDA strictly regulates marketing, labeling, advertising and promotion of products that are placed on the market. Drugs may be promoted only for the approved indications and in accordance with the provisions of the approved label. The FDA and other agencies actively enforce the laws and regulations prohibiting the promotion of off-label uses, and a company that is found to have improperly promoted off-label uses may be subject to significant liability, including investigation by federal and state authorities.

The Hatch-Waxman Amendments

Our regulatory strategy is to pursue development of our drugs for suprachoroidal delivery as Section 505(b)(2) NDAs under the FDCA. As an alternative path to FDA approval for modifications to

formulations or uses of drugs previously approved by the FDA, an applicant may submit an NDA under Section 505(b)(2) of the FDCA Section 505(b)(2) was enacted as part of the Hatch-Waxman Amendments. A Section 505(b)(2) NDA is an application that contains full reports of investigations of safety and effectiveness, but where at least some of the information required for approval comes from studies not conducted by, or for, the applicant and for which the applicant has not obtained a right of reference or use from the person by or for whom the investigations were conducted. This type of application permits reliance for such approvals on literature or on an FDA finding of safety, effectiveness or both for an approved drug product. As such, under Section 505(b)(2), the FDA may rely, for approval of an NDA, on data not developed by the applicant. Therefore, if we can satisfy the conditions required for a Section 505(b)(2) NDA submission, it may eliminate the need for us to conduct some of the preclinical studies or clinical trials for the new product candidate that might otherwise have been required. The FDA may also require companies to perform additional studies or measurements, including clinical trials, to support the change from the approved branded reference drug. The FDA may then approve the new product candidate for all, or some, of the label indications for which the branded reference drug has been approved, as well as for any new indication sought by the 505(b)(2) applicant.

Orange Book Listing

In seeking approval for a drug through an NDA, including a 505(b)(2) NDA, applicants are required to list with the FDA certain patents whose claims cover the applicant's product. Upon approval of an NDA, each of the patents listed in the application for the drug is then published in the FDA's Approved Drug Products with Therapeutic Equivalence Evaluations, known as the Orange Book. Any applicant who files an Abbreviated New Drug Application, or ANDA, seeking approval of a generic equivalent version of a drug listed in the Orange Book or a 505(b)(2) NDA referencing a drug listed in the Orange Book must certify, for each patent listed in the Orange Book for the referenced drug, to the FDA that (1) no patent information on the drug product that is the subject of the application has been submitted to the FDA, (2) such patent has expired, (3) the date on which such patent expires or (4) such patent is invalid or will not be infringed upon by the manufacture, use or sale of the drug product for which the application is submitted. There might also be no relevant patent certification. The fourth certification described above is known as a paragraph IV certification. A notice of the paragraph IV certification must be provided to each owner of the patent that is the subject of the certification and to the holder of the approved NDA to which the ANDA or 505(b)(2) application refers. The applicant may also elect to submit a "section viii" statement certifying that its proposed label does not contain (or carves out) any language regarding the patented method-of-use rather than certify to a listed method-of-use patent. This section viii statement does not require notice to the patent holder or NDA owner.

If the reference NDA holder and patent owners assert a patent challenge directed to one of the Orange Book listed patents within 45 days of the receipt of the paragraph IV certification notice, the FDA is prohibited from approving the application until the earlier of 30 months from the receipt of the paragraph IV certification expiration of the patent, settlement of the lawsuit, or a decision in the infringement case that is favorable to the applicant. Even if the 45 days expire, a patent infringement lawsuit can be brought and could delay market entry, but it would not extend the FDA-related 30-month stay of approval.

The ANDA or 505(b)(2) application also will not be approved until any applicable non-patent exclusivity listed in the Orange Book for the branded reference drug has expired as described in further detail below.

Non-Patent Exclusivity

In addition to patent exclusivity, the holder of the NDA for the listed drug may be entitled to a period of non-patent exclusivity, during which the FDA cannot approve an ANDA or 505(b)(2) application that relies on the listed drug.

A drug, including one approved under a 505(b)(2) application, may obtain a three-year period of non-patent market exclusivity for a particular condition of approval, or change to a marketed product, such as a new formulation for a previously approved product, if one or more new clinical studies (other than bioavailability or bioequivalence studies) was essential to the approval of the application and was conducted/sponsored by the applicant. Should this occur, the FDA would be precluded from approving any ANDA or 505(b)(2) application for the protected modification until after that three-year exclusivity period has run. However, the FDA can accept an application and begin the review process during the three-year exclusivity period. A 505(b)(2) NDA may also be subject to a five-year exclusivity period for a new chemical entity, whereby the FDA will not accept for filing, with limited exception, a product seeking to rely upon the FDA's findings of safety or effectiveness for such new chemical entity.

Orphan Drugs

Under the Orphan Drug Act, the FDA may grant orphan designation to a drug intended to treat a rare disease or condition affecting fewer than 200,000 individuals in the United States, or in other limited cases. Orphan drug designation does not convey any advantage in or shorten the duration of the regulatory review and approval process, though companies developing orphan drugs are eligible for certain incentives, including tax credits for qualified clinical testing. In addition, an NDA for a product that has received orphan drug designation is not subject to a prescription drug user fee unless the application includes an indication other than the rare disease or condition for which the drug was designated.

If a product that has orphan drug designation subsequently receives the first FDA approval for the disease or condition for which it has such designation, the product is entitled to orphan drug exclusivity, which means that the FDA may not approve any other applications to market the same active moiety for the same indication for seven years, except in limited circumstances, such as another drug's showing of clinical superiority over the drug with orphan exclusivity. Competitors, however, may receive approval of different active moieties for the same indication or obtain approval for the same active moiety for a different indication. In addition, doctors may prescribe products for off-label uses and undermine our exclusivity. Orphan drug exclusivity could block the approval of one of our products for seven years if a competitor obtains approval for the same active moiety for the same indication before we do, unless we are able to demonstrate that our product is clinically superior.

We do not plan to pursue orphan drug designation and exclusivity for CLS-1001 for the treatment of non-infectious uveitis in the United States. However, we may seek designation for other products in the future. We cannot guarantee that we will obtain orphan drug designation for any products in any jurisdiction. Even if we are able to obtain orphan drug designation for a product, we cannot be sure that such product will be approved, that we will be able to obtain orphan drug exclusivity upon approval, if ever, or that we will be able to maintain any exclusivity that is granted.

Foreign Regulation

In order to market any product outside of the United States, we would need to comply with numerous and varying regulatory requirements of other countries and jurisdictions regarding quality, safety and

efficacy and governing, among other things, clinical trials, marketing authorization, commercial sales and distribution of our products. Whether or not we obtain FDA approval for a product, we would need to obtain the necessary approvals by the comparable foreign regulatory authorities before we can commence clinical trials or marketing of the product in foreign countries and jurisdictions. Although many of the issues discussed above with respect to the United States apply similarly in the context of the European Union and other geographies, the approval process varies between countries and jurisdictions and can involve additional product testing and additional administrative review periods. The time required to obtain approval in other countries and jurisdictions might differ from and be longer than that required to obtain FDA approval. Regulatory approval in one country or jurisdiction does not ensure regulatory approval in another, but a failure or delay in obtaining regulatory approval in one country or jurisdiction may negatively impact the regulatory process in others.

Federal and State Fraud and Abuse, Data Privacy and Security and Transparency Laws

In addition to FDA restrictions on marketing and promotion of drugs and devices, other federal and state laws restrict our business practices. These laws include, without limitation, anti-kickback and false claims laws, data privacy and security laws, as well as transparency laws regarding payments or other items of value provided to healthcare providers.

The federal Anti-Kickback Statute prohibits, among other things, knowingly and willfully offering, paying, soliciting or receiving any remuneration (including any kickback, bribe or rebate), directly or indirectly, overtly or covertly, to induce or in return for purchasing, leasing, ordering or arranging for or recommending the purchase, lease or order of any good, facility, item or service reimbursable, in whole or in part, under Medicare, Medicaid or other federal healthcare programs. The term “remuneration” has been broadly interpreted to include anything of value. Although there are a number of statutory exceptions and regulatory safe harbors protecting some common activities from prosecution, the exceptions and safe harbors are drawn narrowly. Practices that involve remuneration that may be alleged to be intended to induce prescribing, purchases or recommendations may be subject to scrutiny if they do not qualify for an exception or safe harbor. Failure to meet all of the requirements of a particular applicable statutory exception or regulatory safe harbor does not make the conduct per se illegal under the Anti-Kickback Statute. Instead, the legality of the arrangement will be evaluated on a case-by-case basis based on a cumulative review of all its facts and circumstances. Several courts have interpreted the statute’s intent requirement to mean that if any one purpose of an arrangement involving remuneration is to induce referrals of federal healthcare covered business, the Anti-Kickback Statute has been violated.

Additionally, the intent standard under the Anti-Kickback Statute was amended by the Patient Protection and Affordable Care Act of 2010, as amended by the Health Care and Education Reconciliation Act of 2010, collectively the Affordable Care Act, to a stricter standard such that a person or entity no longer needs to have actual knowledge of the statute or specific intent to violate it in order to have committed a violation. In addition, the Affordable Care Act codified case law that a claim including items or services resulting from a violation of the federal Anti-Kickback Statute constitutes a false or fraudulent claim for purposes of the federal civil False Claims Act.

The federal civil False Claims Act prohibits, among other things, any person or entity from knowingly presenting, or causing to be presented, a false or fraudulent claim for payment or approval to the federal government or knowingly making, using or causing to be made or used a false record or statement material to a false or fraudulent claim to the federal government. A claim includes “any request or demand” for

money or property presented to the U.S. government. The civil False Claims Act also applies to false submissions that cause the government to be paid less than the amount to which it is entitled, such as a rebate. Intent to deceive is not required to establish liability under the civil False Claims Act. Several pharmaceutical, device and other healthcare companies have been prosecuted under these laws for, among other things, allegedly providing free product to customers with the expectation that the customers would bill federal programs for the product. Other companies have been prosecuted for causing false claims to be submitted because of the companies' marketing of products for unapproved, and thus non-covered, uses.

The government may further prosecute conduct constituting a false claim under the criminal False Claims Act. The criminal False Claims Act prohibits the making or presenting of a claim to the government knowing such claim to be false, fictitious, or fraudulent and, unlike the civil False Claims Act, requires proof of intent to submit a false claim.

The federal Health Insurance Portability and Accountability Act of 1996, or HIPAA, created new federal criminal statutes that prohibit, among other things, knowingly and willfully executing, or attempting to execute, a scheme to defraud any healthcare benefit program, including private third-party payors, knowingly and willfully embezzling or stealing from a healthcare benefit program, willfully obstructing a criminal investigation of a healthcare offense, and knowingly and willfully falsifying, concealing or covering up a material fact or making any materially false, fictitious or fraudulent statement in connection with the delivery of or payment for healthcare benefits, items or services. Like the Anti-Kickback Statute, the Affordable Care Act amended the intent standard for certain healthcare fraud statutes under HIPAA such that a person or entity no longer needs to have actual knowledge of the statute or specific intent to violate it in order to have committed a violation.

The civil monetary penalties statute imposes penalties against any person or entity that, among other things, is determined to have presented or caused to be presented a claim to a federal health program that the person knows or should know is for an item or service that was not provided as claimed or is false or fraudulent.

Also, many states have similar fraud and abuse statutes or regulations that may be broader in scope and may apply regardless of payor, in addition to items and services reimbursed under Medicaid and other state programs.

Under HIPAA, the U.S. Department of Health and Human Services, or HHS, has issued regulations to protect the privacy and security of protected health information used or disclosed by covered entities including health care providers. HIPAA also regulates standardization of data content, codes and formats used in health care transactions and standardization of identifiers for health plans and providers. HIPAA, as amended by HITECH and its implementing regulations, including the omnibus final rule published on January 25, 2015, also imposes certain obligations on the business associates of covered entities that obtain protected health information in providing services to or on behalf of covered entities. Penalties for violations of HIPAA regulations include civil and criminal penalties. In addition to federal privacy regulations, there are a number of state laws governing confidentiality and security of health information that are applicable to our business. New laws governing privacy may be adopted in the future as well. Failure to comply with privacy requirements could result in civil or criminal penalties, which could have a materially adverse effect on our business.

Additionally, there has been a recent trend of increased federal and state regulation of payments and transfers of value provided to healthcare professionals and/or entities. On February 8, 2013, the Centers for Medicare & Medicaid Services, or CMS, released its final rule implementing section 6002 of the Affordable

Care Act known as the Physician Payments Sunshine Act that imposes new annual reporting requirements on manufacturers of drugs, devices, biologicals and medical supplies for payments and other transfers of value provided by them, directly or indirectly, to physicians and teaching hospitals, as well as ownership and investment interests held by physicians and their family members. A manufacturer's failure to submit timely, accurately and completely the required information for all payments, transfers of value or ownership or investment interests may result in civil monetary penalties of up to an aggregate of $150,000 per year, and up to an aggregate of $1 million per year for "knowing failures." Any failure to comply could result in significant fines and penalties. Certain states also mandate implementation of commercial compliance programs, impose restrictions on device manufacturer marketing practices or require tracking and reporting of gifts, compensation and other remuneration to particular types of healthcare professionals and entities.

Because of the breadth of these laws and the narrowness of the statutory exceptions and safe harbors available under such laws, it is possible that some of our current or future business activities, including certain sales and marketing practices and the provision of certain items and services to our customers, could be subject to challenge under one or more of such laws. The heightening compliance environment and the need to build and maintain robust and expandable systems to comply with different compliance and/or reporting requirements in multiple jurisdictions could increase the possibility that a healthcare company may fail to comply fully with one or more of these requirements. If our operations are found to be in violation of any of the health care laws or regulations described above that are applicable to us, or any other laws that apply to us, we may be subject to penalties, including potentially significant criminal and civil and/or administrative penalties, damages, fines, disgorgement, imprisonment, exclusion from participation in government healthcare programs, contractual damages, reputational harm, administrative burdens, diminished profits and future earnings, and the curtailment or restructuring of our operations, any of which could adversely affect our ability to operate our business and our results of operations. To the extent that any of our product candidates, once approved, are sold in a foreign country, we may be subject to similar foreign laws, which may include, for instance, applicable post-marketing requirements, including safety surveillance, anti-fraud and abuse laws and implementation of corporate compliance programs and reporting of payments or transfers of value to healthcare professionals.

Coverage and Reimbursement

We believe that physicians who use our product candidates, if approved, will be reimbursed by third-party payors for both the SCS injection using our SCS Microinjector and for the drug itself. We intend to seek a specific Current Procedural Terminology, or CPT, code as established and maintained by the American Medical Association, or AMA, for the SCS injection of pharmacologic agents using our SCS Microinjector, and a separate Healthcare Common Procedure Coding System, or HCPCS, code as maintained by the Centers for Medicare and Medicaid Services, or CMS, for the drug itself. We believe that separate CPT and HCPCS codes will help payors differentiate our drug candidates from other drugs currently on the market administered through intravitreal injections, although we can provide no assurance that the AMA or CMS will approve the creation of such new codes applicable to our products.

Our strategy will include efforts to engage physician societies and encourage third-party payors to establish coverage, coding and payment that will facilitate access to our product candidates and SCS Microinjector as we expand our commercialization efforts in the United States. Our success in these efforts depends in part on the extent to which governmental authorities, private health insurers and other third-party payors provide coverage for and establish adequate reimbursement levels for the procedures during which our product candidates are administered and for the drugs themselves. Failure by physicians, hospitals,

ambulatory surgery centers, and other users of our products to obtain sufficient coverage and reimbursement from healthcare payors for the procedures administering our product candidates or for the product candidates themselves, or adverse changes in government and private third-party payors' policies would have a material adverse effect on our business, financial condition, results of operations and future growth prospects.

In the U.S., third-party payors continue to implement initiatives that restrict the use of certain technologies to those that meet certain clinical evidentiary requirements. Failure to obtain favorable coverage policies could have a material adverse effect on our business and operations.

In addition to uncertainties surrounding coverage policies, third-party payors from time to time update reimbursement amounts and also revise the methodologies used to determine reimbursement amounts. This includes annual updates to payments to ambulatory surgery centers, hospitals and physicians for the procedure performed administering our products, which could directly impact the demand for any of our product candidates that may be approved. An example of payment updates is the Medicare program updates to physician payments, which is done on an annual basis using a prescribed statutory formula. In the past, when the application of the formula resulted in lower payment, Congress has passed interim legislation to prevent the reductions. However, the Medicare Access and CHIP Reauthorization Act of 2015, or MACRA, ended the use of the statutory formula, and provided for a 0.5% annual increase in payment rates under the Medicare Physician Fee Schedule through 2019, but no annual update from 2020 through 2025. MACRA also introduced a merit based incentive bonus program for Medicare physicians beginning in 2019. At this time it is unclear how the introduction of the merit based incentive program will impact overall physician reimbursement under the Medicare program. Any changes in coverage and reimbursement that further restricts coverage of our products or lowers reimbursement for procedures using our products could materially affect our business.

Healthcare Reform

Current and future legislative proposals to further reform healthcare or reduce healthcare costs may result in lower reimbursement for our products, or for the procedures associated with the use of our products, or limit coverage of our products. The cost containment measures that payors and providers are instituting and the effect of any healthcare reform initiative implemented in the future could significantly reduce our revenues from the sale of our products. However, we believe that the shift away from fee-for-service agreements to capitated payment models supports the value of our products, as we believe that our products reduce longitudinal resource utilization, which can be cost saving-for both payors and providers.

For example, implementation of the Affordable Care Act has the potential to substantially change healthcare financing and delivery by both governmental and private insurers, and significantly impact the pharmaceutical and medical device industries.

The Affordable Care Act imposed, among other things, a new federal excise tax on the sale of certain medical devices, established an annual, nondeductible fee on any entity that manufactures or imports certain specified branded prescription drugs and biologic agents, addressed a new methodology by which rebates owed by manufacturers under the Medicaid Drug Rebate Program are calculated for drugs that are inhaled, infused, instilled, implanted or injected, increased the minimum Medicaid rebates owed by most manufacturers under the Medicaid Drug Rebate Program, extended the Medicaid Drug Rebate program to utilization of prescriptions of individuals enrolled in Medicaid managed care organizations, and provided incentives to programs that increase the federal government's comparative effectiveness research. In

addition, the Affordable Care Act implemented payment system reforms including a national pilot program on payment bundling to encourage hospitals, physicians and other providers to improve the coordination, quality and efficiency of certain healthcare services through bundled payment models. There have been judicial and Congressional challenges to certain aspects of the ACA, and we expect there will be additional challenges and amendments to the ACA in the future.

In addition, other legislative changes have been proposed and adopted since the Affordable Care Act was enacted. On August 2, 2011, the President signed into law the Budget Control Act of 2011, which, among other things, created the Joint Select Committee on Deficit Reduction to recommend to Congress proposals in spending reductions. The Joint Select Committee did not achieve a targeted deficit reduction of at least $1.2 trillion for the years 2013 through 2021, triggering the legislation's automatic reduction to several government programs. This includes reductions to Medicare payments to providers of 2% per fiscal year, which went into effect on April 1, 2013 and, due to the Bipartisan Budget Act of 2015, will remain in effect through 2025 unless additional Congressional action is taken. On January 2, 2013, President Obama signed into law the American Taxpayer Relief Act of 2012, which, among other things, reduced Medicare payments to several providers, including hospitals, imaging centers and cancer treatment centers and increased the statute of limitations period for the government to recover overpayments to providers from three to five years. We expect that additional state and federal healthcare reform measures will be adopted in the future, any of which could limit the amounts that federal and state governments will pay for healthcare products and services, which could result in reduced demand for our products or additional pricing pressure.

The Foreign Corrupt Practices Act

The Foreign Corrupt Practices Act, or the FCPA, prohibits any U.S. individual or business from paying, offering, or authorizing payment or offering of anything of value, directly or indirectly, to any foreign official, political party or candidate for the purpose of influencing any act or decision of the foreign entity in order to assist the individual or business in obtaining or retaining business. The FCPA also obligates companies whose securities are listed in the United States to comply with accounting provisions requiring the company to maintain books and records that accurately and fairly reflect all transactions of the corporation, including international subsidiaries, and to devise and maintain an adequate system of internal accounting controls for international operations. Activities that violate the FCPA, even if they occur wholly outside the United States, can result in criminal and civil fines, imprisonment, disgorgement, oversight, and debarment from government contracts.

Employees

As of December 15, 2015, we had 21 employees, all of whom are located in the United States. None of our employees is represented by a labor union or covered by a collective bargaining agreement. We consider our relationship with our employees to be good.

Facilities

Our principal offices occupy approximately 8,800 square feet of leased office space in Alpharetta, Georgia, pursuant to a lease agreement that expires in March 2017. We believe that our current facilities are suitable and adequate to meet our current needs. We intend to add new facilities or expand existing facilities as we add employees, and we believe that suitable additional or substitute space will be available as needed to accommodate any such expansion of our operations.

Legal Proceedings

We are not currently a party to any material legal proceedings and we are not aware of any pending or threatened legal proceeding against us that we believe could have a material adverse effect on our business, operating results or financial condition.

MANAGEMENT

Directors and Executive Officers

The following table sets forth information concerning our directors, executive officers and other key employees, including their ages as of December 15, 2015:

Name	Age	Position
Executive Officers:		
Daniel H. White	48	President, Chief Executive Officer and Director
Charles A. Deignan	51	Chief Financial Officer
Glenn Noronha, Ph.D.	50	Executive Vice President, Research and Development
Other Key Employees:		
Rafael V. Andino	50	Vice President, Product Development
Stephen H. Lang	58	Vice President, Commercial Operations
Non-Management Directors:		
Christy L. Shaffer, Ph.D	57	Chairman of the Board of Directors
Clay B. Thorp	47	Director
Evgeny Zaytsev, M.D.	47	Director
Gerald D. Cagle, Ph.D.	71	Director
William D. Humphries	49	Director
Derek Yoon	41	Director

Executive Officers

Daniel H. White

Mr. White is the founder of our company and has served as our President and Chief Executive Officer and as a member of our board of directors since our inception in May 2011. From 2008 to 2011, Mr. White served as Executive Director, Global Corporate Development, for Stiefel Laboratories, Inc., a dermatology pharmaceutical company acquired by GlaxoSmithKline in 2009. From 2007 to 2008, he co-founded and served as President and Chief Executive Officer of Percept BioScience, Inc., a biotechnology company. In 2003, Mr. White co-founded, and until 2007 served as Vice President of Finance and Corporate Development of Alimera Sciences, Inc., a biopharmaceutical company focused on ophthalmology. Previously, he was Head of Business Development and Licensing for CIBA Vision, a Novartis company, and Director of Licensing and Business Development for AAIPharma. Mr. White holds an M.B.A. degree from Wake Forest University and a B.S. degree in Molecular Biology from Auburn University. Our board of directors believes that Mr. White's leadership of our company since its inception, extensive entrepreneurial experience, knowledge of our company as founder and experience with biotechnology companies prior to founding our company provides him with the qualifications and skills to serve as a director of our company.

Charles A. Deignan

Mr. Deignan has served as our Chief Financial Officer since January 2012. From 2009 to December 2011, Mr. Deignan was Vice President of Finance and Administration for Salutria Pharmaceuticals. Previously, from 1999 to 2009, Mr. Deignan served in a number of roles with AtheroGenics, Inc., a publicly held biopharmaceutical company, including as its Vice President of Finance and Administration. Prior to that, he held management positions at AAIPharma, Inc. and Schering-Plough. Mr. Deignan received his B.S. degree in Business Administration from Boston University.

Glenn Noronha, Ph.D.

Dr. Noronha has served as our Executive Vice President, Research and Development since August 2013. From August 2012 to May 2013, he served as Vice President, Research and Development at Sucampo Pharma Americas, LLC, a pharmaceutical company. From July 2011 to July 2012, Dr. Noronha was Chief Scientific Officer for JW Theriac, Inc., a pharmaceutical company focused on new drug research and development. From 2008 to July 2011, Dr. Noronha was Global Project Head for Retinal Development at Alcon Laboratories, Inc., a Novartis company. From 2002 to 2008, Dr. Noronha held several positions at TargeGen, Inc., a pharmaceutical company, including as co-lead for its ophthalmology programs. Previously, from 2000 to 2002, he was a research scientist and project leader for Medtronic MiniMed, Inc. Dr. Noronha received his Ph.D. degree from Loyola University of Chicago and was a post-doctoral fellow at the University of California at Irvine.

Other Key Employees

Rafael V. Andino

Mr. Andino has served as our Vice President, Product Development since February 2013. Since June 2013, Mr. Andino has also served as an adjunct professor of biomedical engineering at the Georgia Institute of Technology. From January 2009 to February 2013, he served as Director of Research and Development for Bard Medical, a division of C.R. Bard, Inc., a publicly traded company. In 1999, Mr. Andino founded, and until 2008 served as President and Chief Executive Officer of Biofisica, Inc., a biotechnology company that developed technology to expedite wound healing and regeneration of connective tissue in humans. Prior to founding Biofisica, from 1995 to 2005 Mr. Andino was a mechanical engineer, research and development director and senior project manager for CIBA Vision, a Novartis company. He has also worked for the global technology companies E.I. Dupont de Nemours, General Electric and IBM. Mr. Andino received his Bachelor’s degree in Mechanical Engineering from the Georgia Institute of Technology, a Master of Science in Biomedical Engineering from the University of Alabama at Birmingham and an M.B.A. degree from Mercer University.

Stephen H. Lang

Mr. Lang has served as our Vice President, Commercial Operations since March 2013. From 2006 to June 2012, Mr. Lang served as Vice President of Sales for ISTA Pharmaceuticals, Inc., an ophthalmic product company acquired by Bausch + Lomb in 2012. Previously, Mr. Lang held leadership roles in sales and marketing, serving with Novartis Ophthalmics, Inc. from 1995 to 2003, including as its Senior Vice President of U.S. Sales from 2002 to 2003. Mr. Lang began his career with Allergan, Inc. where he served for more than 16 years in various positions, including sales, marketing, national accounts and global business development. He earned his B.B.A. degree in Management from Georgia Southern University.

Non-Management Directors

Christy L. Shaffer, Ph.D.

Dr. Shaffer has served as a director of our company and as the chairman of our board of directors since January 2012. Since 2011, Dr. Shaffer has served as a Venture Partner with Hatteras Venture Partners, an investment firm, and as Managing Director of Hatteras Discovery, which invests in early-stage companies in the life sciences industry sector. From 1995 to March 2010, Dr. Shaffer served in increasing leadership positions at Inspire Pharmaceuticals, a publicly held biopharmaceutical company, beginning as the

company's first full-time employee and Director of Clinical Operations and eventually being appointed as Chief Executive Officer and a director of the company in 1999, as its President in 2005 and a member of its Development Committee in 2009. Prior to Inspire, she was a clinical research scientist, international project leader and Associate Director of Pulmonary and Critical Care Medicine at Burroughs Wellcome Co.
Dr. Shaffer currently serves in leadership roles on several non-profit boards, including as chair of the Morehead Planetarium and Science Center's advisory board, on the Board of Trustees for the Cystic Fibrosis Foundation, and as chair of the board of CFF Therapeutic, Inc. Dr. Shaffer is a receptor pharmacologist by training, earning her Ph.D. in Pharmacology from the University of Tennessee's Health Science Center in Memphis, Tennessee. She completed post-doctoral training at The Chicago Medical School as well as the University of North Carolina at Chapel Hill. In September 2008, the Securities and Exchange Commission approved a non-monetary settlement of its investigation relating to Inspire Pharmaceuticals' disclosures in its periodic reports relating to a clinical trial. The Commission also approved a settlement with Dr. Shaffer, as Inspire's President and Chief Executive Officer and a member of its board of directors, under which she consented to a cease and desist order against future violations of Section 13(a) of the Exchange Act and Rules 12b-20 and 13a-13 thereunder. The cease and desist order followed a finding by the Commission that three Quarterly Reports on Form 10-Q filed by Inspire included misleading disclosure about a clinical trial, specifically that the trial was described as "confirmatory" and "replicating" the efficacy found in an earlier trial. Dr. Shaffer did not admit or deny any findings in the order, and the order did not include any finding of any violation of any statute or regulation that involved any intentional wrongdoing or fraud, any monetary payments or other sanctions or otherwise affect Dr. Shaffer's future employment status, nor did it prohibit Dr. Shaffer from serving in any capacity on public company boards of directors. Our board of directors believes that Dr. Shaffer's clinical background as a scientist and her leadership experience as chief executive of a public company in the biopharmaceutical industry provides her with the qualifications and skills to serve as a director of our company.

Clay B. Thorp

Mr. Thorp has served as a director of our company since January 2012. In 2001, Mr. Thorp co-founded and has since served as General Partner of Hatteras Venture Partners, an investment firm, where he leads investments in a range of life science companies in the biopharmaceutical, medical device, diagnostics and research informatics sectors. Previously, he was instrumental in the founding of several life sciences companies, including serving as co-founder, Chief Executive Officer and Chairman of Synthematix, Inc., a chemistry informatics company that was acquired by Symyx Technologies in 2005, co-founder and former Chairman of PhaseBio Pharmaceuticals, Inc., co-founder and head of corporate development for Novalon Pharmaceutical Corporation, which was sold to Karo Bio in 2000, and co-founder and president of Xanthon, Inc., a bioinformatics company with electro-chemical detection technology for direct analysis of DNA, RNA and proteins. Mr. Thorp holds a Masters of Public Policy degree from Harvard University and a B.A. degree in Mathematics and History from the University of North Carolina at Chapel Hill. Our board of directors believes that Mr. Thorp's experience as an entrepreneur and an investor in life sciences companies provides him with the qualifications and skills to serve as a director of our company.

Evgeny Zaytsev, M.D.

Dr. Zaytsev has served as a director of our company since August 2014. Dr. Zaytsev has served as President, Chief Executive Officer and a managing partner of RMI Partners LLC since May 2013 and as the President and Chief Executive Officer of RMI Partners Inc. since November 2013. Dr. Zaytsev has also served as a general partner at Helix Ventures, which he co-founded to exclusively invest in novel

therapeutic opportunities, since July 2009. Previously Dr. Zaytsev was a partner at Asset Management Company, one of the oldest venture firms in Silicon Valley, from 2002 to 2009. Dr. Zaytsev received his M.D. degree and Ph.D. degree from the Altai State Medical University and his M.B.A. degree from the Stanford Graduate School of Business. Our board of directors believes that Dr. Zaytsev's scientific background and experience as an investor in life sciences companies provides him with the qualifications and skills to serve as a director of our company.

Gerald D. Cagle, Ph.D.

Dr. Cagle has served on our board of directors since July 2013. Dr. Cagle has served as Chief Operating Officer at Cognoptix, lnc., a biotechnology company focused on the diagnosis of Alzheimer's disease, since December 2008. He also is Senior Advisor and Head of Business Development for GrayBug, LLC, a platform drug delivery company. Previously, Dr. Cagle served as Senior Vice President of Research & Development at Alcon Laboratories lnc. from 1997 to 2008, assuming the responsibility of Chief Scientific Officer in 2006. He currently serves on the board of directors of Aerie Pharmaceuticals, Inc., a publicly held biopharmaceutical company. Dr. Cagle has also served on the Wilmer Eye Institute Advisory Council and is a member of the ARVO Foundation Board of Governors. Dr. Cagle received his B.S. degree from Wayland College and earned M.S. and Ph.D. degrees from the University of North Texas. Our board of directors believes that Dr. Cagle's scientific background and experience provides him with the qualifications and skills to serve as a director of our company.

William D. Humphries

Mr. Humphries has served as a director of our company since January 2012. Mr. Humphries has served as President and Chief Executive Officer of the North American business of Merz, Inc., an affiliate of Merz Pharma Group, a specialty healthcare company, since March 2012. From 2006 to March 2012, he served in a number of leadership positions with Stiefel Laboratories, Inc., a dermatology pharmaceutical company, including as its Chief Commercial Officer and then as its President beginning in 2008. Stiefel was acquired by GlaxoSmithKline in 2009. After the acquisition, Mr. Humphries served as the President of Dermatology for Stiefel from 2009 until March 2012. Before Stiefel, Mr. Humphries served in executive roles in sales and marketing, business development, and international marketing for Allergan, Inc., concluding as vice president of its U.S. skincare business. Mr. Humphries has served on the board of ZARS Pharma, the GlaxoSmithKline Portfolio Investment Board and the GlaxoSmithKline Ophthalmology Board. Mr. Humphries received his M.B.A. degree from Pepperdine University and a B.A. degree from Bucknell University. Our board of directors believes that Mr. Humphries' experience as pharmaceutical company executive provides him with the qualifications and skills to serve as a director of our company.

Derek Yoon

Mr. Yoon has served as a director of our company since December 2015. Mr. Yoon has served as a Partner in the Boston, Massachusetts office of AJU IB Investment, a venture investment firm headquartered in Seoul, Korea, since January 2014. Prior to that, from April 2011 to December 2013, Mr. Yoon served as a Portfolio Manager, Healthcare Banking at RBS Citizens Bank. From July 2009 to May 2011, he served as a Research Associate at Berwind Private Equity. Before this, Mr. Yoon held a variety of positions in the investment banking industry. Mr. Yoon received his B.S. degree in Chemical Engineering from Yonsei University (Seoul, Korea), his M.B.A. degree from Babson College and his M.S.F. degree from Boston College. Our board of directors believes that Mr. Yoon's scientific and finance background and experience provide him with the qualifications and skills to serve as a director of our company.

Board Composition

Our board of directors currently consists of seven members. Each director is currently elected to the board for a one-year term, to serve until the election and qualification of successor directors at the annual meeting of stockholders, or until the director's earlier removal, resignation or death.

Our directors were elected to and currently serve on the board pursuant to a voting agreement among us and several of our largest stockholders. This agreement will terminate upon the completion of this offering, after which there will be no further contractual obligations regarding the election of our directors.

In accordance with our amended and restated certificate of incorporation, which will be in effect upon the closing of this offering, our board of directors will be divided into three classes, each of which will consist, as nearly as possible, of one-third of the total number of directors constituting our entire board and which will serve staggered three-year terms. At each annual meeting of stockholders, the successors to directors whose terms then expire will be elected to serve from the time of election and qualification until the third annual meeting following election. Our directors will be divided among the three classes as follows:

- Class I, which will consist of and , and their term will expire at our first annual meeting of stockholders to be held after the completion of this offering;
- Class II, which will consist of and , and their term will expire at our second annual meeting of stockholders to be held after the completion of this offering; and
- Class III, which will consist of and , and their term will expire at our third annual meeting of stockholders to be held after the completion of this offering.

Our amended and restated bylaws, which will become effective upon completion of this offering, will provide that the authorized number of directors may be changed only by resolution approved by a majority of our board of directors. Any additional directorships resulting from an increase in the number of directors will be distributed among the three classes so that, as nearly as possible, each class will consist of one-third of the directors.

The division of our board of directors into three classes with staggered three-year terms may delay or prevent a change of our management or a change in control.

Director Independence

Our board of directors has undertaken a review of the independence of the directors and considered whether any director has a material relationship with us that could compromise his or her ability to exercise independent judgment in carrying out his or her responsibilities. As a result of this review, our board of directors has determined that Drs. Shaffer, Cagle and Zaytsev and Messrs. Humphries, Yoon and Thorp, representing six of our seven directors, are "independent directors" as defined under NASDAQ rules.

Committees of the Board of Directors

Our board of directors has established an audit committee, a compensation committee and a nominating and corporate governance committee, each of which has the composition and responsibilities described below. From time to time, the board may establish other committees to facilitate the management of our business.

Audit Committee

Our audit committee reviews our internal accounting procedures and consults with and reviews the services provided by our independent registered public accountants. Our audit committee consists of three directors, , and , and our board of directors has determined that each of them is independent within the meaning of the applicable stock exchange listing requirements and the independence requirements contemplated by Rule 10A-3 under the Securities Exchange Act of 1934, as amended, or the Exchange Act. is the chairman of the audit committee and our board of directors has determined that is an "audit committee financial expert" as defined by SEC rules and regulations. Our board of directors has determined that the composition of our audit committee meets the criteria for independence under, and the functioning of our audit committee complies with, the applicable requirements of the Sarbanes-Oxley Act, applicable stock exchange listing requirements and SEC rules and regulations. We intend to continue to evaluate the requirements applicable to us and we intend to comply with the future requirements to the extent that they become applicable to our audit committee. The principal duties and responsibilities of our audit committee include:

- appointing and retaining an independent registered public accounting firm to serve as independent auditor to audit our financial statements, overseeing the independent auditor's work and determining the independent auditor's compensation;
- approving in advance all audit services and non-audit services to be provided to us by our independent auditor;
- establishing procedures for the receipt, retention and treatment of complaints received by us regarding accounting, internal accounting controls, auditing or compliance matters, as well as for the confidential, anonymous submission by our employees of concerns regarding questionable accounting or auditing matters;
- reviewing and discussing with management and our independent auditor the results of the annual audit and the independent auditor's review of our quarterly financial statements; and
- conferring with management and our independent auditor about the scope, adequacy and effectiveness of our internal accounting controls, the objectivity of our financial reporting and our accounting policies and practices.

Compensation Committee

Our compensation committee reviews and determines the compensation of all our executive officers. Our compensation committee consists of directors, , each of whom is a non-employee member of our board of directors as defined in Rule 16b-3 under the Exchange Act. is the chairman of the compensation committee. Our board of directors has determined that the composition of our compensation committee satisfies the applicable independence requirements under, and the functioning of our compensation committee complies with the applicable requirements of, stock exchange listing rules and SEC rules and regulations. We intend to continue to evaluate and intend to comply with all future requirements applicable to our compensation committee. The principal duties and responsibilities of our compensation committee include:

- establishing and approving, and making recommendations to the board of directors regarding, performance goals and objectives relevant to the compensation of our chief executive officer, evaluating the performance of our chief executive officer in light of those goals and objectives and

setting, or recommending to the full board of directors for approval, the chief executive officer's compensation, including incentive-based and equity-based compensation, based on that evaluation;

- setting the compensation of our other executive officers, based in part on recommendations of the chief executive officer;
- exercising administrative authority under our stock plans and employee benefit plans;
- establishing policies and making recommendations to our board of directors regarding director compensation;
- reviewing and discussing with management the compensation discussion and analysis that we may be required from time to time to include in SEC filings; and
- preparing a compensation committee report on executive compensation as may be required from time to time to be included in our annual proxy statements or annual reports on Form 10-K filed with the SEC.

Nominating and Corporate Governance Committee

The nominating and corporate governance committee consists of directors, . is the chairman of the nominating and corporate governance committee. Our board of directors has determined that the composition of our nominating and corporate governance committee satisfies the applicable independence requirements under, and the functioning of our nominating and corporate governance committee complies with the applicable requirements of, stock exchange listing standards and SEC rules and regulations. We will continue to evaluate and will comply with all future requirements applicable to our nominating and corporate governance committee. The nominating and corporate governance committee's responsibilities include:

- assessing the need for new directors and identifying individuals qualified to become directors;
- recommending to the board of directors the persons to be nominated for election as directors and to each of the board's committees;
- assessing individual director performance, participation and qualifications;
- developing and recommending to the board corporate governance principles;
- monitoring the effectiveness of the board and the quality of the relationship between management and the board; and
- overseeing an annual evaluation of the board's performance.

Code of Business Conduct and Ethics for Employees, Executive Officers and Directors

Effective upon completion of this offering, we will adopt a Code of Business Conduct and Ethics, or the Code of Conduct, applicable to all of our employees, executive officers and directors. Following the completion of this offering, the Code of Conduct will be available on our website at *www.clearsidebio.com*. The nominating and corporate governance committee of our board of directors will be responsible for overseeing the Code of Conduct and must approve any waivers of the Code of Conduct for employees, executive officers and directors. We expect that any amendments to the Code of Conduct, or any waivers of its requirements, will be disclosed on our website.

Compensation Committee Interlocks and Insider Participation

None of our directors who currently serve as members of our compensation committee is, or has at any time during the past year been, one of our officers or employees. None of our executive officers currently serves, or in the past year has served, as a member of the board of directors or compensation committee of any other entity that has one or more executive officers serving on our board of directors or compensation committee.

Non-Employee Director Compensation

We have not historically paid cash retainers or other compensation with respect to service on our board of directors, except for reimbursement of direct expenses incurred in connection with attending meetings of the board or committees. In January 2012, we awarded an option to purchase 50,000 shares of our common stock to Mr. Humphries at an exercise price of $0.07 per share, which option was outstanding at December 31, 2014. In October 2013, we awarded an option to purchase 50,000 shares of our common stock to Mr. Humphries at an exercise price of $0.18 per share, which option was outstanding at December 31, 2014. As of December 31, 2014, options to purchase 75,000 shares were vested and the remaining 25,000 shares vest in four equal quarterly installments through December 31, 2015 and are subject to full acceleration of vesting upon a change of control of our company.

In June 2013, in connection with his appointment to our board of directors, we awarded an option to purchase 100,000 shares of our common stock to Dr. Cagle at an exercise price of $0.18 per share, which option was outstanding as of December 31, 2014. As of December 31, 2014, the option was vested as to 37,500 shares and the remaining 62,500 shares vest in equal quarterly installments through June 30, 2017 and are subject to full acceleration of vesting upon a change of control of our company. Other than Mr. Humphries and Dr. Cagle, none of our non-employee directors serving as of December 31, 2014 held any options to purchase our common stock.

None of our non-employee directors received compensation for service on our board of directors during the year ended December 31, 2014 and, accordingly, we have not included a 2014 director compensation table. Mr. White, our President and Chief Executive Officer, is also a director but does not receive any additional compensation for his service as a director. Mr. White’s compensation as an executive officer is set forth below under “Executive Compensation—Summary Compensation Table.”

We expect that our board of directors will adopt a director compensation policy for non-employee directors to be effective following the completion of this offering.

EXECUTIVE COMPENSATION

Our named executive officers for the year ended December 31, 2014 include our principal executive officer and our two other executive officers:

- Daniel H. White, our President and Chief Executive Officer;
- Charles A. Deignan, our Chief Financial Officer; and
- Glenn Noronha, Ph.D., our Executive Vice President of Research and Development.

No other individuals served as executive officers of our company at any point during 2014.

Summary Compensation Table

The following table presents the compensation awarded to, earned by or paid to each of our named executive officers for the years ended December 31, 2013 and 2014.

Name and Principal Position	Year	Salary ($)(1)	Bonus ($)(2)	Option Awards ($)(3)	Non-Equity Incentive Plan Compensation ($)	All Other Compensation ($)	Total ($)
Daniel H. White	2014	263,294	12,424	387,500	37,576	—	700,794
President and Chief Executive Officer	2013	256,771	12,906	102,225	51,625	—	423,527
Charles A. Deignan	2014	203,090	6,040	155,000	24,161	—	388,291
Chief Financial Officer	2013	179,740	—	68,025	28,910	—	276,675
Glenn Noronha, Ph.D.	2014	262,708	—	155,000	29,848	—	447,556
Executive Vice President, Research and Development(4)	2013	108,333	—	105,250	17,333	48,809(5)	279,725

(1) Salary amounts represent actual amounts paid during the indicated year. See "—Narrative to Summary Compensation Table—Annual Base Salary" for a description of adjustments to base salaries made during the year.

(2) Represents the amount above the specified level of achievement under the annual bonus incentive plan. The compensation committee exercised its discretion to award Mr. White and Mr. Deignan additional compensation in light of their roles in the achievement of corporate objectives outside of the scope of the stated objectives described below under "Narrative to Summary Compensation Table—Annual Bonus."

(3) The amounts reflect the full grant date fair value for awards granted during the indicated year. The grant date fair value was computed in accordance with ASC Topic 718, *Compensation — Stock Compensation*. Unlike the calculations contained in our financial statements, this calculation does not give effect to any estimate of forfeitures related to service-based vesting, but assumes that the executive will perform the requisite service for the award to vest in full. The assumptions we used in valuing options are described in note 11 to our financial statements included in this prospectus.

(4) Dr. Noronha became an executive officer of our company in August 2013, and amounts represent compensation earned since that date.

(5) Amount represents relocation allowance plus associated tax gross-up.

Narrative to Summary Compensation Table

We review compensation annually for all employees, including our executives. In setting executive base salaries and bonuses and granting equity incentive awards, we consider compensation for comparable positions in the market, the historical compensation levels of our executives, individual performance as compared to our expectations and objectives, our desire to motivate our employees to achieve short- and long-term results that are in the best interests of our stockholders, and a long-term commitment to our company. We do not target a specific competitive position or a specific mix of compensation among base salary, bonus or long-term incentives.

The compensation committee of our board of directors has historically determined our executives' compensation. Our compensation committee typically reviews and discusses management's proposed compensation with the chief executive officer for all executives other than the chief executive officer. Based on those discussions and its discretion, the compensation committee then recommends the compensation for each executive officer. Our compensation committee, without members of management present, discusses and ultimately approves the compensation of our executive officers. To date, our compensation committee has not engaged a compensation consultant or adopted a peer group of companies for purposes of determining executive compensation.

Annual Base Salary

Our named executive officers' base salaries are reviewed periodically by our board of directors, and adjustments may be made upon the recommendations of the compensation committee. In 2012, we entered into an employment agreement with Mr. White under which his annual base salary was established at $250,000. In February 2013, our compensation committee recommended, and our board of directors approved, an increase in Mr. White's annual base salary to $258,125. At the same time, our compensation committee recommended, and our board of directors approved, an increase in Mr. Deignan's base salary from $175,000 to $180,688. Dr. Noronha's annual base salary of $260,000 was approved by our board of directors in connection with the commencement of his employment with us in August 2013. In July 2014, our compensation committee recommended, and the board of directors approved, further increases in our named executive officers' salaries as follows: $268,450 for Mr. White, $215,722 for Mr. Deignan and $266,500 for Dr. Noronha. In November 2014, our compensation committee recommended, and in December 2014, our board of directors approved, further increases in our named executive officers' salaries effective January 1, 2015 as follows: $325,000 for Mr. White, $250,000 for Mr. Deignan and $274,495 for Dr. Noronha.

Annual Bonus

We seek to motivate and reward our executives for achievements relative to our corporate goals and expectations for each fiscal year. Each named executive officer has a target bonus opportunity, defined as a percentage of his annual salary. For 2013 and 2014, the target bonus was as follows:

Name	Target Bonus (% of Salary)
Daniel H. White	25
Charles A. Deignan	20
Glenn Noronha, Ph.D.	20

For 2015, the target bonus is as follows:

Name	Target Bonus (% of Salary)
Daniel H. White	50
Charles A. Deignan	35
Glenn Noronha, Ph.D.	35

To reinforce the importance of integrated and collaborative leadership, our executives' bonuses have historically been solely based on company performance, and we did not include an individual performance component. For 2013, 40% of each executive officer's target bonus was attributable to the commencement of our Phase 1/2 clinical trial for CLS-1001, 30% was attributable to our further drug and product development efforts and 30% was attributable to our capital raising activities. In 2014, our compensation committee determined that the 2013 performance goals had been achieved at an 80% level in the aggregate. In December 2014, our board of directors determined that the 2014 performance goals had been achieved at a 56% level in the aggregate. The bonuses to be paid to the named executive officers for 2013 performance at the 80% level and for 2014 performance at the 56% level are reflected in the "Non-Equity Incentive Plan Compensation" column of the Summary Compensation Table above.

Long-Term Incentives

Our 2011 Stock Incentive Plan authorizes us to make grants to eligible recipients of non-qualified stock options, incentive stock options, restricted stock awards, restricted stock units and other stock-based awards. All of our awards under this plan have been in the form of stock options.

We typically grant stock options at the start of employment to each executive and our other employees. Through 2013, we have not maintained a practice of granting additional equity on an annual basis, but we have retained discretion to provide additional targeted grants in appropriate circumstances.

We award stock options on the date the compensation committee approves the grant. We set the option exercise price and grant date fair value based on our per-share valuation on the date of grant.

In February 2013, our compensation committee awarded options to Messrs. White and Deignan to purchase 128,000 shares and 52,000 shares of our common stock, respectively. In August 2013, in connection with the commencement of Dr. Noronha's employment with us, our board of directors approved the grant of an option to purchase 125,000 shares of our common stock. In November 2013, our board of directors approved additional option grants to Messrs. White and Deignan and Dr. Noronha to purchase 75,000 shares, 75,000 shares and 50,000 shares of our common stock, respectively. Each of these options has an exercise price of $0.18 per share.

In December 2014, our compensation committee awarded options to Mr. White, Mr. Deignan and Dr. Noronha to purchase 250,000 shares, 100,000 shares and 100,000 shares of our common stock, respectively. Each of these options has an exercise price of $1.55 per share.

Employment Arrangements and Potential Payments upon Termination of Employment

In September 2012, we entered into an employment agreement with Mr. White, under which he serves as our President and Chief Executive Officer. On January 1, 2015, we entered into an amended and restated employment agreement with Mr. White, under which he continues to serve as our President and Chief

Executive Officer. On January 1, 2015, we also entered into employment agreements with Mr. Deignan and Dr. Noronha, pursuant to which they serve as our Chief Financial Officer and Executive Vice President of Research and Development, respectively.

These employment agreements have one-year terms and are renewable for successive one-year terms unless either we or the executive officer gives notice of non-renewal at least 60 days prior to the end of the term. Pursuant to these employment agreements, Mr. White, Mr. Deignan and Dr. Noronha are eligible to receive severance benefits in specified circumstances.

In the event we terminate Mr. White without cause, he resigns for good reason or we elect not to renew his employment agreement, then, upon execution and effectiveness of a settlement agreement and release of claims in a form acceptable to us, Mr. White will be entitled to receive (a) an amount equal to 18 months of his annual base salary, less applicable deductions, payable in accordance with our normal payroll schedule, (b) reimbursement of the cost of health insurance premiums for 18 months or, if shorter, until he obtains reasonably comparable health insurance coverage and (c) each equity award held by him shall immediately vest and become exercisable to the extent the award would have vested had he remained employed by us for 18 months following the termination of the agreement.

If we or our successor terminates Mr. White without cause, he resigns for good reason or we elect not to renew his employment agreement within 12 months after a “change in control event” within the meaning of the regulations promulgated under Section 409A of the Internal Revenue Code, as amended, or the Code, in addition to the payments and benefits specified above, the equity awards held by Mr. White at the time of termination shall immediately vest and become exercisable until the earlier to occur of either the final exercise date in the equity award or the end of the severance period. He shall also be entitled to receive 100% of the performance bonus earned by him in the most recent calendar year.

For the period of two years following January 1, 2015, to the extent that any payment, benefit or distribution by us or any of our affiliates to Mr. White pursuant to his employment agreement or any other agreement, plan or arrangement would constitute an “excess parachute payment” within the meaning of Section 280G of the Code and would be subject to the excise tax imposed under Section 4999 of the Code, Mr. White will be entitled to receive a “gross-up” payment equal to 36 months of his annual base salary. After such period, Mr. White will not be entitled to any such “gross up” and if all or a portion of the total payments to him would constitute an “excess parachute payment” within the meaning of 280G of the Code, he shall receive (a) an amount limited so that no portion shall fail to be deductible under Section 280G of the Code or (b) if the amount otherwise payable, under the employment agreement or otherwise, would be greater than the limited amount after paying the excise tax and any other taxes required, he shall receive the amount otherwise payable.

In the event we terminate Mr. Deignan without cause, he resigns for good reason or we elect not to renew his employment agreement, then, upon execution and effectiveness of a settlement agreement and release of claims in a form acceptable to us, Mr. Deignan will be entitled to receive (a) an amount equal to 12 months of his annual base salary, less applicable deductions, payable in accordance with our normal payroll schedule, (b) reimbursement of the cost of health insurance premiums for 12 months or, if shorter, until he obtains reasonably comparable health insurance coverage and (c) each equity award held by him shall immediately vest and become exercisable to the extent the award would have vested had he remained employed by us for 12 months following the termination of the agreement.

If we or our successor terminates Mr. Deignan without cause, he resigns for good reason or we elect not to renew his employment agreement within 12 months after a "change in control event" within the meaning of the regulations promulgated under Section 409A of the Code, in addition to the payments and benefits specified above, the equity awards held by Mr. Deignan at the time of termination shall immediately vest and become exercisable until the earlier to occur of either the final exercise date in the equity award or the end of the severance period. He shall also be entitled to receive 67% of the performance bonus earned by him in the most recent calendar year.

For the period of two years following January 1, 2015, to the extent that any payment, benefit or distribution by us or any of our affiliates to Mr. Deignan pursuant to his employment agreement or any other agreement, plan or arrangement would constitute an "excess parachute payment" within the meaning of Section 280G of the Code and would be subject to the excise tax imposed under Section 4999 of the Code, Mr. Deignan will be entitled to receive a "gross-up" payment equal to 18 months of his annual base salary. After such period, Mr. Deignan will not be entitled to any such "gross up" and if all or a portion of the total payments to him would constitute an "excess parachute payment" within the meaning of 280G of the Code, he shall receive (a) an amount limited so that no portion shall fail to be deductible under Section 280G of the Code or (b) if the amount otherwise payable, under the employment agreement or otherwise, would be greater than the limited amount after paying the excise tax and any other taxes required, he shall receive the amount otherwise payable.

In the event we terminate Dr. Noronha without cause, he resigns for good reason or we elect not to renew his employment agreement, then, upon execution and effectiveness of a settlement agreement and release of claims in a form acceptable to us, Dr. Noronha will be entitled to receive (a) an amount equal to 12 months of his annual base salary, less applicable deductions, payable in accordance with our normal payroll schedule, (b) reimbursement of the cost of health insurance premiums for 12 months or, if shorter, until he obtains reasonably comparable health insurance coverage and (c) each equity award held by him shall immediately vest and become exercisable to the extent the award would have vested had he remained employed by us for 12 months following the termination of the agreement.

If we or our successor terminates Dr. Noronha without cause, he resigns for good reason or we elect not to renew his employment agreement, in each case within 12 months after a "change in control event" within the meaning of the regulations promulgated under Section 409A of the Code, in addition to the payments and benefits specified above, the equity awards held by Dr. Noronha at the time of termination shall immediately vest and become exercisable until the earlier to occur of either the final exercise date in the equity award or the end of the severance period. He shall also be entitled to receive 67% of the performance bonus earned by him in the most recent calendar year.

For the period of two years following January 1, 2015, to the extent that any payment, benefit or distribution by us or any of our affiliates to Dr. Noronha pursuant to his employment agreement or any other agreement, plan or arrangement would constitute an "excess parachute payment" within the meaning of Section 280G of the Code and would be subject to the excise tax imposed under Section 4999 of the Code, Dr. Noronha will be entitled to receive a "gross-up" payment equal to 18 months of his annual base salary. After such period, Dr. Noronha will not be entitled to any such "gross up" and if all or a portion of the total payments to him would constitute an "excess parachute payment" within the meaning of 280G of the Code, he shall receive (a) an amount limited so that no portion shall fail to be deductible under Section 280G of the Code or (b) if the amount otherwise payable, under the employment agreement or otherwise, would be greater than the limited amount after paying the excise tax and any other taxes required, he shall receive the amount otherwise payable.

The following definitions have been adopted in Mr. White's, Mr. Deignan's and Dr. Noronha's employment agreements:

- "cause" means that our board of directors has determined that any of the following has occurred: (a) the material breach of the employment agreement, failure to diligently and properly perform his duties or failure to achieve the objectives specified by the board of directors, and such breach or failure has not been cured within 30 days after written notice thereof; (b) the misappropriation or unauthorized use of our property or breach of his agreements with us relating to confidentiality, intellectual property rights, non-competition or non-solicitation; (c) a material failure to comply with our policies or directives of our board of directors, and any such failure has not been cured within 30 days after written notice thereof, provided that the failure to comply with our policies related to harassment, unlawful discrimination, retaliation or workplace violence do not require notice or permit a cure period; (d) the use of illegal drugs or any illegal substance, or the use of alcohol in any manner that materially interferes with the performance of the executive officer's duties to the company; (e) a dishonest or illegal action by the executive officer, or any action determined to be detrimental to our interest and well-being, including harm to our reputation; (f) a failure to fully disclose any material conflict of interest that he may have in a transaction between us and a third party, which is materially detrimental to our interest and well-being; (g) any adverse action or omission by the executive officer which would be required to be disclosed under securities laws or which would limit our ability to sell securities or would disqualify us from an exemption otherwise available to us; and
- "good reason" means the existence of any of the following without the executive officer's prior consent: (a) any substantial reduction or diminution of his duties and responsibilities or salary; (b) any material breach of the employment agreement by us; or (c) a relocation of his place of employment by more than 50 miles from the location of our principal office, in each case after notice to us within 90 days following the initial existence of the event and after we have had the opportunity to but have not cured the event for 30 days following such notice, and the executive officer terminates his employment with us no later than two years after the initial existence of the event.

Outstanding Equity Awards at End of 2014

The following table provides information about outstanding stock options held by each of our executive officers at December 31, 2014. All of these options were granted under our 2011 Stock Incentive Plan.

	Option Awards				Stock Awards	
Name	Number of Securities Underlying Unexercised Options (#) Exercisable	Number of Securities Underlying Unexercised Options (#) Unexercisable	Option Exercise Price ($)	Option Expiration Date	Number of Shares or Units of Stock That Have Not Vested (#)	Market Value of Shares or Units of Stock That Have Not Vested ($)(8)
Daniel H. White	56,000(1)	72,000(1)	0.18	02/28/2023		
	18,750(3)	56,250(3)	0.18	11/24/2023		
	—	250,000(4)	1.55	12/18/2024		
Charles A. Deignan	22,750(1)	29,250(1)	0.18	02/28/2023	10,835(5)	29,580
	18,750(3)	56,250(3)	0.18	11/24/2023	23,750(6)	64,838
	—	100,000(4)	1.55	12/18/2024	10,936(7)	29,855
Glenn Noronha, Ph.D.	41,667(2)	83,333(2)	0.18	08/06/2023		
	12,500(3)	37,500(3)	0.18	11/24/2023		
	—	100,000(4)	1.55	12/18/2024		

(1) The shares underlying this option vested as to 25% of the shares on March 1, 2014, with the remainder vesting in 36 equal monthly installments thereafter, subject to the officer's continued service through each applicable vesting date. The option is subject to full acceleration of vesting following a change of control if the option is assumed or a substantially equivalent award is substituted, but the officer's employment is terminated without cause within 12 months following the change of control.

(2) The shares underlying this option vested as to 25% of the shares on August 1, 2014, with the remainder vesting in 36 equal monthly installments thereafter, subject to the officer's continued service through each applicable vesting date. The option is subject to full acceleration of vesting (a) upon a change of control if the option is not assumed or a substantially equivalent award is not substituted by the acquiring or succeeding entity or (b) following a change of control if the option is assumed or a substantially equivalent award is substituted, but the officer's employment is terminated without cause within 12 months following the change of control.

(3) The shares underlying this option vested as to 25% of the shares on December 13, 2014, with the remainder vesting in 36 equal monthly installments thereafter, subject to the officer's continued service through each applicable vesting date. The option is subject to full acceleration of vesting (a) upon a change of control if the option is not assumed or a substantially equivalent award is not substituted by the acquiring or succeeding entity or (b) following a change of control if the option is assumed or a substantially equivalent award is substituted, but the officer's employment is terminated without cause or for good reason within 12 months following the change of control.

(4) The shares underlying this option vest as to 25% of the shares on December 19, 2015, with the remainder vesting in 36 equal monthly installments thereafter, subject to the officer's continued service through each applicable vesting date. The option is subject to full acceleration of vesting (a) upon a change of control if the option is not assumed or a substantially equivalent award is not substituted by

the acquiring or succeeding entity or (b) following a change of control if the option is assumed or a substantially equivalent award is substituted, but the officer's employment is terminated without cause or for good reason within 12 months following the change of control.

(5) These restricted shares will vest in equal monthly installments through January 31, 2016. These restricted shares are subject to full acceleration of vesting (a) upon a change of control if the option is not assumed or a substantially equivalent award is not substituted by the acquiring or succeeding entity or (b) following a change of control if the option is assumed or a substantially equivalent award is substituted, but the officer's employment is terminated without cause or for good reason within 12 months following the change of control.

(6) These restricted shares will vest in equal monthly installments through July 1, 2016. These restricted shares are subject to full acceleration of vesting (a) upon a change of control if the option is not assumed or a substantially equivalent award is not substituted by the acquiring or succeeding entity or (b) following a change of control if the option is assumed or a substantially equivalent award is substituted, but the officer's employment is terminated without cause or for good reason within 12 months following the change of control.

(7) These restricted shares will vest in equal monthly installments through September 30, 2016. These restricted shares are subject to full acceleration of vesting (a) upon a change of control if the option is not assumed or a substantially equivalent award is not substituted by the acquiring or succeeding entity or (b) following a change of control if the option is assumed or a substantially equivalent award is substituted, but the officer's employment is terminated without cause or for good reason within 12 months following the change of control.

(8) Based on the valuation of our common stock of $2.73 per share as of December 31, 2014.

Stock Option Exercises and Stock Vested During 2014

The following table shows information regarding stock awards vested during the year ended December 31, 2014 with respect to our named executive officers.

	Stock Awards	
Name	**Number of Shares Acquired on Vesting (#)**	**Value Realized on Vesting ($)**
Daniel H. White	118,750	166,250(1)
Charles A. Deignan	31,250(2)	42,733(3)

(1) We have determined the value realized by Mr. White using an assumed value of $1.40 per share, the valuation of our common stock as of June 30, 2014, for these shares that vested during the first half of 2014.

(2) Mr. Deignan acquired shares of stock pursuant to the early exercise of stock options, which stock was subject to a right of repurchase in favor of us. The number of shares acquired on vesting represents the number of such shares for which our rights of repurchase lapsed during the year.

(3) Represents the difference between the estimated value of the shares for which our repurchase right lapsed and the exercise price of $0.07 per share paid by Mr. Deignan in respect of such shares upon the early exercise of the options. The assumed value of such shares upon vesting was $1.40 per share, the valuation of our common stock as of June 30, 2014, for shares vested during the first nine months of 2014. For shares vested during the last three months of 2014, the assumed value of such shares upon vesting was $1.55 per share, the valuation of our common stock as of September 30, 2014.

Health and Welfare Benefits

We maintain a defined contribution employee retirement plan for our employees. Our 401(k) plan is intended to qualify as a tax-qualified plan under Section 401 of the Internal Revenue Code so that contributions to our 401(k) plan, and income earned on such contributions, are not taxable to participants until withdrawn or distributed from the 401(k) plan. Our 401(k) plan provides that each participant may contribute a portion of his or her pre-tax compensation, up to a statutory limit, which was $17,500 for 2014 and is $18,000 in 2015. Participants who are at least 50 years old can also make "catch-up" contributions, which in 2014 and 2015 may be up to an additional $5,500 above the statutory limit. Under our 401(k) plan, each employee is fully vested in his or her deferred salary contributions. Employee contributions are held and invested by the plan's trustee, subject to participants' ability to give investment directions by following specified procedures. We do not currently make discretionary contributions or matching contributions to our 401(k) plan.

Except for the benefits described above under "Narrative to Summary Compensation Table — Other Compensation," we do not provide perquisites or personal benefits to our named executive officers. We do, however, pay the premiums for medical, dental and term life insurance for all of our employees, including our named executive officers.

Equity Incentive Plans

2016 Equity Incentive Plan

We expect that our board of directors will adopt, and our stockholders will approve, prior to the completion of this offering our 2016 Equity Incentive Plan, or our 2016 plan. We do not expect to issue equity awards under our 2016 plan until after the completion of this offering. No awards have been granted and no shares of our common stock have been issued under our 2016 plan. Our 2016 plan will provide for the grant of incentive stock options within the meaning of Section 422 of the Code to our employees and our parent and subsidiary corporations' employees, and for the grant of nonstatutory stock options, restricted stock awards, restricted stock unit awards, stock appreciation rights, performance stock awards and other forms of stock compensation to our employees, including officers, consultants and directors. Our 2016 plan will also provide for the grant of performance cash awards to our employees, consultants and directors.

Authorized Shares

The maximum number of shares of our common stock that may be issued under our 2016 plan is shares. The number of shares of our common stock reserved for issuance under our 2016 plan will automatically increase on January 1 of each year, for a period of 10 years, from January 1, 2017 continuing through January 1, 2026, by % of the total number of shares of our common stock outstanding on December 31 of the preceding calendar year, or a lesser number of shares as may be determined by our board of directors. The maximum number of shares that may be issued pursuant to the exercise of incentive stock options under the 2016 plan is .

Shares issued under our 2016 plan may be authorized but unissued or reacquired shares of our common stock. Shares subject to stock awards granted under our 2016 plan that expire or terminate without being exercised in full, or that are paid out in cash rather than in shares, will not reduce the number of shares available for issuance under our 2016 plan. Additionally, shares issued pursuant to stock awards under our 2016 plan that we repurchase or that are forfeited, as well as shares reacquired by us as consideration for the

exercise or purchase price of a stock award or to satisfy tax withholding obligations related to a stock award, will become available for future grant under our 2016 plan.

Administration

Our board of directors, or a duly authorized committee thereof, has the authority to administer our 2016 plan. Our board of directors has delegated its authority to administer our 2016 plan to our compensation committee under the terms of the compensation committee's charter. Our board of directors may also delegate to one or more of our officers the authority to (i) designate employees other than officers to receive specified stock awards and (ii) determine the number of shares of our common stock to be subject to such stock awards. Subject to the terms of our 2016 plan, the administrator has the authority to determine the terms of awards, including recipients, the exercise price or strike price of stock awards, if any, the number of shares subject to each stock award, the fair market value of a share of our common stock, the vesting schedule applicable to the awards, together with any vesting acceleration, the form of consideration, if any, payable upon exercise or settlement of the stock award and the terms and conditions of the award agreements for use under our 2016 plan.

The administrator has the power to modify outstanding awards under our 2016 plan. Subject to the terms of our 2016 plan, the administrator has the authority to reprice any outstanding option or stock appreciation right, cancel and re-grant any outstanding option or stock appreciation right in exchange for new stock awards, cash or other consideration, or take any other action that is treated as a repricing under generally accepted accounting principles, with the consent of any adversely affected participant.

Section 162(m) Limits

No participant may be granted stock awards covering more than shares of our common stock under our 2016 plan during any calendar year pursuant to stock options, stock appreciation rights and other stock awards whose value is determined by reference to an increase over an exercise price or strike price of at least 100% of the fair market value of our common stock on the date of grant. Additionally, no participant may be granted in a calendar year a performance stock award covering more than shares of our common stock or a performance cash award having a maximum value in excess of $ under our 2016 plan. These limitations enable us to grant awards that will be exempt from the $1,000,000 limitation on the income tax deductibility of compensation paid per covered executive officer imposed by Section 162(m) of the Code.

Performance Awards

Our 2016 plan permits the grant of performance-based stock and cash awards that may qualify as performance-based compensation that is not subject to the $1,000,000 limitation on the income tax deductibility of compensation paid per covered executive officer imposed by Section 162(m) of the Code. To enable us to grant performance-based awards that will qualify, our compensation committee can structure such awards so that the stock or cash will be issued or paid pursuant to such award only following the achievement of specified pre-established performance goals during a designated performance period.

Corporate Transactions

Our 2016 plan provides that in the event of a specified corporate transaction, including without limitation a consolidation, merger, or similar transaction involving our company, the sale, lease or other disposition of all or substantially all of the assets of our company or the consolidated assets of our company

and our subsidiaries, or a sale or disposition of at least 50% of the outstanding capital stock of our company, the administrator will determine how to treat each outstanding stock award. The administrator may:

- arrange for the assumption, continuation or substitution of a stock award by a successor corporation;
- arrange for the assignment of any reacquisition or repurchase rights held by us to a successor corporation;
- accelerate the vesting of the stock award and provide for its termination prior to the effective time of the corporate transaction;
- arrange for the lapse, in whole or in part, of any reacquisition or repurchase right held by us; or
- cancel the stock award prior to the transaction in exchange for a cash payment, which may be reduced by the exercise price payable in connection with the stock award.

The administrator is not obligated to treat all stock awards or portions of stock awards, even those that are of the same type, in the same manner. The administrator may take different actions with respect to the vested and unvested portions of a stock award.

Change in Control

The administrator may provide, in an individual award agreement or in any other written agreement between us and the participant, that the stock award will be subject to additional acceleration of vesting and exercisability in the event of a change in control. In the absence of such a provision, no such acceleration of the stock award will occur.

Plan Amendment or Termination

Our board has the authority to amend, suspend, or terminate our 2016 plan, provided that such action does not materially impair the existing rights of any participant without such participant's written consent. No incentive stock options may be granted after the tenth anniversary of the date our board of directors adopts our 2016 plan.

2011 Stock Incentive Plan

Our board of directors adopted, and our stockholders approved, the 2011 Stock Incentive Plan, or the 2011 plan, in November 2011. Our 2011 plan was amended by our board of directors and our stockholders in December 2011. Our 2011 plan provides for the grant of incentive stock options within the meaning of Section 422 of the Code to our employees, and for the grant of nonstatutory stock options, restricted stock awards, restricted stock units and other stock-based awards to our officers, directors, employees, consultants and advisers.

Authorized Shares

There are 3,338,776 shares of our common stock reserved for issuance under our 2011 plan. As of December 15, 2015, 563,096 shares of our common stock have been issued upon the exercise of options granted under our 2011 plan and options to purchase 2,775,680 shares of our common stock were outstanding at a weighted average exercise price of $1.09 per share. Effective upon the completion of this offering, no further options or stock awards may be granted under our 2011 plan, but all outstanding stock awards will continue to be governed by their existing terms.

Administration

Our board of directors, or a committee thereof appointed by our board of directors, administers our 2011 plan and the option and stock awards granted under it. Our board of directors delegated its authority to administer our 2011 plan to our compensation committee.

Corporate Transactions

Our 2011 plan provides that, in the event of a specified change of control transaction, including without limitation a dissolution, merger, consolidation or reorganization of our company with one or more other entities in which our company is not the surviving entity, a sale of substantially all of the assets of our company, or any transaction which results in the disposition of at least a majority of the voting power or value of the securities of our company, the board may take any one or more of the following actions with respect to awards other than restricted stock awards:

- the assumption or substitution of the options by a successor corporation;
- the termination of the options immediately prior to the change of control transaction;
- provide that the options become exercisable, realizable or derivable, or that restrictions applicable to options shall lapse;
- the purchase of outstanding options for an amount of cash that could have been received upon the exercise of the options or the conversion of the options into a right to receive liquidation proceeds; or
- any combination of the foregoing.

With respect to restricted stock awards, upon the occurrence of a change of control transaction involving the liquidation or dissolution of our company, all restrictions and conditions on all restricted stock awards then outstanding shall automatically be deemed terminated or satisfied. With respect to a change of control transaction not involving the liquidation or dissolution of our company, all of our repurchase or other rights under each outstanding restricted stock award shall inure to the benefit of our successor.

2016 Employee Stock Purchase Plan

We expect that our board of directors will adopt, and our stockholders will approve, prior to the completion of this offering, our 2016 Employee Stock Purchase Plan, or our 2016 ESPP. We expect that the 2016 ESPP will become effective upon the completion of this offering, but we have no current plans to grant purchase rights under our 2016 ESPP.

The maximum number of shares of our common stock that may be issued under our 2016 ESPP is shares. Additionally, the number of shares of our common stock reserved for issuance under our 2016 ESPP will automatically increase on January 1 of each year, beginning on January 1 of the year after the completion of this offering and ending on and including January 1, 2026, by the lesser of (i) 1% of the total number of shares of our common stock outstanding on December 31 of the preceding calendar year or (ii) 1,000,000 shares of common stock; provided, however, our board of directors may act prior to the first day of any calendar year to provide that there will be no January 1 increase in the share reserve for such calendar year or that the increase in the share reserve for such calendar year will be a lesser number of shares of common stock. Shares subject to purchase rights granted under our 2016 ESPP that terminate without having been exercised in full will not reduce the number of shares available for issuance under our 2016 ESPP.

Our board of directors, or a duly authorized committee thereof, will administer our 2016 ESPP. Our board of directors has delegated its authority to administer our 2016 ESPP to our compensation committee under the terms of the compensation committee's charter.

Employees, including executive officers, of ours or any of our designated affiliates may have to satisfy one or more of the following service requirements before participating in our 2016 ESPP, as determined by the administrator: (i) customary employment with us or one of our affiliates for more than 20 hours per week and more than five months per calendar year; or (ii) continuous employment with us or one of our affiliates for a minimum period of time, not to exceed two years, prior to the first date of an offering. An employee may not be granted rights to purchase stock under our 2016 ESPP if such employee (i) immediately after the grant would own stock possessing 5% or more of the total combined voting power or value of all classes of our common stock, or (ii) holds rights to purchase stock under our 2016 ESPP that would accrue at a rate that exceeds $25,000 worth of our stock for each calendar year that the rights remain outstanding.

A component of our 2016 ESPP is intended to qualify as an employee stock purchase plan under Section 423 of the Code and the provisions of this component will be construed in a manner that is consistent with the requirements of Section 423 of the Code. In addition, the 2016 ESPP authorizes the grant of options to purchase shares of our common stock that do not meet the requirements of Section 423 of the Code because of deviations necessary to permit participation in the 2016 ESPP by employees who are foreign nationals or employed outside of the United States while complying with applicable foreign laws. Any such options must be granted pursuant to rules, procedures or subplans adopted by our board designed to achieve these objectives for eligible employees and our company. The administrator may specify offerings with a duration of not more than 27 months, and may specify one or more shorter purchase periods within each offering. Each offering will have one or more purchase dates on which shares of our common stock will be purchased for the employees who are participating in the offering. The administrator, in its discretion, will determine the terms of offerings under our 2016 ESPP.

Our 2016 ESPP permits participants to purchase shares of our common stock through payroll deductions up to 15% of their earnings. Unless otherwise determined by the administrator, the purchase price of the shares will be 85% of the lower of the fair market value of our common stock on the first day of an offering or on the date of purchase. Participants may end their participation at any time during an offering and will be paid their accrued contributions that have not yet been used to purchase shares. Participation ends automatically upon termination of employment with us.

A participant may not transfer purchase rights under our 2016 ESPP other than by will, the laws of descent and distribution or as otherwise provided under our 2016 ESPP.

In the event of a specified corporate transaction, such as a merger or change in control of our company, a successor corporation may assume, continue or substitute each outstanding purchase right. If the successor corporation does not assume, continue or substitute for the outstanding purchase rights, the offering in progress will be shortened and a new exercise date will be set. The participants' purchase rights will be exercised on the new exercise date and such purchase rights will terminate immediately thereafter.

Our board of directors has the authority to amend, suspend or terminate our 2016 ESPP, at any time and for any reason. Our 2016 ESPP will remain in effect until terminated by our board of directors in accordance with the terms of the 2016 ESPP.

Limitations on Liability and Indemnification Matters

Our amended and restated certificate of incorporation, which will become effective upon the completion of this offering, contains provisions that limit the liability of our current and former directors for monetary damages to the fullest extent permitted by Delaware law. Delaware law provides that directors of a corporation will not be personally liable for monetary damages for any breach of fiduciary duties as directors, except liability for:

- any breach of the director's duty of loyalty to the corporation or its stockholders;
- any act or omission not in good faith or that involves intentional misconduct or a knowing violation of law;
- unlawful payments of dividends or unlawful stock repurchases or redemptions as provided in Section 174 of the Delaware General Corporation Law; or
- any transaction from which the director derived an improper personal benefit.

This limitation of liability does not apply to liabilities arising under federal securities laws and does not affect the availability of equitable remedies such as injunctive relief or rescission.

Our amended and restated certificate of incorporation and our amended and restated bylaws will provide that we are required to indemnify our directors to the fullest extent permitted by Delaware law. Our amended and restated bylaws will also provide that, upon satisfaction of certain conditions, we are required to advance expenses incurred by a director in advance of the final disposition of any action or proceeding, and permit us to secure insurance on behalf of any officer, director, employee or other agent for any liability arising out of his or her actions in that capacity regardless of whether we would otherwise be permitted to indemnify him or her under the provisions of Delaware law. Our amended and restated bylaws will also provide our board of directors with discretion to indemnify our officers and employees when determined appropriate by the board. We have entered into and expect to continue to enter into agreements to indemnify our directors, and we also expect to enter into agreements to indemnify our officers, as determined by the board of directors. With certain exceptions, these agreements provide for indemnification for related expenses including, among other things, attorneys' fees, judgments, fines and settlement amounts incurred by any of these individuals in any action or proceeding. We believe that these bylaw provisions and indemnification agreements are necessary to attract and retain qualified persons as directors. We also maintain customary directors' and officers' liability insurance.

The limitation of liability and indemnification provisions in our amended and restated certificate of incorporation and amended and restated bylaws may discourage stockholders from bringing a lawsuit against our directors for breach of their fiduciary duty. They may also reduce the likelihood of derivative litigation against our directors and officers, even though an action, if successful, might benefit us and other stockholders. Further, a stockholder's investment may be adversely affected to the extent that we pay the costs of settlement and damage awards against directors and officers as required by these indemnification provisions. At present, there is no pending litigation or proceeding involving any of our directors, officers or employees for which indemnification is sought and we are not aware of any threatened litigation that may result in claims for indemnification.

Rule 10b5-1 Sales Plans

Our directors and executive officers may adopt written plans, known as Rule 10b5-1 plans, in which they will contract with a broker to buy or sell shares of our common stock on a periodic basis. Under a Rule

10b5-1 plan, a broker executes trades pursuant to parameters established by the director or officer when entering into the plan, without further direction from them. The director or officer may amend a Rule 10b5-1 plan in some circumstances and may terminate a plan at any time. Our directors and executive officers also may buy or sell additional shares outside of a Rule 10b5-1 plan when they are not in possession of material nonpublic information subject to compliance with the terms of our insider trading policy. Prior to 180 days after the date of this offering, subject to early termination, the sale of any shares under such plan would be prohibited by the lock-up agreement that the director or officer has entered into with the underwriters.

CERTAIN RELATIONSHIPS AND RELATED PARTY TRANSACTIONS

The following is a description of transactions since January 1, 2012 to which we have been a participant in which the amount involved exceeded or will exceed $120,000, and in which any of our directors, executive officers or holders of more than 5% of our capital stock, or any members of their immediate family, had or will have a direct or indirect material interest, other than compensation arrangements which are described under "Executive Compensation."

Sales of Series A Convertible Preferred Stock

In January 2012, February 2012 and July 2012, we sold an aggregate of 5,198,826 shares of our Series A convertible preferred stock at a price of $0.78589 per share for an aggregate price of $4.1 million, 5,071,582 shares of which were sold to holders of more than 5% of our voting securities and members of our board of directors. The table below summarizes these sales.

Purchaser	Shares of Series A Convertible Preferred Stock Purchased	Aggregate Purchase Price
Entities affiliated with Hatteras Venture Partners(1)	4,071,815	$ 3,199,999
Entities affiliated with GRA Venture Fund(2)	866,533	681,000
Daniel H. White(3)	133,234	104,707
Total	5,071,582	$ 3,985,706

(1) Consists of 1,866,418 shares purchased by Hatteras Venture Partners III, LP, 169,489 shares purchased by Hatteras Venture Affiliates III, LP and 2,035,908 shares purchased by Hatteras Venture Partners IV SBIC, LP. Entities affiliated with Hatteras Venture Partners are holders of more than 5% of our voting securities, and Christy L. Shaffer, Ph.D. and Clay B. Thorp are affiliated with Hatteras Venture Partners and are members of our board of directors.

(2) Consists of 547,492 shares purchased by GRA Venture Fund, LLC and 319,041 shares purchased by GRA Venture Fund (T.E.), LLC. Entities affiliated with GRA Venture Fund are holders of more than 5% of our voting securities.

(3) Mr. White's investment represented the conversion of $100,000 in principal amount under convertible promissory notes issued to Mr. White between June 2011 and December 2011, plus accrued interest of $4,707.

Sales of Series A-1 Convertible Preferred Stock

In January 2013, we sold an aggregate of 4,356,931 shares of our Series A-1 convertible preferred stock at a price of $1.8132 per share for an aggregate price of $7.9 million, 3,860,573 shares of which were sold to entities affiliated with members of our board of directors and holders of more than 5% of our voting securities. The table below summarizes these sales.

Purchaser	Shares of Series A-1 Convertible Preferred Stock Purchased	Aggregate Purchase Price
Entities affiliated with Hatteras Venture Partners(1)	1,654,531	$ 2,999,996
Entities affiliated with GRA Venture Fund(2)	275,754	499,997
Santen Pharmaceutical Co., Ltd.	1,930,288	3,499,998
Total	3,860,573	$ 6,999,991

(1) Consists of 631,997 shares purchased by Hatteras Venture Partners III, LP, 57,391 shares purchased by Hatteras Venture Affiliates III, LP, 689,388 shares purchased by Hatteras Venture Partners IV SBIC, LP and 275,755 shares purchased by Hatteras NC Fund, LP.

(2) Consists of 174,226 shares purchased by GRA Venture Fund, LLC and 101,528 shares purchased by GRA Venture Fund (T.E.), LLC.

Unsecured 7% Convertible Promissory Notes

In April and May 2014, we issued an aggregate principal amount of $3.0 million of unsecured 7% convertible promissory notes, or the bridge notes, and warrants to purchase an aggregate of 248,175 shares of our common stock at an exercise price of $0.01 per share. We issued an aggregate principal amount of $2,196,993 of our bridge notes and warrants to purchase up to 181,750 shares of our common stock to holders of more than 5% of our voting securities, members of our board of directors and our officers. The table below summarizes these issuances.

Name	Principal Amount of Unsecured Convertible Notes	Common Stock Warrants
Entities affiliated with Hatteras Venture Partners(1)	$ 1,154,496	95,508
Entities affiliated with GRA Venture Fund(2)	499,997	41,363
Santen Pharmaceutical Co., Ltd.	500,000	41,363
Daniel H. White	17,500	1,448
Charles A. Deignan	12,500	1,034
Gerald D. Cagle, Ph.D.	12,500	1,034
Total	$ 2,196,993	181,750

(1) Consists of bridge notes and warrants issued to Hatteras Venture Partners III, LP.

(2) Consists of a principal amount of $315,911 of our bridge notes and warrants to purchase 31,023 shares of our common stock issued to GRA Venture Fund, LLC, and a principal amount of $184,086 of our bridge notes and warrants to purchase 10,341 shares of our common stock issued to GRA Venture Fund (T.E.), LLC.

All principal and interest under the bridge notes was converted into shares of our Series B convertible preferred stock in connection with our August 2014 financing described below.

Sales of Series B Convertible Preferred Stock

In August 2014, we issued an aggregate of 6,009,202 shares of our Series B convertible preferred stock at a price of $2.69783 per share for an aggregate price of $16.2 million, 4,302,359 shares of which were sold to entities affiliated with members of our board of directors, our officers and holders of more than 5% of our voting securities. In some cases, some or all of the purchase price for these shares took the form of conversion of principal and interest under outstanding bridge notes held by the respective investors. In connection with this financing, we also issued warrants to purchase an aggregate of 1,716,914 shares of common stock at an exercise price of $0.01 per share, which became exercisable in February 2015. Of these warrants issued, warrants to purchase an aggregate of 1,229,248 shares of common stock were issued to entities affiliated with members of our board of directors, our officers and holders of more than 5% of our voting securities. All of the warrants issued in connection with this financing were exercised in May 2015. The table below summarizes the issuances of shares of Series B convertible preferred stock and warrants to

purchase common stock to entities affiliated with members of our board of directors, our officers and holders of more than 5% of our voting securities.

Purchaser	Shares of Series B Convertible Preferred Stock Purchased	Warrants to Purchase Common Stock Issued	Aggregate Purchase Price	
			Cash	Note Conversion
Entities affiliated with Hatteras Venture Partners(1)	865,881	247,395	$1,154,492	$1,181,508
Entities affiliated with GRA Venture Fund(2)	434,937	124,268	499,994	673,394
Santen Pharmaceutical Co., Ltd.	375,004	107,144	499,998	511,699
RMI Investments(3)	2,594,677	741,340	6,999,997	—
Daniel H. White	13,110	3,745	17,499	17,871
Charles A. Deignan	9,375	2,678	12,500	12,792
Gerald D. Cagle	9,375	2,678	12,500	12,792
Total	4,302,359	1,229,248	$9,196,980	$2,410,056

(1) Consists of (i) 396,920 shares of Series B convertible preferred stock and a warrant to purchase 113,406 shares of common stock issued to Hatteras Venture Partners III, LP, (ii) 36,020 shares of Series B convertible preferred stock and a warrant to purchase 10,291 shares of common stock issued to Hatteras Venture Affiliates III, LP and (iii) 432,941 shares of Series B convertible preferred stock and a warrant to purchase 123,698 shares of common stock issued to Hatteras Venture Partners IV SBIC, LP.

(2) Consists of (i) 236,711 shares of Series B convertible preferred stock and a warrant to purchase 67,632 shares of common stock issued to GRA Venture Fund, LLC, (ii) 137,935 shares of Series B convertible preferred stock and a warrant to purchase 39,410 shares of common stock issued to GRA Venture Fund (T.E.), LLC and (iii) 60,291 shares of Series B convertible preferred stock and a warrant to purchase 17,226 shares of common stock issued to Georgia Research Alliance, Inc.

(3) Entities affiliated with RMI Investments, or RMI, are holders of more than 5% of our voting securities and Evgeny Zaytsev, M.D. is affiliated with RMI Investments and is a member of our board of directors.

Sales of Series C Convertible Preferred Stock

In November and December 2015, we issued an aggregate of 5,073,598 shares of our Series C convertible preferred stock at a price of $3.7917 per share for an aggregate price of $19.2 million, 1,753,829 shares of which were sold to entities affiliated with members of our board of directors and holders of more than 5% of our voting securities. The table below summarizes the issuances of shares of Series C convertible preferred stock to entities affiliated with members of our board of directors and holders of more than 5% of our voting securities.

Purchaser	Shares of Series C Convertible Preferred Stock Purchased	Aggregate Purchase Price
Entities Affiliated with Hatteras Venture Partners(1)	527,466	$ 1,999,993
Entities Affiliated with GRA Venture Fund(2)	171,427	650,000
AJU Life Science Overseas Expansion Platform Fund(3)	1,054,936	4,000,000
Total	1,753,829	$ 6,649,993

(1) Consists of (i) 241,778 shares of Series C convertible preferred stock issued to Hatteras Venture Partners III, LP, (ii) 21,955 shares of Series C convertible preferred stock issued to Hatteras Venture Affiliates III, LP and (iii) 263,733 shares of Series C convertible preferred stock issued to Hatteras Venture Partners IV SBIC, LP.

(2) Consists of (i) 143,120 shares of Series C convertible preferred stock issued to GRA Venture Fund, LLC and (ii) 28,307 shares of Series C convertible preferred stock issued to GRA Venture Fund (T.E.), LLC.

(3) Derek Yoon, a member of our board of directors, is a Partner of AJU IB Investment, which is affiliated with AJU Life Science Overseas Expansion Platform Fund.

NovaMedica License Agreement

In connection with our Series B financing, in August 2014, we entered into a license agreement with NovaMedica LLC, or NovaMedica. Under this agreement, we granted to NovaMedica the exclusive right in Russia and specified adjacent territories to use our intellectual property to develop and commercialize products involving the use of TA as the sole active pharmaceutical ingredient for administration in the SCS. In connection with this license, NovaMedica made an upfront payment to us of $200,000. In addition, NovaMedica has agreed to make royalty payments equal to the amount of any royalties we owe to Emory or GTRC pursuant to the Emory/GTRC License Agreement as a result of NovaMedica's sales of products and services covered by the license granted to NovaMedica, up to a maximum of a low single-digit percentage of net sales of such products or services by NovaMedica. NovaMedica has also agreed to make milestone payments, totaling $12.7 million in the aggregate, upon the achievement of specified development and commercial milestones. NovaMedica is jointly owned by Rusnano MedInvest LLC, or Rusnano MedInvest, and Domain Russia Investments Limited. RMI, which beneficially owns more than 5% of our voting securities, is a wholly owned subsidiary of Rusnano MedInvest.

The term of the NovaMedica license agreement will expire upon the expiration of the last-to-expire valid claim within the patents licensed to NovaMedica pursuant to the agreement. Either we or NovaMedica may terminate the agreement upon written notice in the event of the other party's material breach that is not cured within 20 business days of receiving written notice requesting a cure of a payment breach, and within 60 business days of receiving written notice requesting a cure in the case of all other breaches. Each party also has the right to terminate in the event of the other party's bankruptcy or insolvency. We may terminate the agreement immediately upon written notice in the event that NovaMedica commences or participates in any action challenging the validity or enforceability of the patents licensed to NovaMedica under the agreement.

Santen Research Collaboration

In January 2013, we entered into a collaboration agreement with Santen, which beneficially owns more than 5% of our common stock. Under this agreement, we and Santen agreed to conduct feasibility studies to identify compounds for further development. Each party to the agreement bears its own costs, except that some of the costs we may incur are limited to a maximum amount. We and Santen amended our collaboration agreement in April 2014 and in April 2015 to expand the scope of our collaboration and to extend the duration of Santen's option rights with respect to products we develop together under the agreement. We incurred research and development costs under this agreement of $162,000 during the year ended December 31, 2013 and $98,000 during the year ended December 31, 2014.

Investor Rights Agreement

We have entered into an investor rights agreement, as amended, with our preferred stockholders, including entities affiliated with Hatteras, Santen, GRA and RMI, each of which beneficially own more than 5% of our common stock, as well as certain of our directors and executive officers. The investor rights agreement, among other things:

- grants our preferred stockholders specified registration rights with respect to shares of our common stock, including shares of common stock issued or issuable upon conversion of shares of our convertible preferred stock held by them;
- obligates us to deliver periodic financial statements to some of the stockholders who are parties to the investor rights agreement; and
- grants a right of first refusal with respect to sales of our shares by us, subject to specified exclusions, which exclusions include the sale of the shares pursuant to this prospectus, to some of the stockholders who are parties to the investor rights agreement.

For more information regarding the registration rights provided in this agreement, please refer to the section titled “Description of Capital Stock — Registration Rights.” The provisions of this agreement other than those relating to registration rights will terminate upon the completion of this offering.

Voting Agreement

We have entered into a voting agreement, as amended, with some of our stockholders, including entities affiliated with Hatteras, Santen, GRA and RMI, as well as certain of our directors and executive officers. The voting agreement, among other things, provides for the voting of shares with respect to the constituency of our board of directors. The voting agreement will terminate upon the completion of this offering.

Stock Sale Agreement

We have entered into a stock sale agreement, as amended, with some of our stockholders, including entities affiliated with Hatteras, Santen, GRA and RMI, as well as certain of our directors and executive officers. The stock sale agreement, among other things:

- grants our investors and our founders rights of first refusal and co-sale with respect to proposed transfers of our securities by specified stockholders;
- grants us rights of first refusal with respect to proposed transfers of our securities by specified stockholders; and
- provides for the voting of shares with respect to specified transactions approved by a majority of holders of our outstanding convertible preferred stock.

The stock sale agreement will terminate upon the completion of this offering.

Indemnification Agreements

Our amended and restated certificate of incorporation will contain provisions limiting the liability of directors, and our amended and restated bylaws will provide that we will indemnify each of our directors to the fullest extent permitted under Delaware law. Our amended and restated certificate of incorporation and amended and restated bylaws will also provide our board of directors with discretion to indemnify our officers and employees when determined appropriate by the board.

In addition, we have entered into an indemnification agreement with each of our directors. For more information regarding these agreements, see “Executive Compensation — Limitations on Liability and Indemnification Matters.”

Related Person Transaction Policy

Prior to this offering, we have not had a formal policy regarding approval of transactions with related parties. Prior to the completion of this offering, we expect to adopt a related person transaction policy that sets forth our procedures for the identification, review, consideration and approval or ratification of related person transactions. The policy will become effective immediately upon the execution of the underwriting agreement for this offering. For purposes of our policy only, a related person transaction is a transaction, arrangement or relationship, or any series of similar transactions, arrangements or relationships, in which we and any related person are, were or will be participants in which the amount involved exceeds $120,000. Transactions involving compensation for services provided to us as an employee or director are not covered by this policy. A related person is any executive officer, director or beneficial owner of more than 5% of any class of our voting securities, including any of their immediate family members and any entity owned or controlled by such persons.

Under the policy, if a transaction has been identified as a related person transaction, including any transaction that was not a related person transaction when originally consummated or any transaction that was not initially identified as a related person transaction prior to consummation, our management must present information regarding the related person transaction to our audit committee, or, if audit committee approval would be inappropriate, to another independent body of our board of directors, for review, consideration and approval or ratification. The presentation must include a description of, among other things, the material facts, the interests, direct and indirect, of the related persons, the benefits to us of the transaction and whether the transaction is on terms that are comparable to the terms available to or from, as the case may be, an unrelated third party or to or from employees generally. Under the policy, we will collect information that we deem reasonably necessary from each director, executive officer and, to the extent feasible, significant stockholder to enable us to identify any existing or potential related-person transactions and to effectuate the terms of the policy. In addition, under our Code of Business Conduct and Ethics that we expect to adopt prior to the completion of this offering, our employees and directors will have an affirmative responsibility to disclose any transaction or relationship that reasonably could be expected to give rise to a conflict of interest. In considering related person transactions, our audit committee, or other independent body of our board of directors, will take into account the relevant available facts and circumstances including, but not limited to:

- the risks, costs and benefits to us;
- the impact on a director’s independence in the event that the related person is a director, immediate family member of a director or an entity with which a director is affiliated;
- the availability of other sources for comparable services or products; and
- the terms available to or from, as the case may be, unrelated third parties or to or from employees generally.

The policy requires that, in determining whether to approve, ratify or reject a related person transaction, our audit committee, or other independent body of our board of directors, must consider, in light of known circumstances, whether the transaction is in, or is not inconsistent with, our best interests and those of our stockholders, as our audit committee, or other independent body of our board of directors, determines in the good faith exercise of its discretion.

PRINCIPAL STOCKHOLDERS

The following table sets forth the beneficial ownership of our common stock as of December 15, 2015 for:

- each person, or group of affiliated persons, who is known by us to beneficially own more than 5% of our common stock;
- each of our named executive officers;
- each of our directors; and
- all of our current executive officers and directors as a group.

The percentage ownership information shown in the table is based upon 26,503,258 shares of common stock outstanding as of December 15, 2015, after giving effect to the conversion of all of our convertible preferred stock into 20,638,557 shares of common stock, which will occur automatically upon the closing of this offering.

We have determined beneficial ownership in accordance with the rules of the SEC. These rules generally attribute beneficial ownership of securities to persons who possess sole or shared voting power or investment power with respect to those securities. In addition, the rules include shares of common stock issuable pursuant to the exercise of stock options or warrants that are exercisable on or before February 13, 2016, which is 60 days after December 15, 2015. These shares are deemed to be outstanding and beneficially owned by the person holding those options or warrants for the purpose of computing the percentage ownership of that person, but they are not treated as outstanding for the purpose of computing the percentage ownership of any other person. Unless otherwise indicated, the persons or entities identified in this table have sole voting and investment power with respect to all shares shown as beneficially owned by them, subject to applicable community property laws.

Except as otherwise noted below, the address for persons listed in the table is c/o Clearside Biomedical, Inc., 1220 Old Alpharetta Road, Suite 300, Alpharetta, Georgia 30005.

Name of Beneficial Owner	Number of Shares Beneficially Owned	Percentage of Shares Beneficially Owned	
		Before Offering	After Offering
Principal Stockholders:			
Entities affiliated with Hatteras Venture Partners(1)	7,461,709	28.1%	
Santen Pharmaceutical Co., Ltd.(2)	2,453,416	9.2	
Entities affiliated with GRA Venture Fund(3)	1,913,836	7.2	
RMI Investments(4)	3,333,370	12.6	
Executive Officers and Directors:			
Daniel H. White(5)	1,469,823	5.5	
Charles A. Deignan(6)	245,785	*	
Glenn Noronha, Ph.D.(7)	134,375	*	
Christy L. Shaffer, Ph.D.(1)	—	—	
Clay B. Thorp(1)	7,461,709	28.1	
William D. Humphries(8)	100,000	*	
Gerald D. Cagle, Ph.D.(9)	75,577	*	
Evgeny Zaytsev, M.D.(4)	3,333,370	12.6	
Derek Yoon	—	—	
All current directors and executive officers as a group (9 persons)(10)	12,820,639	47.1	

* Represents beneficial ownership of less than 1%.

(1) Consists of (a) 113,000 shares of common stock, 3,137,113 shares of common stock issuable upon conversion of shares of preferred stock and 43,780 shares of common stock issuable upon exercise of immediately exercisable warrants held by Hatteras Venture Partners III, LP ("HVP III"), (b) 10,254 shares of common stock, 284,855 shares of common stock issuable upon conversion of shares of preferred stock and 3,973 shares of common stock issuable upon exercise of immediately exercisable warrants held by Hatteras Venture Affiliates III, LP ("HVA III"), (c) 123,256 shares of common stock, 3,421,970 shares of common stock issuable upon conversion of shares of preferred stock and 47,753 shares of common stock issuable upon exercise of immediately exercisable warrants held by Hatteras Venture Partners IV SBIC, LP ("HVP IV SBIC") and (d) 275,755 shares of common stock issuable upon conversion of shares of preferred stock held by Hatteras NC Fund ("Hatteras NC" and together with HVP III, HVA III, and HVP IV SBIC, the "Hatteras Entities"). The shares directly held by HVA III and HVP III are indirectly held by Hatteras Venture Advisors III, LLC ("HVA III LLC"), their general partner. The individual general partners of HVA III LLC are Clay B. Thorp, Robert A. Ingram, Kenneth B. Lee, Douglas Reed, MD and John Crumpler (the "HVA III LLC Directors"). HVA III LLC and the HVA III LLC Directors may be deemed to have shared voting and dispositive power over, and be deemed indirect beneficial owners of, the shares directly held by Hatteras Venture Affiliates III and Hatteras Venture Partners III. The shares directly held by HVP IV SBIC are indirectly held by Hatteras Venture Advisors IV SBIC, LLC ("HVA IV SBIC LLC"), its general partner. The individual general partners of HVA IV SBIC LLC are Clay B. Thorp, Robert A Ingram, Kenneth B. Lee, Douglas Reed, MD and John Crumpler

(the "HVA IV SBIC LLC Directors"). HVA IV SBIC LLC and the HVA IV SBIC LLC Directors may be deemed to have shared voting and dispositive power over, and be deemed indirect beneficial owners of, the shares directly held by HVA IV SBIC. The shares directly held by Hatteras NC are indirectly held by Hatteras Venture Advisors IV, LLC ("HVA IV"), its general partner. The individual general partners of HVA IV are Clay B. Thorp, Robert A. Ingram, Kenneth B. Lee, Douglas Reed, MD and John Crumpler (the "HVA IV Directors"). HVA IV and the HVA IV Directors may be deemed to have shared voting and dispositive power over, and be deemed indirect beneficial owners of, the shares directly held by Hatteras NC. Christy Shaffer, one of our directors, is a Venture Partner with Hatteras Venture Partners, but she does not have beneficial ownership over the shares held by HVP III, HVA III, HVP IV SBIC and Hatteras NC. The principal business address of the Hatteras Entities is 280 S. Mangum St., Suite 350, Durham, NC 27701.

(2) Consists of (a) 106,761 shares of common stock, (b) 2,305,292 shares of common stock issuable upon conversion of shares of preferred stock and (c) 41,363 shares of common stock issuable upon exercise of immediately exercisable warrants, in each case held by Santen Pharmaceutical Co., Ltd. ("Santen"). The principal business address of Santen is 9-19 Shimoshinjo 3-chome, Higashiyodogawa-ku, Osaka 533-8651, Japan.

(3) Consists of (a) 67,390 shares of common stock, 1,101,549 shares of common stock issuable upon conversion of shares of preferred stock and 26,134 shares of common stock issuable upon exercise of immediately exercisable warrants held by GRA Venture Fund, LLC ("GRAVF"), (b) 39,269 shares of common stock, 586,811 shares of common stock issuable upon conversion of shares of preferred stock and 15,228 shares of common stock issuable upon exercise of immediately exercisable warrants held by GRA Venture Fund (T.E.), LLC ("GRAVF TE") and (c) 17,164 shares of common stock and 60,291 shares of common stock issuable upon conversion of shares of preferred stock held in the name of Georgia Research Alliance, Inc. ("GRA, Inc." and, together with GRAVF and GRAVF TE, the "GRA Entities") in an account administered by GRA, Inc. pursuant to a contract with the State of Georgia's Department of Economic Development. The shares directly held by GRAVF are indirectly held by the members of its board of managers, Duane Ackerman, Jim Balloun, Chris Carr, Russ Chandler, Frederick E. Cooper, Brad Currey, Bill Fickling, Rusty French, William Linginfelter, Diana M. Murphy, Sig Mosley, Tom Parker, David Ratcliffe and Fran Rogers (the "GRAVF Directors"). The GRAVF Directors may be deemed to have shared voting and dispositive power over, and be deemed indirect beneficial owners of, the shares directly held by GRAVF. The shares directly held by GRAVF TE are indirectly held by the members of its board of managers, who are the same individuals as the GRAVF Directors (the "GRAVF TE Directors"). The GRAVF TE Directors may be deemed to have shared voting and dispositive power over, and be deemed indirect beneficial owners of, the shares directly held by GRAVF TE. The shares directly held by GRA, Inc. are indirectly held by the members of its board of trustees, Clyde Tuggle, Douglas Hertz, Kathelen Amos, Paul Amos, Dr. Ricardo Azziz, Dr. Mark Becker, Paul Bowers, Carlton Brown, Chris Carr, Dr. Max Cooper, Kenneth Cornelius, Thomas Cousins, Larry Gellerstedt III, George Deese, James Hannan, Robert Hatcher, Edward Heys, William Linginfelter, Kelly Loeffler, Charles McTier, Jere Morehead, Allen Mosley, Thomas Noonan, Charles Ogburn, Kenneth Ostrowski, G.P. Peterson, Parker Petit, David Ratcliffe, Joseph Rogers, William Rogers, John Somerhalder II, Lizanne Thomas, T. Rogers Wade, James Wagner and Felker Ward (the "GRA, Inc. Trustees"). The GRA, Inc. Trustees may be deemed to have shared voting and dispositive power over, and be deemed indirect beneficial owners of, the shares directly held in the name of GRA, Inc. pursuant to a contact with the State of Georgia's Department of Economic Development. The principal business address of the GRA Entities is 191 Peachtree Street, NE, Suite 846, Atlanta, Georgia 30303.

(4) Consists of 738,693 shares of common stock and 2,594,677 shares of common stock issuable upon conversion of shares of preferred stock held by RMI. The shares directly held by RMI are indirectly held by RusnanoMedInvest, the parent company of RMI. RMI Partners LLC is the management company for RusnanoMedInvest. The CEO of RMI Partners LLC is Vladimir Gurdus and the Managing Partner of RMI Partners LLC is Evgeny Zaytsev, M.D., a member of our board of directors (the "RMI Partners LLC Directors"). RusnanoMedInvest, RMI Partners LLC and the RMI Partners LLC Directors may be deemed to have shared voting and dispositive power over, and be deemed indirect beneficial owners of, the shares directly held by RMI. The principal business address of RMI is Business-Center 29/22, Capital Tower 1st Brestskaya Street, Moscow, 12 125047.

(5) Consists of (a) 1,016,830 shares of common stock held by Mr. White directly, (b) 90,000 shares of common stock held by the White Family Trust, for which Mr. White's wife serves as trustee, (c) 5,136 shares of common stock held for the benefit of Mr. White's children under the Georgia Uniform Transfers to Minors Act, for which Mr. White serves as custodian, (d) 135,131 shares of common stock issuable upon conversion of shares of preferred stock held by Mr. White directly, (e) 3,191 shares of common stock, 11,213 shares of common stock issuable upon conversion of shares of preferred stock and 1,034 shares of common stock issuable upon exercise of immediately exercisable warrants held by the Daniel H. White (IRA), for which Mr. White serves as trustee, (f) 206,875 shares of common stock underlying options that are exercisable and vested within 60 days of December 15, 2015 and (g) 413 shares of common stock issuable upon exercise of immediately exercisable warrants.

(6) Consists of (a) 127,668 shares of common stock, (b) 9,375 shares of common stock issuable upon conversion of shares of preferred stock, (c) 107,708 shares of common stock underlying options that are exercisable and vested within 60 days of December 15, 2015 and (d) 1,034 shares of common stock issuable upon exercise of immediately exercisable warrants. Shares of restricted stock that are not vested are subject to a repurchase right in favor of the company if Mr. Deignan does not satisfy the applicable vesting requirements. In any event, unvested restricted shares may not be disposed of until the vesting period has been satisfied.

(7) Consists of 134,375 shares of common stock underlying options that are exercisable and vested within 60 days of December 15, 2015.

(8) Consists of 100,000 shares of common stock underlying options that are exercisable and vested within 60 days of December 15, 2015.

(9) Consists of (a) 2,668 shares of common stock, (b) 9,375 shares of common stock issuable upon conversion of shares of preferred stock (c) 62,500 shares of common stock underlying options that are exercisable and vested within 60 days of December 15, 2015 and (d) 1,034 shares of common stock issuable upon exercise of immediately exercisable warrants.

(10) Consists of (a) 2,230,696 shares of common stock, (b) 9,879,464 shares of common stock issuable upon conversion of shares of preferred stock, (c) 611,458 shares of common stock underlying options that are exercisable and vested within 60 days of December 15, 2015 and (d) 99,021 shares of common stock issuable upon exercise of immediately exercisable warrants. Shares of restricted stock that are not vested are subject to a repurchase right in favor of the company if the officer or director does not satisfy the applicable vesting requirements. In any event, unvested restricted shares may not be disposed of until the vesting period has been satisfied.

DESCRIPTION OF CAPITAL STOCK

The following description of our capital stock and provisions of our amended and restated certificate of incorporation and amended and restated bylaws are summaries. You should also refer to the amended and restated certificate of incorporation and the amended and restated bylaws, which are filed as exhibits to the registration statement of which this prospectus is part.

General

Upon the completion of this offering, our amended and restated certificate of incorporation will authorize us to issue up to shares of common stock, $0.001 par value per share, and shares of preferred stock, $0.001 par value per share, all of which shares of preferred stock will be undesignated. Our board of directors may establish the rights and preferences of the preferred stock from time to time. As of December 15, 2015, we had outstanding 5,864,701 shares of common stock, held by 52 stockholders of record. As of December 15, 2015, after giving effect to the conversion of all outstanding preferred stock into shares of common stock, there would have been 26,576,951 shares of common stock issued and outstanding, held of record by 83 stockholders.

Common Stock

Voting Rights

Each holder of our common stock is entitled to one vote for each share on all matters submitted to a vote of the stockholders, including the election of directors. Under our amended and restated certificate of incorporation and amended and restated bylaws, our stockholders will not have cumulative voting rights. Because of this, the holders of a majority of the shares of common stock entitled to vote in any election of directors can elect all of the directors standing for election, if they should so choose.

Dividends

Subject to preferences that may be applicable to any then-outstanding preferred stock, holders of common stock are entitled to receive ratably those dividends, if any, as may be declared from time to time by the board of directors out of legally available funds.

Liquidation

In the event of our liquidation, dissolution or winding up, holders of common stock will be entitled to share ratably in the net assets legally available for distribution to stockholders after the payment of all of our debts and other liabilities and the satisfaction of any liquidation preference granted to the holders of any then-outstanding shares of preferred stock.

Rights and Preferences

Holders of common stock have no preemptive, conversion or subscription rights and there are no redemption or sinking fund provisions applicable to the common stock. The rights, preferences and privileges of the holders of common stock are subject to, and may be adversely affected by, the rights of the holders of shares of any series of preferred stock that we may designate in the future.

Preferred Stock

As of December 15, 2015, there were outstanding 20,712,250 shares of convertible preferred stock. All currently outstanding shares of convertible preferred stock will be converted automatically into an aggregate of 20,712,250 shares of common stock immediately prior to the completion of this offering.

Following the completion of this offering, our board of directors will have the authority, without further action by our stockholders, to issue up to 5,000,000 shares of preferred stock in one or more series, to establish from time to time the number of shares to be included in each such series, to fix the rights, preferences and privileges of the shares of each wholly unissued series and any qualifications, limitations or restrictions thereon, and to increase or decrease the number of shares of any such series, but not below the number of shares of such series then outstanding.

Our board of directors may authorize the issuance of preferred stock with voting or conversion rights that could adversely affect the voting power or other rights of the holders of our common stock. The purpose of authorizing our board of directors to issue preferred stock and determine its rights and preferences is to eliminate delays associated with a stockholder vote on specific issuances. The issuance of preferred stock, while providing flexibility in connection with possible acquisitions and other corporate purposes, could, among other things, have the effect of delaying, deferring or preventing a change in control of us and may adversely affect the market price of our common stock and the voting and other rights of the holders of our common stock. It is not possible to state the actual effect of the issuance of any shares of preferred stock on the rights of holders of common stock until the board of directors determines the specific rights attached to that preferred stock.

We have no present plans to issue any shares of preferred stock following completion of this offering.

Options

As of December 15, 2015, under our 2011 plan, options to purchase an aggregate of 2,775,680 shares of common stock were outstanding. For additional information regarding the terms of this plan, see “Executive Compensation — Equity Incentive Plans.”

Warrants

We have outstanding an immediately exercisable warrant to purchase 57,143 shares of our Series B convertible preferred stock at an exercise price of $3.50 per share, which expires in April 2025. This warrant has a net exercise provision under which the holder may, in lieu of payment of the exercise price in cash, surrender the warrant and receive a net amount of shares based on the fair market value of our stock at the time of exercise of the warrant after deduction of the aggregate exercise price. The warrant also contains provisions for the adjustment of the exercise price and the number of shares issuable upon exercise of the warrant in the event of certain stock dividends, stock splits, reorganizations, reclassifications and consolidations. Upon completion of this offering, unless earlier exercised, this warrant will be converted into a warrant to purchase 57,143 shares of our common stock at $3.50 per share.

We have outstanding an immediately exercisable warrant to purchase 16,550 shares of our Series A-1 convertible preferred stock at an exercise price of $1.81 per share, which expires in February 2023. This warrant has a net exercise provision under which the holder may, in lieu of payment of the exercise price in cash, surrender the warrant and receive a net amount of shares based on the fair market value of our stock at the time of exercise of the warrant after deduction of the aggregate exercise price. The warrant also contains

provisions for the adjustment of the exercise price and the number of shares issuable upon the exercise of the warrant in the event of certain stock dividends, stock splits, reorganizations, reclassifications and consolidations. Upon the completion of this offering, unless earlier exercised, this warrant will be converted into a warrant to purchase 16,550 shares of our common stock at $1.81 per share.

As of December 15, 2015, we also had outstanding immediately exercisable warrants to purchase an aggregate of 248,175 shares of our common stock at an exercise price of $0.01 per share, which expire in April 2024. These warrants have net exercise provisions under which the holder may, in lieu of payment of the exercise price in cash, surrender the warrant and receive a net amount of shares based on the fair market value of our common stock at the time of exercise of the warrant after deduction of the aggregate exercise price. These warrants also contain provisions for the adjustment of the exercise price and the number of shares issuable upon the exercise of the warrant in the event of certain stock dividends, stock splits, reorganizations, reclassifications and consolidations. If unexercised, these warrants will expire upon the closing of this offering, and therefore we expect that these warrants will be exercised in connection with the completion of this offering and that we will issue approximately 248,175 shares of our common stock upon their exercise.

Registration Rights

We and the holders of our existing convertible preferred stock have entered into an investor rights agreement. The registration rights provisions of this agreement provide those holders with demand and piggyback registration rights with respect to the shares of our common stock currently held by them and issuable to them upon exercise of warrants and upon conversion of our convertible preferred stock in connection with this offering.

Demand Registration Rights

At any time beginning 180 days following the effective date of the registration statement of which this prospectus is a part, the holders of at least 40% of the shares held by parties to the investor rights agreement in the aggregate have the right to demand that we file up to two Form S-1 registration statements, as long as the anticipated aggregate offering price, net of underwriting discounts and commissions, would exceed $10.0 million. These registration rights are subject to specified conditions and limitations, including the right of the underwriters, if any, to limit the number of shares included in any such registration under specified circumstances. Upon such a request, we are required to effect the registration as soon as reasonably possible. An aggregate of shares of common stock and shares issuable upon the exercise of warrants will be entitled to these demand registration rights.

Piggyback Registration Rights

At any time after the completion of this offering, if we propose to register any of our securities under the Securities Act either for our own account or for the account of other stockholders, the parties to the investor rights agreement will each be entitled to notice of the registration and will be entitled to include their shares of common stock in the registration statement. These piggyback registration rights are subject to specified conditions and limitations, including the right of the underwriters to limit the number of shares included in any such registration under specified circumstances. An aggregate of shares of common stock and shares issuable upon the exercise of warrants will be entitled to these piggyback registration rights.

Registration on Form S-3

At any time after we become eligible to file a registration statement on Form S-3, the holders of at least 20% of the shares held by parties to the investor rights agreement will be entitled to have their shares registered by us on a Form S-3 registration statement at our expense, provided that such requested registration has an anticipated aggregate offering price, net of underwriting discounts and commissions, of at least $1.0 million and subject to other specified conditions and limitations. An aggregate of shares of common stock and shares issuable upon the exercise of warrants will be entitled to these Form S-3 registration rights.

Expenses of Registration

We will pay all expenses relating to any demand, piggyback or Form S-3 registration, other than underwriting discounts and commissions, subject to specified conditions and limitations.

Termination of Registration Rights

The registration rights granted under the investor rights agreement will terminate upon the earliest to occur of (i) the fifth anniversary of the completion of this offering or (ii) the closing of a liquidating event.

Anti-Takeover Provisions

Section 203 of the Delaware General Corporation Law

We are subject to Section 203 of the Delaware General Corporation Law, which prohibits a Delaware corporation from engaging in any business combination with any interested stockholder for a period of three years after the date that such stockholder became an interested stockholder, with the following exceptions:

- before such date, the board of directors of the corporation approved either the business combination or the transaction that resulted in the stockholder becoming an interested stockholder;
- upon completion of the transaction that resulted in the stockholder becoming an interested stockholder, the interested stockholder owned at least 85% of the voting stock of the corporation outstanding at the time the transaction began, excluding for purposes of determining the voting stock outstanding, but not the outstanding voting stock owned by the interested stockholder, those shares owned (i) by persons who are directors and also officers and (ii) employee stock plans in which employee participants do not have the right to determine confidentially whether shares held subject to the plan will be tendered in a tender or exchange offer; or
- on or after such date, the business combination is approved by the board of directors and authorized at an annual or special meeting of the stockholders, and not by written consent, by the affirmative vote of at least 66 ⅔% of the outstanding voting stock that is not owned by the interested stockholder.

In general, Section 203 defines a “business combination” to include the following:

- any merger or consolidation involving the corporation and the interested stockholder;
- any sale, transfer, pledge or other disposition of 10% or more of the assets of the corporation involving the interested stockholder;
- subject to certain exceptions, any transaction that results in the issuance or transfer by the corporation of any stock of the corporation to the interested stockholder;

- any transaction involving the corporation that has the effect of increasing the proportionate share of the stock or any class or series of the corporation beneficially owned by the interested stockholder; or
- the receipt by the interested stockholder of the benefit of any loans, advances, guarantees, pledges or other financial benefits by or through the corporation.

In general, Section 203 defines an "interested stockholder" as an entity or person who, together with the person's affiliates and associates, beneficially owns, or within three years prior to the time of determination of interested stockholder status did own, 15% or more of the outstanding voting stock of the corporation.

Certificate of Incorporation and Bylaws to be in Effect Upon the Completion of this Offering

Our amended and restated certificate of incorporation to be in effect upon the completion of this offering, or our restated certificate, will provide for our board of directors to be divided into three classes with staggered three-year terms. Only one class of directors will be elected at each annual meeting of our stockholders, with the other classes continuing for the remainder of their respective three-year terms. Because our stockholders do not have cumulative voting rights, stockholders holding a majority of the shares of common stock outstanding will be able to elect all of our directors. Our restated certificate and our amended and restated bylaws to be effective upon the completion of this offering, or our restated bylaws, will also provide that directors may be removed by the stockholders only for cause upon the vote of 66 2⁄3% or more of our outstanding common stock. Furthermore, the authorized number of directors may be changed only by resolution of the board of directors, and vacancies and newly created directorships on the board of directors may, except as otherwise required by law or determined by the board, only be filled by a majority vote of the directors then serving on the board, even though less than a quorum.

Our restated certificate and restated bylaws will also provide that all stockholder actions must be effected at a duly called meeting of stockholders and will eliminate the right of stockholders to act by written consent without a meeting. Our restated bylaws will also provide that only our chairman of the board, chief executive officer or the board of directors pursuant to a resolution adopted by a majority of the total number of authorized directors may call a special meeting of stockholders.

Our restated bylaws will also provide that stockholders seeking to present proposals before a meeting of stockholders or to nominate candidates for election as directors at a meeting of stockholders must provide timely advance notice in writing, and will specify requirements as to the form and content of a stockholder's notice.

Our restated certificate and restated bylaws will provide that the stockholders cannot amend many of the provisions described above except by a vote of 66 2⁄3% or more of our outstanding common stock.

The combination of these provisions will make it more difficult for our existing stockholders to replace our board of directors as well as for another party to obtain control of us by replacing our board of directors. Since our board of directors has the power to retain and discharge our officers, these provisions could also make it more difficult for existing stockholders or another party to effect a change in management. In addition, the authorization of undesignated preferred stock makes it possible for our board of directors to issue preferred stock with voting or other rights or preferences that could impede the success of any attempt to change our control.

These provisions are intended to enhance the likelihood of continued stability in the composition of our board of directors and its policies and to discourage coercive takeover practices and inadequate takeover bids. These provisions are also designed to reduce our vulnerability to hostile takeovers and to discourage certain tactics that may be used in proxy fights. However, such provisions could have the effect of discouraging others from making tender offers for our shares and may have the effect of delaying changes in our control or management. As a consequence, these provisions may also inhibit fluctuations in the market price of our stock that could result from actual or rumored takeover attempts. We believe that the benefits of these provisions, including increased protection of our potential ability to negotiate with the proponent of an unfriendly or unsolicited proposal to acquire or restructure our company, outweigh the disadvantages of discouraging takeover proposals, because negotiation of takeover proposals could result in an improvement of their terms.

Choice of Forum

Our restated certificate will provide that the Court of Chancery of the State of Delaware will be the exclusive forum for:

- any derivative action or proceeding brought on our behalf;
- any action asserting a breach of fiduciary duty;
- any action asserting a claim against us arising pursuant to the Delaware General Corporation Law, our restated certificate, or our amended and restated bylaws; or
- any action asserting a claim against us that is governed by the internal affairs doctrine.

The enforceability of similar choice of forum provisions in other companies' certificates of incorporation has been challenged in legal proceedings, and it is possible that, in connection with any action, a court could find the choice of forum provisions contained in our restated certificate to be inapplicable or unenforceable in such action.

Transfer Agent and Registrar

The transfer agent and registrar for our common stock is American Stock Transfer & Trust Company. The transfer agent's address is 6201 15th Avenue, Brooklyn, NY 11219.

NASDAQ Global Market Listing

We have applied for listing of our common stock on The NASDAQ Global Market under the trading symbol "CLSD."

SHARES ELIGIBLE FOR FUTURE SALE

Prior to this offering, no public market existed for our common stock. Future sales of shares of our common stock in the public market after this offering, or the perception that these sales could occur, could adversely affect prevailing market prices for our common stock and could impair our future ability to raise equity capital.

Based on the number of shares outstanding as of December 15, 2015, upon completion of this offering and assuming no exercise of the underwriters' option to purchase additional shares, shares of common stock will be outstanding, assuming no outstanding options or warrants are exercised. All of the shares of common stock sold in this offering will be freely tradable without restrictions or further registration under the Securities Act, except for any shares sold to our "affiliates," as that term is defined under Rule 144 under the Securities Act. The remaining shares of common stock held by existing stockholders are "restricted securities," as that term is defined in Rule 144 under the Securities Act. Restricted securities may be sold in the public market only if registered or if their resale qualifies for exemption from registration described below under Rule 144 promulgated under the Securities Act.

As a result of contractual restrictions described below and the provisions of Rules 144 and 701, the shares sold in this offering and the restricted securities will be available for sale in the public market as follows:

- the shares sold in this offering and of the existing restricted shares will be eligible for immediate sale upon the completion of this offering;
- approximately restricted shares will be eligible for sale in the public market 90 days after the date of this prospectus, subject to the volume, manner of sale and other limitations under Rule 144 and Rule 701; and
- approximately restricted shares will be eligible for sale in the public market upon expiration of lock-up agreements 180 days after the date of this prospectus, subject in certain circumstances to the volume, manner of sale and other limitations under Rule 144 and Rule 701.

Rule 144

In general, persons who have beneficially owned restricted shares of our common stock for at least six months, and any affiliate of the company who owns either restricted or unrestricted shares of our common stock, are entitled to sell their securities without registration with the SEC under an exemption from registration provided by Rule 144 under the Securities Act.

Non-Affiliates

Any person who is not deemed to have been one of our affiliates at the time of, or at any time during the three months preceding, a sale may sell an unlimited number of restricted securities under Rule 144 if:

- the restricted securities have been held for at least six months, including the holding period of any prior owner other than one of our affiliates;
- we have been subject to the Exchange Act periodic reporting requirements for at least 90 days before the sale; and
- we are current in our Exchange Act reporting at the time of sale.

Any person who is not deemed to have been an affiliate of ours at the time of, or at any time during the three months preceding, a sale and has held the restricted securities for at least one year, including the holding period of any prior owner other than one of our affiliates, will be entitled to sell an unlimited number of restricted securities without regard to the length of time we have been subject to Exchange Act periodic reporting or whether we are current in our Exchange Act reporting.

Affiliates

Persons seeking to sell restricted securities who are our affiliates at the time of, or any time during the three months preceding, a sale, would be subject to the restrictions described above. They are also subject to additional restrictions, by which such person would be required to comply with the manner of sale and notice provisions of Rule 144 and would be entitled to sell within any three-month period only that number of securities that does not exceed the greater of either of the following:

- 1% of the number of shares of our common stock then outstanding, which will equal approximately shares immediately after the completion of this offering based on the number of shares outstanding as of December 15, 2015; or
- the average weekly trading volume of our common stock on The NASDAQ Global Market during the four calendar weeks preceding the filing of a notice on Form 144 with respect to the sale.

Additionally, persons who are our affiliates at the time of, or any time during the three months preceding, a sale may sell unrestricted securities under the requirements of Rule 144 described above, without regard to the six month holding period of Rule 144, which does not apply to sales of unrestricted securities.

Rule 701

Rule 701 under the Securities Act, as in effect on the date of this prospectus, permits resales of shares in reliance upon Rule 144 but without compliance with certain restrictions of Rule 144, including the holding period requirement. Most of our employees, executive officers or directors who purchased shares under a written compensatory plan or contract may be entitled to rely on the resale provisions of Rule 701, but all holders of Rule 701 shares are required to wait until 90 days after the date of this prospectus before selling their shares. However, substantially all Rule 701 shares are subject to lock-up agreements as described below and in the section of this prospectus titled “Underwriting” and will become eligible for sale upon the expiration of the restrictions set forth in those agreements.

Form S-8 Registration Statements

As soon as practicable after the completion of this offering, we intend to file with the SEC one or more registration statements on Form S-8 under the Securities Act to register the shares of our common stock that are issuable pursuant to our 2011 plan, 2016 plan and 2016 ESPP. These registration statements will become effective immediately upon filing. Shares covered by these registration statements will then be eligible for sale in the public markets, subject to vesting restrictions, any applicable lock-up agreements described below and Rule 144 limitations applicable to affiliates.

Lock-Up Agreements

We and the holders of substantially all of our common stock outstanding on the date of this prospectus, including each of our executive officers and directors, have entered into lock-up agreements with the

underwriters or otherwise agreed, subject to certain exceptions, that we and they will not, directly or indirectly, offer, sell, contract to sell, pledge, grant any option to purchase, make any short sale, or otherwise dispose of or hedge any of our shares of common stock, any options or warrants to purchase shares of our common stock, or any securities convertible into, or exchangeable for or that represent the right to receive shares of our common stock, without the prior written consent of the representatives of the underwriters for a period of 180 days from the date of this prospectus.

MATERIAL U.S. FEDERAL INCOME TAX CONSEQUENCES TO NON-U.S. HOLDERS

The following is a general discussion of the material U.S. federal income tax considerations applicable to non-U.S. holders with respect to their ownership and disposition of shares of our common stock issued pursuant to this offering. All prospective non-U.S. holders of our common stock should consult their own tax advisors with respect to the U.S. federal, state, local and non-U.S. tax consequences of the purchase, ownership and disposition of our common stock. In general, a non-U.S. holder means a beneficial owner of our common stock (other than a partnership or an entity or arrangement treated as a partnership for U.S. federal income tax purposes) that is not, for U.S. federal income tax purposes:

- an individual who is a citizen or resident of the United States;
- a corporation, or an entity treated as a corporation for U.S. federal income tax purposes, created or organized in the United States or under the laws of the United States or of any state thereof or the District of Columbia;
- an estate, the income of which is subject to U.S. federal income tax regardless of its source; or
- a trust if (1) a U.S. court can exercise primary supervision over the trust's administration and one or more U.S. persons have the authority to control all of the trust's substantial decisions or (2) the trust has a valid election in effect under applicable U.S. Treasury Regulations to be treated as a U.S. person.

This discussion is based on current provisions of the U.S. Internal Revenue Code of 1986, as amended, which we refer to as the Code, existing U.S. Treasury Regulations promulgated thereunder, published administrative rulings and judicial decisions, all as in effect as of the date of this prospectus. These laws are subject to change and to differing interpretation, possibly with retroactive effect. Any change or differing interpretation could alter the tax consequences to non-U.S. holders described in this prospectus.

We assume in this discussion that a non-U.S. holder holds shares of our common stock as a capital asset within the meaning of Section 1221 of the Code (generally, for investment). This discussion does not address all aspects of U.S. federal income taxation that may be relevant to a particular non-U.S. holder in light of that non-U.S. holder's individual circumstances, nor does it address any aspects of U.S. federal taxes other than income taxes (except to the limited extent set forth below), or U.S. state, local or non-U.S. taxes. This discussion also does not consider any specific facts or circumstances that may apply to a non-U.S. holder and does not address the special tax rules applicable to particular non-U.S. holders, such as holders that own, or are deemed to own, more than 5% of our capital stock (except to the extent specifically set forth below), corporations that accumulate earnings to avoid U.S. federal income tax, tax-exempt organizations, banks, financial institutions, insurance companies, brokers, dealers or traders in securities, commodities or currencies, tax-qualified retirement plans, holders subject to the alternative minimum tax or the Medicare contribution tax, holders who hold or receive our common stock pursuant to the exercise of employee stock options or otherwise as compensation, holders holding our common stock as part of a hedge, straddle or other risk reduction strategy, conversion transaction or other integrated investment, holders deemed to sell our common stock under the constructive sale provisions of the Code, controlled foreign corporations, passive foreign investment companies and certain former U.S. citizens or long-term residents.

In addition, this discussion does not address the tax treatment of partnerships (or entities or arrangements that are treated as partnerships for U.S. federal income tax purposes) or persons that hold their common stock through such partnerships. If a partnership, including any entity or arrangement treated as a

partnership for U.S. federal income tax purposes, holds shares of our common stock, the U.S. federal income tax treatment of a partner in such partnership will generally depend upon the status of the partner and the activities of the partnership. Such partners and partnerships should consult their own tax advisors regarding the tax consequences of the purchase, ownership and disposition of our common stock.

There can be no assurance that the Internal Revenue Service, which we refer to as the IRS, will not challenge one or more of the tax consequences described herein, and we have not obtained, nor do we intend to obtain, a ruling with respect to the U.S. federal income tax consequences to a non-U.S. holder of the purchase, ownership or disposition of our common stock.

Distributions on Our Common Stock

Distributions, if any, on our common stock generally will constitute dividends for U.S. federal income tax purposes to the extent paid from our current or accumulated earnings and profits, as determined under U.S. federal income tax principles. If a distribution exceeds our current and accumulated earnings and profits, the excess will be treated as a tax-free return of the non-U.S. holder's investment, up to such holder's adjusted tax basis in the common stock. Any remaining excess will be treated as capital gain from the sale or exchange of such common stock, subject to the tax treatment described below in "Gain on Sale, Exchange or Other Disposition of Our Common Stock." Any such distribution will also be subject to the discussion below under the heading "Foreign Accounts."

Dividends paid to a non-U.S. holder will generally be subject to withholding of U.S. federal income tax at a 30% rate or such lower rate as may be specified by an applicable income tax treaty between the United States and such holder's country of residence.

Dividends that are treated as effectively connected with a trade or business conducted by a non-U.S. holder within the United States and, if an applicable income tax treaty so provides, that are attributable to a permanent establishment or a fixed base maintained by the non-U.S. holder within the United States, are generally exempt from the 30% withholding tax if the non-U.S. holder satisfies applicable certification and disclosure requirements. However, such U.S. effectively connected income, net of specified deductions and credits, is taxed at the same graduated U.S. federal income tax rates applicable to U.S. persons (as defined in the Code). Any U.S. effectively connected income received by a non-U.S. holder that is a corporation may also, under certain circumstances, be subject to an additional "branch profits tax" at a 30% rate or such lower rate as may be specified by an applicable income tax treaty between the United States and such holder's country of residence.

A non-U.S. holder of our common stock who claims the benefit of an applicable income tax treaty between the United States and such holder's country of residence generally will be required to provide a properly executed IRS Form W-8BEN or W-8BEN-E (or successor form) and satisfy applicable certification and other requirements. Non-U.S. holders are urged to consult their tax advisors regarding their entitlement to benefits under a relevant income tax treaty.

A non-U.S. holder that is eligible for a reduced rate of U.S. withholding tax under an income tax treaty may obtain a refund or credit of any excess amounts withheld by timely filing an appropriate claim for refund with the IRS.

Gain on Sale, Exchange or Other Disposition of Our Common Stock

Subject to the discussion below regarding backup withholding and foreign accounts, in general, a non-U.S. holder will not be subject to any U.S. federal income tax on any gain realized upon such holder's sale, exchange or other disposition of shares of our common stock unless:

- the gain is effectively connected with a U.S. trade or business of the non-U.S. holder and, if an applicable income tax treaty so provides, is attributable to a permanent establishment or a fixed base maintained in the United States by such non-U.S. holder, in which case the non-U.S. holder generally will be taxed at the graduated U.S. federal income tax rates applicable to U.S. persons (as defined in the Code) and, if the non-U.S. holder is a foreign corporation, the branch profits tax described above in "Distributions on Our Common Stock" also may apply;
- the non-U.S. holder is a nonresident alien individual who is present in the United States for 183 days or more in the taxable year of the disposition and certain other conditions are met, in which case the non-U.S. holder will be subject to a 30% tax (or such lower rate as may be specified by an applicable income tax treaty) on the net gain derived from the disposition, which may be offset by U.S. source capital losses of the non-U.S. holder, if any (even though the individual is not considered a resident of the United States); or
- our common stock constitutes a U.S. real property interest because we are, or have been, at any time during the five-year period preceding such disposition (or the non-U.S. holder's holding period, if shorter) a "U.S. real property holding corporation." Even if we are or become a U.S. real property holding corporation, provided that our common stock is regularly traded on an established securities market, our common stock will be treated as a U.S. real property interest only with respect to a non-U.S. holder that holds more than 5% of our outstanding common stock, directly or indirectly, actually or constructively, during the shorter of the 5-year period ending on the date of the disposition or the period that the non-U.S. holder held our common stock. In such case, such non-U.S. holder generally will be taxed on its net gain derived from the disposition at the graduated U.S. federal income tax rates applicable to U.S. persons (as defined in the Code). Generally, a corporation is a U.S. real property holding corporation only if the fair market value of its U.S. real property interests equals or exceeds 50% of the sum of the fair market value of its worldwide real property interests plus its other assets used or held for use in a trade or business. Although there can be no assurance, we do not believe that we are, or have been, a U.S. real property holding corporation, or that we are likely to become one in the future. No assurance can be provided that our common stock will be regularly traded on an established securities market for purposes of the rules described above.

U.S. Federal Estate Tax

Shares of our common stock that are owned or treated as owned at the time of death by an individual who is not a citizen or resident of the United States, as specifically defined for U.S. federal estate tax purposes, are considered U.S. situs assets and will be included in the individual's gross estate for U.S. federal estate tax purposes. Such shares, therefore, may be subject to U.S. federal estate tax, unless an applicable estate tax or other treaty provides otherwise.

Backup Withholding and Information Reporting

We must report annually to the IRS and to each non-U.S. holder the gross amount of the dividends on our common stock paid to such holder and the tax withheld, if any, with respect to such dividends. Non-

U.S. holders will have to comply with specific certification procedures to establish that the holder is not a U.S. person (as defined in the Code) in order to avoid backup withholding at the applicable rate with respect to dividends on our common stock. Dividends paid to non-U.S. holders subject to the U.S. withholding tax, as described above in "Distributions on Our Common Stock," generally will be exempt from U.S. backup withholding.

Information reporting and backup withholding will generally apply to the proceeds of a disposition of our common stock by a non-U.S. holder effected by or through the U.S. office of any broker, U.S. or foreign, unless the holder certifies its status as a non-U.S. holder and satisfies certain other requirements, or otherwise establishes an exemption. Generally, information reporting and backup withholding will not apply to a payment of disposition proceeds to a non-U.S. holder where the transaction is effected outside the United States through a non-U.S. office of a broker. However, for information reporting purposes, dispositions effected through a non-U.S. office of a broker with substantial U.S. ownership or operations generally will be treated in a manner similar to dispositions effected through a U.S. office of a broker. Non-U.S. holders should consult their own tax advisors regarding the application of the information reporting and backup withholding rules to them.

Copies of information returns may be made available to the tax authorities of the country in which the non-U.S. holder resides or is incorporated under the provisions of a specific treaty or agreement.

Backup withholding is not an additional tax. Any amounts withheld under the backup withholding rules from a payment to a non-U.S. holder may be allowed as a credit against the non-U.S. holder's U.S. federal income tax liability, if any, and may entitle such holder to a refund, provided that the required information is timely furnished to the IRS.

Foreign Accounts

The Code generally imposes a U.S. federal withholding tax of 30% on dividends and the gross proceeds of a disposition of our common stock paid to a "foreign financial institution" (as specifically defined for this purpose), unless such institution enters into an agreement with the U.S. government to, among other things, withhold on certain payments and to collect and provide to the U.S. tax authorities substantial information regarding U.S. account holders of such institution (which includes certain equity and debt holders of such institution, as well as certain account holders that are foreign entities with U.S. owners). Foreign financial institutions located in jurisdictions that have an intergovernmental agreement with the United States governing this withholding tax may be subject to different rules. A U.S. federal withholding tax of 30% also applies to dividends and the gross proceeds of a disposition of our common stock paid to a non-financial foreign entity, unless such entity provides the withholding agent with either a certification that it does not have any substantial direct or indirect U.S. owners or provides information regarding substantial direct and indirect U.S. owners of the entity. The withholding provisions described above generally apply to dividends on our common stock and will apply with respect to gross proceeds of a sale or other disposition of our common stock on or after January 1, 2019. Under certain circumstances, a non-U.S. holder might be eligible for refunds or credits of such taxes.

UNDERWRITING

Subject to the terms and conditions set forth in the underwriting agreement, to be dated the date of this prospectus, between us and RBC Capital Markets, LLC and Stifel, Nicolaus & Company, Incorporated, as the representatives of the underwriters named below and the joint book-running managers of this offering, we have agreed to sell to the underwriters, and each of the underwriters has agreed, severally and not jointly, to purchase from us, the respective number of shares of common stock shown opposite its name below:

Underwriter	Number of Shares
RBC Capital Markets, LLC	
Stifel, Nicolaus & Company, Incorporated	
Needham & Company, LLC	
Nomura Securities International, Inc.	
Total	

The underwriting agreement provides that the obligations of the several underwriters are subject to certain conditions precedent such as the receipt by the underwriters of officers' certificates and legal opinions and approval of certain legal matters by their counsel. The underwriting agreement provides that the underwriters will purchase all of the shares of common stock if any of them are purchased. If an underwriter defaults, the underwriting agreement provides that the purchase commitments of the non-defaulting underwriters may be increased or the underwriting agreement may be terminated. We have agreed to indemnify the underwriters, their affiliates and certain of their controlling persons against certain liabilities, including liabilities under the Securities Act, and to contribute to payments that the underwriters may be required to make in respect of those liabilities.

The underwriters have advised us that, following the completion of this offering, they currently intend to make a market in the common stock as permitted by applicable laws and regulations. However, the underwriters are not obligated to do so, and the underwriters may discontinue any market-making activities at any time without notice in their sole discretion. Accordingly, no assurance can be given as to the liquidity of the trading market for the common stock, that you will be able to sell any of the common stock held by you at a particular time or that the prices that you receive when you sell will be favorable.

The underwriters are offering the shares of common stock subject to their acceptance of the shares of common stock from us and subject to prior sale. The underwriters reserve the right to withdraw, cancel or modify offers to the public and to reject orders in whole or in part. In addition, the underwriters have advised us that they do not expect sales to accounts over which they have discretionary authority to exceed 5% of the common stock being offered.

Commissions and Expenses

The underwriters have advised us that they propose to offer the shares of common stock to the public at the initial public offering price set forth on the cover page of this prospectus and to certain dealers, which may include the underwriters, at that price less a concession not in excess of $ per share of common stock. After the offering, the initial public offering price and the concession to dealers may be reduced by the representatives. No such reduction will change the amount of proceeds to be received by us as set forth on the cover page of this prospectus. Certain of the underwriters may sell shares to the public through one or more of their affiliates as selling agents.

The following table shows the public offering price, the underwriting discounts and commissions that we are to pay the underwriters and the proceeds, before expenses, to us in connection with this offering. Such amounts are shown assuming both no exercise and full exercise of the underwriters' option to purchase additional shares.

	Per Share		Total	
	Without Option To Purchase Additional Shares	With Option To Purchase Additional Shares	Without Option To Purchase Additional Shares	With Option To Purchase Additional Shares
Public offering price	$	$	$	$
Underwriting discounts and commissions paid by us	$	$	$	$
Proceeds to us, before expenses	$	$	$	$

We estimate expenses payable by us in connection with this offering, other than the underwriting discounts and commissions referred to above, will be approximately $ million. We have agreed to reimburse the underwriters for certain expenses in an amount up to $.

Determination of Offering Price

Prior to this offering, there has not been a public market for our common stock. Consequently, the initial public offering price for our common stock will be determined by negotiations between us and the representatives. Among the factors to be considered in these negotiations will be prevailing market conditions, our financial information, market valuations of other companies that we and the underwriters believe to be comparable to us, estimates of our business potential, the present state of our development and other factors deemed relevant.

We offer no assurances that the initial public offering price will correspond to the price at which the common stock will trade in the public market subsequent to the offering or that an active trading market for the common stock will develop and continue after the offering.

Listing

We have applied to list our common stock on The NASDAQ Global Market under the symbol "CLSD."

Option to Purchase Additional Shares

We have granted to the underwriters an option, exercisable for 30 days from the date of this prospectus, to purchase, from time to time, in whole or in part, up to an aggregate of shares from us at the public offering price set forth on the cover page of this prospectus, less underwriting discounts and commissions. If the underwriters exercise this option, each underwriter will be obligated, subject to specified conditions, to purchase a number of additional shares proportionate to that underwriter's initial purchase commitment as indicated in the table above. This option may be exercised only if the underwriters sell more shares than the total number set forth on the cover page of this prospectus.

No Sales of Similar Securities

We, our officers, directors and holders of substantially all of our outstanding capital stock have agreed, subject to specified exceptions, not to directly or indirectly:

- sell, offer to sell, contract to sell, effect any short sale, pledge, transfer, establish a "put equivalent position" within the meaning of Rule 16a-l(h) under the Exchange Act;
- otherwise dispose of, or enter into any swap, hedge or similar arrangement that transfers, in whole or in part, the economic risk of ownership of, any shares of common stock, options or warrants to acquire shares of common stock, or securities exchangeable or exercisable for or convertible into shares of common stock currently or hereafter owned either of record or beneficially;
- make any demand for, or exercise any right with respect to, the registration under the Securities Act of the offer and sale of any shares of common stock, options or warrants to acquire shares of common stock, or securities exchangeable or exercisable for or convertible into shares of common stock; or
- publicly announce any intention to do any of the foregoing;

for a period of 180 days after the date of this prospectus without the prior written consent of the representatives.

The lock-up restrictions terminate after the close of trading of the common stock on and including the 180th day after the date of this prospectus. The representatives may, in their sole discretion and at any time or from time to time before the termination of the 180-day period release all or any portion of the securities subject to lock-up agreements.

The restrictions described above to do not apply to:

- transfers of shares of our common stock or any security convertible into or exercisable or exchangeable for shares of our common stock (i) as a bona fide gift, or gifts, (ii) to an immediate family member or a trust for the direct or indirect benefit of the lock-up signatory or such immediate family member of the lock-up signatory or (iii) by will or intestacy;
- transactions relating to shares of our common stock or other securities acquired in the open market after the completion of this offering;
- if the lock-up signatory is a corporation, limited partnership, trust or other business entity, transfers of shares of our common stock to (i) another corporation, member, partner, trust or other business entity that is a direct or indirect affiliate (as defined in Rule 405 promulgated under the Securities Act) of the lock-up signatory or (ii) as part of a pro rata distribution or transfer by the lock-up signatory to its stockholders, members, partners, beneficiaries or other equity holders provided however, that any such transfer or distribution shall not involve a disposition for value;
- transfers to us in connection with the "cashless" exercise of options to purchase shares of our common stock pursuant to employee benefit plans disclosed in this prospectus;
- transfers in connection with the "net exercise" of warrants held by the lock-up signatory;
- transfers to us to satisfy tax withholding obligations in connection with the vesting or exercise of equity incentive awards under our employee benefit plans after the completion of this offering;

- transfers to us in connection with the repurchase of shares of our common stock issued pursuant to employee benefit plans disclosed in this prospectus upon the termination of service pursuant to an existing company right;
- transfers, sales, tenders or other dispositions of shares of our common stock, or any securities convertible into or exercisable or exchangeable for our common stock, occurring after the consummation of this offering, pursuant to a bona fide third party tender offer, merger, consolidation or other similar transaction made to all holders of our capital stock that would result in the disposition of not less than a majority of the outstanding shares of our voting securities, provided that in the event that the tender offer, merger, consolidation or other such transaction is not completed, our common stock and any security convertible into or exchangeable for our common stock shall remain subject to the same restrictions;
- transfers pursuant to operation of law, including pursuant to a domestic order or negotiated divorce settlement;
- any issuance by us of shares of our common stock or securities convertible or exercisable or exchangeable for shares of our common stock pursuant to the exercise or conversion of warrants, options, or other convertible or exchangeable securities, in each case outstanding as of the date of this prospectus; and
- the establishment of a trading plan that complies with Rule 10b5-1 under the Exchange Act; provided, however, that (i) the restrictions shall apply in full force to sales or other dispositions pursuant to such Rule 10b5-1 plan during the 180-day lock-up period described above and (ii) no public announcement or disclosure of entry into such Rule 10b5-1 plan is made or required to be made;

provided, however, that in the case of any transfer or distribution pursuant to the first, third, ninth and tenth clauses above, each donee, distributee recipient or transferee shall sign and deliver a lock-up agreement substantially in the form of the lock-up agreements described above; and in the case of any transfer or distribution pursuant to the first (except for sub-clause (iii)), second, third, fourth, fifth, sixth and eleventh clauses above, no filing under Section 16(a) of the Exchange Act, reporting a reduction in beneficial ownership of shares of our common stock, shall be required or shall be voluntarily made during the restricted period.

There are no existing agreements between the underwriters and any of our stockholders who will execute a lock-up agreement, providing consent to the sale of shares prior to the expiration of the lock-up period.

Stabilization

The underwriters have advised us that they, pursuant to Regulation M under the Exchange Act, certain persons participating in the offering may engage in short sale transactions, stabilizing transactions, syndicate covering transactions or the imposition of penalty bids in connection with this offering. These activities may have the effect of stabilizing or maintaining the market price of the common stock at a level above that which might otherwise prevail in the open market. Establishing short sales positions may involve either “covered” short sales or “naked” short sales.

“Covered” short sales are sales made in an amount not greater than the underwriters’ option to purchase additional shares of our common stock in this offering. The underwriters may close out any

covered short position by either exercising their option to purchase additional shares of our common stock or purchasing shares of our common stock in the open market. In determining the source of shares to close out the covered short position, the underwriters will consider, among other things, the price of shares available for purchase in the open market as compared to the price at which they may purchase shares through the option to purchase additional shares.

"Naked" short sales are sales in excess of the option to purchase additional shares of our common stock. The underwriters must close out any naked short position by purchasing shares in the open market. A naked short position is more likely to be created if the underwriters are concerned that there may be downward pressure on the price of the shares of our common stock in the open market after pricing that could adversely affect investors who purchase in this offering.

A stabilizing bid is a bid for the purchase of shares of common stock on behalf of the underwriters for the purpose of fixing or maintaining the price of the common stock. A syndicate covering transaction is the bid for or the purchase of shares of common stock on behalf of the underwriters to reduce a short position incurred by the underwriters in connection with the offering. Similar to other purchase transactions, the underwriter's purchases to cover the syndicate short sales may have the effect of raising or maintaining the market price of our common stock or preventing or retarding a decline in the market price of our common stock. As a result, the price of our common stock may be higher than the price that might otherwise exist in the open market. A penalty bid is an arrangement permitting the underwriters to reclaim the selling concession otherwise accruing to a syndicate member in connection with the offering if the common stock originally sold by such syndicate member are purchased in a syndicate covering transaction and therefore have not been effectively placed by such syndicate member.

Neither we nor any of the underwriters make any representation or prediction as to the direction or magnitude of any effect that the transactions described above may have on the price of our common stock. The underwriters are not obligated to engage in these activities and, if commenced, any of the activities may be discontinued at any time.

Electronic Distribution

A prospectus in electronic format may be made available by e-mail or through online services maintained by one or more of the underwriters or their affiliates. In those cases, prospective investors may view offering terms online and may be allowed to place orders online. The underwriters may agree with us to allocate a specific number of shares of common stock for sale to online brokerage account holders. Any such allocation for online distributions will be made by the underwriters on the same basis as other allocations. Other than the prospectus in electronic format, the information on the underwriters' websites and any information contained in any other website maintained by any of the underwriters is not part of this prospectus, has not been approved or endorsed by us or the underwriters and should not be relied upon by investors.

Other Activities and Relationships

The underwriters and certain of their respective affiliates are full service financial institutions engaged in various activities, which may include securities trading, commercial and investment banking, financial advisory, investment management, investment research, principal investment, hedging, financing and brokerage activities. The underwriters and certain of their respective affiliates have, from time to time, performed, and may in the future perform, various commercial and investment banking and financial advisory services for us and our affiliates, for which they received or will receive customary fees and expenses.

In the ordinary course of their various business activities, the underwriters and certain of their respective affiliates may make or hold a broad array of investments and actively trade debt and equity securities (or related derivative securities) and financial instruments (including bank loans) for their own account and for the accounts of their customers, and such investment and securities activities may involve securities or instruments issued by us and our affiliates. If the underwriters or their respective affiliates have a lending relationship with us, they routinely hedge their credit exposure to us consistent with their customary risk management policies. The underwriters and their respective affiliates may hedge such exposure by entering into transactions which consist of either the purchase of credit default swaps or the creation of short positions in our securities or the securities of our affiliates, including potentially the common stock offered hereby. Any such short positions could adversely affect future trading prices of the common stock offered hereby. The underwriters and certain of their respective affiliates may also communicate independent investment recommendations, market color or trading ideas or publish or express independent research views in respect of such securities or instruments and may at any time hold, or recommend to clients that they acquire, long or short positions in such securities and instruments.

Notice to Residents of Canada

The securities may be sold only to purchasers purchasing as principal that are both "accredited investors" as defined in National Instrument 45-106 Prospectus and Registration Exemptions and "permitted clients" as defined in National Instrument 31-103 Registration Requirements, Exemptions and Ongoing Registrant Obligations. Any resale of the securities must be made in accordance with an exemption from the prospectus requirements and in compliance with the registration requirements of applicable securities laws.

Notice to Prospective Investors in the EEA

In relation to each Member State of the European Economic Area which has implemented the Prospectus Directive (each, a "Relevant Member State"), including each Relevant Member State that has implemented amendments to Article 3(2) of the Prospectus Directive introduced by the 2010 PD Amending Directive (each, an "Early Implementing Member State"), an offer of shares of common stock to the public may not be made in that Relevant Member State and each initial purchaser represents and agrees that with effect from and including the date on which the Prospectus Directive is implemented in that Relevant Member State (the "Relevant Implementation Date") it has not made and will not make an offer of the shares of common stock to the public in that Relevant Member State prior to the publication of a prospectus in relation to the shares of common stock which has been approved by the competent authority in that Relevant Member State or, where appropriate, approved in another Relevant Member State and notified to the competent authority in that Relevant Member State, all in accordance with the Prospectus Directive, except that an offer of the shares of common stock to the public in that Relevant Member State may be made at any time under the following exemptions under the Prospectus Directive, if they have been implemented in that Relevant Member State:

(a) to any legal entity which is a "qualified investor" as defined in the Prospectus Directive;

(b) to fewer than 100 (or, in the case of Early Implementing Member States, 150) natural or legal persons (other than "qualified investors" as defined in the Prospectus Directive) subject to obtaining the prior consent of the Subscribers; or

(c) in any other circumstances falling within Article 3(2) of the Prospectus Directive,

provided that no such offer of the shares of common stock referred to in (a) to (c) above shall require the issuer or any Subscriber to publish a prospectus pursuant to Article 3 of the Prospectus Directive or

supplement a prospectus pursuant to Article 16 of the Prospectus Directive and each person who initially acquires any shares of common stock or to whom any offer is made will be deemed to have represented, warranted and agreed to and with the issuer or any Subscriber that it is a qualified investor within the meaning of the law in that Relevant Member State implementing Article 2(1)(e) of the Prospectus Directive.

For the purposes of this provision, the expression an "offer to the public" in relation to any shares of common stock in any Relevant Member State means the communication in any form and by any means of sufficient information on the terms of the offer and the shares of common stock to be offered so as to enable an investor to decide to purchase or subscribe to the shares of common stock, as the same may be varied in that Relevant Member State by any measure implementing the Prospectus Directive in that Relevant Member State and the expression "Prospectus Directive" means Directive 2003/71/EC of the European Parliament and of the Council of 4 November 2003 (and amendments thereto, including the 2010 PD Amending Directive, to the extent implemented in the Relevant Member State), and includes any relevant implementing measure in the Relevant Member State. The expression "2010 PD Amending Directive" means Directive 2010/73/EU.

Notice to Prospective Investors in Hong Kong

The shares may not be offered or sold by means of any document other than (i) in circumstances which do not constitute an offer to the public within the meaning of the Companies Ordinance (Cap.32, Laws of Hong Kong), or (ii) to "professional investors" within the meaning of the Securities and Futures Ordinance (Cap.571, Laws of Hong Kong) and any rules made thereunder, or (iii) in other circumstances which do not result in the document being a "prospectus" within the meaning of the Companies Ordinance (Cap.32, Laws of Hong Kong), and no advertisement, invitation or document relating to the shares may be issued or may be in the possession of any person for the purpose of issue (in each case whether in Hong Kong or elsewhere), which is directed at, or the contents of which are likely to be accessed or read by, the public in Hong Kong (except if permitted to do so under the laws of Hong Kong) other than with respect to shares which are or are intended to be disposed of only to persons outside Hong Kong or only to "professional investors" within the meaning of the Securities and Futures Ordinance (Cap.571 Laws of Hong Kong) and any rules made thereunder.

Notice to Prospective Investors in Israel

The securities offered by this prospectus have not been approved or disapproved by the Israeli Securities Authority, or the ISA, nor have such securities been registered for sale in Israel. The shares of common stock may not be offered or sold, directly or indirectly, to the public in Israel, absent the publication of a prospectus. The ISA has not issued permits, approvals or licenses in connection with the Offering or publishing the prospectus; nor has it authenticated the details included herein, confirmed their reliability or completeness, or rendered an opinion as to the quality of the securities being offered. Any resale in Israel, directly or indirectly, to the public of the securities offered by this prospectus is subject to restrictions on transferability and must be effected only in compliance with the Israeli securities laws and regulations.

Notice to Prospective Investors in Japan

The securities have not been and will not be registered under the Financial Instruments and Exchange Law of Japan (the Financial Instruments and Exchange Law) and may not be offered or sold, directly or indirectly, in Japan or to, or for the benefit of, any resident of Japan (which term as used herein means any person resident in Japan, including any corporation or other entity organized under the laws of Japan), or to

others for re-offering or resale, directly or indirectly, in Japan or to a resident of Japan, except pursuant to an exemption from the registration requirements of, and otherwise in compliance with, the Financial Instruments and Exchange Law and any other applicable laws, regulations and ministerial guidelines of Japan.

Notice to Prospective Investors in Singapore

This prospectus has not been registered as a prospectus with the Monetary Authority of Singapore. Accordingly, this prospectus and any other document or material in connection with the offer or sale, or invitation for subscription or purchase, of the shares may not be circulated or distributed, nor may the shares be offered or sold, or be made the subject of an invitation for subscription or purchase, whether directly or indirectly, to persons in Singapore other than (i) to an institutional investor under Section 274 of the Securities and Futures Act, Chapter 289 of Singapore (SFA), (ii) to a relevant person, or any person pursuant to Section 275(1A), and in accordance with the conditions, specified in Section 275 of the SFA or (iii) otherwise pursuant to, and in accordance with the conditions of, any other applicable provision of the SFA.

Where the shares are subscribed or purchased under Section 275 by a relevant person which is: (a) a corporation (which is not an accredited investor) the sole business of which is to hold investments and the entire share capital of which is owned by one or more individuals, each of whom is an accredited investor; or (b) a trust (where the trustee is not an accredited investor) whose sole purpose is to hold investments and each beneficiary is an accredited investor, shares, debentures and units of shares and debentures of that corporation or the beneficiaries' rights and interest in that trust shall not be transferable for six months after that corporation or that trust has acquired the shares under Section 275 except: (1) to an institutional investor under Section 274 of the SFA or to a relevant person, or any person pursuant to Section 275(1A), and in accordance with the conditions, specified in Section 275 of the SFA; (2) where no consideration is given for the transfer; or (3) by operation of law.

Notice to Prospective Investors in the United Kingdom

In addition, in the United Kingdom, this document is being distributed only to, and is directed only at, and any offer subsequently made may only be directed at persons who are "qualified investors" (as defined in the Prospectus Directive) (i) who have professional experience in matters relating to investments falling within Article 19(5) of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005, as amended, which we refer to as the Order, or (ii) who are high net worth companies (or persons to whom it may otherwise be lawfully communicated) falling within Article 49(2)(a) to (d) of the Order (all such persons together being referred to as "relevant persons"). This document must not be acted on or relied on in the United Kingdom by persons who are not relevant persons. In the United Kingdom, any investment or investment activity to which this document relates is only available to, and will be engaged in with, relevant persons.

Notice to Prospective Investors in Switzerland

The Prospectus does not constitute an issue prospectus pursuant to Article 652a or Article 1156 of the Swiss Code of Obligations ("CO") and the shares will not be listed on the SIX Swiss Exchange. Therefore, the Prospectus may not comply with the disclosure standards of the CO or the listing rules (including any prospectus schemes) of the SIX Swiss Exchange. Accordingly, the shares may not be offered to the public in or from Switzerland, but only to a selected and limited circle of investors, which do not subscribe to the shares with a view to distribution.

LEGAL MATTERS

The validity of the shares of common stock being offered by this prospectus will be passed upon for us by Cooley LLP, Reston, Virginia. Certain legal matters related to this offering will be passed upon for the underwriters by Latham & Watkins LLP.

EXPERTS

The financial statements of Clearside Biomedical, Inc. at December 31, 2013 and 2014, and for each of the two years in the period ended December 31, 2014, appearing in this prospectus and registration statement have been audited by Ernst & Young LLP, independent registered public accounting firm, as set forth in their report thereon appearing elsewhere herein, and are included in reliance upon such report given on the authority of such firm as experts in accounting and auditing.

WHERE YOU CAN FIND ADDITIONAL INFORMATION

We have filed with the SEC a registration statement on Form S-1 under the Securities Act, with respect to the shares of common stock being offered by this prospectus. This prospectus, which constitutes part of the registration statement, does not contain all of the information in the registration statement and its exhibits. For further information with respect to our company and the common stock offered by this prospectus, we refer you to the registration statement and its exhibits. Statements contained in this prospectus as to the contents of any contract or any other document referred to are not necessarily complete, and in each instance, we refer you to the copy of the contract or other document filed as an exhibit to the registration statement. Each of these statements is qualified in all respects by this reference.

You can read our SEC filings, including the registration statement, over the internet at the SEC's website at *www.sec.gov*. You may also read and copy any document we file with the SEC at its public reference room at 100 F Street, N.E., Room 1580, Washington, D.C. 20549. You may also obtain copies of these documents at prescribed rates by writing to the Public Reference Section of the SEC at 100 F Street, N.E., Washington, D.C. 20549. Please call the SEC at 1-800-SEC-0330 for further information on the operation of the public reference facilities.

Upon completion of this offering, we will be subject to the information reporting requirements of the Exchange Act, and we will file reports, proxy statements and other information with the SEC. These reports, proxy statements and other information will be available for inspection and copying at the public reference room and website of the SEC referred to above. We also maintain a website at *www.clearsidebio.com*, at which you may access these materials free of charge as soon as reasonably practicable after they are electronically filed with, or furnished to, the SEC. The information contained in, or that can be accessed through, our website is not part of, and is not incorporated into, this prospectus.

Index to Financial Statements

Report of Independent Registered Public Accounting Firm

The Board of Directors and Stockholders of

Clearside Biomedical, Inc.

We have audited the accompanying balance sheets of Clearside Biomedical, Inc. (the Company) as of December 31, 2013 and 2014, and the related statements of operations, stockholders' deficit, and cash flows for each of the two years in the period ended December 31, 2014. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. We were not engaged to perform an audit of the Company's internal control over financial reporting. Our audits included consideration of internal control over financial reporting as a basis for designing audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion. An audit also includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of Clearside Biomedical, Inc. at December 31, 2013 and 2014, and the results of its operations and its cash flows for each of the two years in the period ended December 31, 2014, in conformity with U.S. generally accepted accounting principles.

/s/ Ernst & Young LLP

Atlanta, Georgia
February 27, 2015

CLEARSIDE BIOMEDICAL, INC.
Balance Sheets
(in thousands, except share and per share data)

	December 31, 2013	December 31, 2014	September 30, 2015 (unaudited)	Pro forma Liabilities, Convertible Preferred Stock and Stockholders' Deficit September 30, 2015 (unaudited)
Assets				
Current assets:				
Cash and cash equivalents	$ 1,909	$ 8,269	$ 4,186	
Prepaid expenses	63	47	172	
Other current assets	45	7	4	
Total current assets	2,017	8,323	4,362	
Property and equipment, net	98	205	147	
Deferred offering costs	—	1,750	—	
Other assets	22	21	7	
Total assets	$ 2,137	$ 10,299	$ 4,516	
Liabilities, convertible preferred stock and stockholders' deficit				
Current liabilities:				
Accounts payable	$ 248	$ 1,257	$ 750	$ 750
Accrued liabilities	427	1,157	1,265	1,265
Current portion of long-term debt	—	—	1,133	1,133
Current portion of deferred rent	8	10	8	8
Total current liabilities	683	2,424	3,156	3,156
Deferred revenue	—	200	700	700
Deferred rent	22	11	5	5
Long-term debt	268	—	4,782	4,782
Other non-current liabilities	31	42	205	205
Total liabilities	1,004	2,677	8,848	8,848
Convertible preferred stock:				
Series A preferred stock, $0.001 par value, 5,200,000 shares authorized at December 31, 2013 and 5,198,826 shares authorized at December 31, 2014 and September 30, 2015; 5,198,826 shares issued and outstanding at December 31, 2013 and 2014 and September 30, 2015; no shares authorized, issued or outstanding, pro forma; liquidation preference of $4,086 at December 31, 2013 and 2014 and September 30, 2015	4,040	4,086	4,086	—
Series A-1 preferred stock, $0.001 par value; 4,800,000 shares authorized at December 31, 2013, 4,373,481 shares authorized at December 31, 2014 and September 30, 2015; 4,356,931 shares issued and outstanding at December 31, 2013 and 2014 and September 30, 2015; no shares authorized, issued or outstanding, pro forma; liquidation preference of $7,900 at December 31, 2013 and 2014 and September 30, 2015	7,831	7,858	7,890	—
Series B preferred stock, $0.001 par value, 7,413,365 shares authorized; 6,009,202 shares issued and outstanding at December 31, 2014 and September 30, 2015; no shares authorized, issued or outstanding, pro forma; liquidation preference of $16,212 at December 31, 2014 and September 30, 2015	—	14,891	15,252	—
Total convertible preferred stock	11,871	26,835	27,228	—
Stockholders' deficit:				
Common stock, $0.001 par value; 17,000,000 shares authorized at December 31, 2013, 30,000,000 shares authorized at December 31, 2014 and September 30, 2015; 3,482,916, 3,996,233 and 5,839,334 shares issued and outstanding at December 31, 2013 and 2014 and September 30, 2015, respectively; 30,000,000 shares authorized, 21,404,293 shares issued and outstanding, pro forma at September 30, 2015	3	4	5	21
Additional paid-in capital	794	2,507	2,628	29,840
Accumulated deficit	(11,535)	(21,724)	(34,193)	(34,193)
Total stockholders' deficit	(10,738)	(19,213)	(31,560)	(4,332)
Total liabilities, convertible preferred stock and stockholders' deficit	$ 2,137	$ 10,299	$ 4,516	$ 4,516

See accompanying notes to the financial statements.

CLEARSIDE BIOMEDICAL, INC.
Statements of Operations
(in thousands, except share and per share data)

	Year Ended December 31,		Nine Months Ended September 30,	
	2013	2014	2014	2015
			(unaudited)	
Operating expenses:				
Research and development	$ 5,045	$ 6,692	$ 4,776	$ 6,964
General and administrative	2,193	3,131	2,398	5,337
Total operating expenses	7,238	9,823	7,174	12,301
Loss from operations	(7,238)	(9,823)	(7,174)	(12,301)
Other income (expense):				
Interest expense	(23)	(371)	(353)	(174)
Interest income	7	5	1	6
Total other expense	(16)	(366)	(352)	(168)
Net loss	$ (7,254)	$ (10,189)	$ (7,526)	$ (12,469)
Net loss per share of common stock — basic and diluted	$ (2.45)	$ (2.66)	$ (2.00)	$ (2.54)
Weighted average shares outstanding — basic and diluted	2,956,285	3,825,052	3,769,091	4,910,055
Pro forma net loss per share — basic and diluted (unaudited)		$ (0.53)		$ (0.61)
Pro forma weighted average shares outstanding — basic and diluted (unaudited)		19,390,011		20,475,014

See accompanying notes to the financial statements.

CLEARSIDE BIOMEDICAL, INC.
Statements of Stockholders' Deficit
(in thousands, except share and per share data)

	Common Stock		Additional	Accumulated	Total Stockholders'
	Shares	Amount	Paid-In Capital	Deficit	Deficit
January 1, 2013	2,547,243	$ 2	$ 489	$ (4,281)	$ (3,790)
Exercise of stock options	74,108	—	5	—	5
Vesting of restricted stock	861,565	1	—	—	1
Accretion of stock issuance costs	—	—	(22)	—	(22)
Share-based compensation expense	—	—	322	—	322
Net loss	—	—	—	(7,254)	(7,254)
Balance at December 31, 2013	3,482,916	3	794	(11,535)	(10,738)
Exercise of stock options	54,569	—	5	—	5
Vesting of restricted stock	458,748	1	6	—	7
Issuance of warrants to purchase common stock	—	—	1,506	—	1,506
Accretion of stock issuance costs	—	—	(231)	—	(231)
Share-based compensation expense	—	—	427	—	427
Net loss	—	—	—	(10,189)	(10,189)
Balance at December 31, 2014	3,996,233	4	2,507	(21,724)	(19,213)
Exercise of stock options (unaudited)	108,893	—	13	—	13
Exercise of warrants (unaudited)	1,710,772	1	(2)	—	(1)
Vesting of restricted stock (unaudited)	23,436	—	—	—	—
Accretion of stock issuance costs (unaudited)	—	—	(392)	—	(392)
Share-based compensation expense (unaudited)	—	—	502	—	502
Net loss (unaudited)	—	—	—	(12,469)	(12,469)
Balance at September 30, 2015 (unaudited)	5,839,334	$ 5	$ 2,628	$ (34,193)	$ (31,560)

See accompanying notes to the financial statements.

CLEARSIDE BIOMEDICAL, INC.
Statements of Cash Flows
(in thousands, except share and per share data)

	Year Ended December 31,		Nine Months Ended September 30,	
	2013	2014	2014	2015
			(unaudited)	
Operating activities				
Net loss	$(7,254)	$(10,189)	$ (7,526)	$ (12,469)
Adjustments to reconcile net loss to net cash used in operating activities:				
Depreciation	15	33	22	45
Share-based compensation expense	322	427	290	502
Non-cash interest expense	—	82	82	66
Accretion of debt discount	—	277	277	32
Change in fair value of warrant liability	6	18	—	(1)
Loss on sale of fixed assets	—	—	—	15
Changes in operating assets and liabilities:				
Prepaid expenses and other current assets	(78)	54	(617)	(122)
Other assets	2	(1,154)	(3)	1,764
Accounts payable and accrued liabilities	146	1,137	870	(399)
Deferred revenue	—	200	200	500
Deferred rent	2	(9)	(4)	(6)
Net cash used in operating activities	(6,839)	(9,124)	(6,409)	(10,073)
Investing activities				
Acquisition of property and equipment	(63)	(140)	(68)	(8)
Proceeds from the sale of fixed assets	—	—	—	4
Net cash used in investing activities	(63)	(140)	(68)	(4)
Financing activities				
Proceeds from issuance of long-term debt	125	3,000	3,000	5,981
Principal payments made on long-term debt	—	(125)	(125)	—
Proceeds from exercise of stock options	10	5	5	13
Proceeds from issuance of Series A-1 Preferred Stock, net of issuance cost	7,820	—	—	—
Proceeds from issuance of Series B Preferred Stock and common warrants, net of issuance cost	—	12,744	12,755	—
Net cash provided by financing activities	7,955	15,624	15,635	5,994
Net increase (decrease) in cash and cash equivalents	1,053	6,360	9,158	(4,083)
Cash and cash equivalents, beginning of period	856	1,909	1,909	8,269
Cash and cash equivalents, end of period	$ 1,909	$ 8,269	$ 11,067	$ 4,186
Supplemental schedule of noncash investing and financing activities				
Conversion of shareholder loan, promissory note and accrued interest	$ —	$ 3,232	$ 3,232	$ —
Issuance of warrant to purchase Series A-1 preferred stock	19	—	—	—
Issuance of warrant to purchase Series B preferred stock	—	—	—	164
Accretion of redeemable convertible preferred stock to redemption value	22	231	84	392
Vesting of restricted stock	1	7	3	—
Amortization of debt discount	2	(7)	7	—
Deferred initial public offering costs in accounts payable and accrued expenses	—	602	898	228

See accompanying notes to the financial statements

CLEARSIDE BIOMEDICAL, INC.

Notes to the Financial Statements

1. The Company

Clearside Biomedical, Inc. (the "Company") is a late-stage clinical biopharmaceutical company developing first-in-class drug therapies to treat blinding diseases of the eye. The Company's current product candidates focus on diseases affecting the retina and choroid, especially diseases associated with macular edema, and are injected into the suprachoroidal space using its proprietary SCS Microinjector. Incorporated in the State of Delaware on May 26, 2011, the Company has its corporate headquarters in Alpharetta, Georgia.

The Company's activities since inception have primarily consisted of developing product and technology rights, raising capital and performing research and development activities. The Company has no current source of revenue to sustain present activities, and does not expect to generate revenue until and unless the Company receives regulatory approval of and successfully commercialize its product candidates. The Company is subject to a number of risks and uncertainties similar to those of other life science companies at a similar stage of development, including, among others, the need to obtain adequate additional financing, successful development efforts including regulatory approval of products, compliance with government regulations, successful commercialization of potential products, protection of proprietary technology and dependence on key individuals.

Liquidity

The Company has funded its operations to date primarily through the sale of convertible preferred stock and the issuance of long-term debt. The Company will need to obtain additional financing to fund future operations, including completing the development and commercialization of its primary product candidates. The Company will need to expend substantial resources for research and development, including costs associated with the clinical testing of its product candidates. The Company will need to obtain additional financing to conduct additional trials for the regulatory approval of its drug candidates if requested by regulatory bodies, and completing the development of any additional product candidates that might be acquired. If such products were to receive regulatory approval, the Company would need to prepare for the potential commercialization of its product candidates and fund the commercial launch of the products, if the Company decides to commercialize the products on its own. Moreover, the Company's fixed expenses such as rent and other contractual commitments are substantial and are expected to increase in the future.

The Company has incurred losses and experienced negative operating cash flows since inception, and has cumulative net cash flows used in operating activities of $29.3 million (unaudited) and cumulative net losses of $34.2 million (unaudited) for the period from May 26, 2011 (inception) to September 30, 2015. The total future need for operating capital and research and development funding significantly exceeds the cash and cash equivalents that the Company has on its balance sheet. As a result, the Company will require additional funding in the future and may not be able to raise such additional funds. In the absence of product or other revenues, the amount, timing, nature or source of which cannot be predicted, the Company's losses will continue as it conducts its research and development activities. Until the Company can generate a sufficient amount of revenue, the Company may finance future cash needs through public or private equity offerings, license agreements, debt financings, collaborations, strategic alliances and marketing or distribution arrangements. The incurrence of indebtedness would result in increased fixed payment obligations and could also result in restrictive covenants, such as limitations on the Company's ability to incur additional debt, limitations on its ability to acquire, sell or license intellectual property rights and other

operating restrictions that could adversely impact the ability of the Company to conduct its business. If adequate funds are not available, the Company plans to delay, reduce or eliminate research and development programs or reduce administrative expenses. The Company may seek to access the public or private capital markets whenever conditions are favorable, even if the Company does not have an immediate need for additional capital at that time. In addition, if the Company raises additional funds through collaborations, strategic alliances or marketing, distribution or licensing arrangements with third parties, the Company may have to relinquish valuable rights to its technologies, future revenue streams or product candidates or to grant licenses on terms that may not be favorable to the Company. There is no assurance that the Company will be successful in obtaining sufficient financing on acceptable terms and conditions to fund continuing operations, if at all. The failure of the Company to obtain sufficient funds on acceptable terms when needed could have a material adverse effect on the Company's business, results of operations and financial condition. However, the Company is able to control spending on development activities while still advancing clinical trials for key drug candidates through January 1, 2016 with cash on hand as of December 31, 2014.

2. Significant Accounting Policies

Basis of Presentation

The Company's financial statements have been prepared in conformity with accounting principles generally accepted in the United States of America ("U.S. GAAP").

Unaudited Interim Financial Information

The accompanying balance sheet as of September 30, 2015, statements of operations and statements of cash flows for the nine months ended September 30, 2014 and 2015 and statement of stockholders' deficit as of September 30, 2015 are unaudited. The interim unaudited financial statements have been prepared on the same basis as the annual financial statements and, in the opinion of management, reflect all adjustments, which include only normal recurring adjustments, necessary for the fair presentation of the Company's financial position as of September 30, 2015 and the results of its operations and its cash flows for the nine months ended September 30, 2014 and 2015. The financial data and other information disclosed in these notes related to the nine months ended September 30, 2014 and 2015 are unaudited. The results for the nine months ended September 30, 2015 are not indicative of results to be expected for the year ending December 31, 2015, any other interim periods or any future year or period.

Unaudited Pro Forma Information

The unaudited pro forma balance sheet data as of September 30, 2015 gives effect to the automatic conversion of all outstanding shares of the Company's convertible preferred stock into an aggregate of 15,564,959 shares of common stock upon completion of the Company's planned initial public offering. The unaudited pro forma basic and diluted net loss per share for the year ended December 31, 2014 and the nine months ended September 30, 2015 gives effect to such automatic conversion as if it had occurred as of the beginning of the periods presented.

Use of Estimates

The preparation of financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of

contingent assets and liabilities at the date of the financial statements and reported amounts of income and expenses during the reporting periods. Significant items subject to such estimates and assumptions include the accounting for useful lives to calculate depreciation and amortization, accrued liabilities, share-based compensation expense and income tax valuation allowance. Actual results could differ from these estimates.

Segment Information

Operating segments are defined as components of an enterprise about which separate discrete information is available for evaluation by the chief operating decision maker, or decision-making group, in deciding how to allocate resources and in assessing performance. The Company views its operations and manages its business in one operating segment. All operations are located in the United States.

Property and Equipment, Net

Property and equipment is recorded at historical cost. Depreciation is calculated using the straight-line method over the estimated useful lives of the related assets. Repairs and maintenance are expensed when incurred. Upon retirement or sale, the cost of the assets disposed of and the related accumulated depreciation are removed from the accounts, and any resulting gain or loss is included in the determination of net income.

Cash Equivalents

Cash equivalents consist of short-term, highly liquid investments with an original term of three months or less at the date of purchase.

Concentration of Credit Risk Arising From Cash Deposits in Excess of Insured Limits

The Company maintains its cash in bank deposits that at times may exceed federally insured limits. The Company has not experienced any loss in such accounts. The Company believes it is not exposed to any significant risks with respect to its cash balances.

Deferred Offering Costs

The Company capitalizes certain legal, accounting and other third-party fees that are directly associated with in-process equity financings as other assets until such financings are consummated. After consummation of the equity financing, these costs are recorded in stockholders' deficit as a reduction of additional paid-in capital generated as a result of the offering or as a reduction to the carrying value of preferred stock issued, if such stock is classified outside of stockholders' deficit. Should the equity financing no longer be considered probable of being consummated, the deferred offering costs would be expensed immediately as a charge to operating expenses in the statement of operations. The Company had not recorded any deferred offering costs as of December 31, 2013. As of December 31, 2014, the Company had recorded $1.8 million of deferred offering costs. During the nine months ended September 30, 2015 (unaudited), all deferred offering costs, in the amount of $1.9 million, were charged to operating expenses as a result of the postponement of the proposed equity financing.

Research and Development Costs

Research and development costs are charged to expense as incurred and include, but are not limited to:

- employee-related expenses, including salaries, benefits, travel and share-based compensation expense for research and development personnel;

- expenses incurred under agreements with contract research organizations, contract manufacturing organizations and consultants that conduct clinical and preclinical studies;
- costs associated with preclinical and development activities;
- costs associated with technology and intellectual property licenses;
- costs for the Company's research and development facility; and
- depreciation expense for assets used in research and development activities.

Costs for certain development activities, such as clinical studies, are recognized based on an evaluation of the progress to completion of specific tasks using data such as patient enrollment, clinical site activations, or information provided to the Company by its vendors on their actual costs incurred. Payments for these activities are based on the terms of the individual arrangements, which may differ from the patterns of costs incurred, and are reflected in the financial statements as prepaid or accrued expense, which are reported in accounts payable. No material adjustments to these estimates have been recorded in these financial statements.

Share-Based Compensation

Compensation cost related to share-based awards granted to employees is measured at grant date, based on the estimated fair value of the award. The Company estimates the fair value of stock options using a Black-Scholes option pricing model. Compensation expense for options granted to non-employees is determined as the fair value of consideration received or the fair value of the equity instruments issued, whichever is more reliably measured. The fair value of restricted stock awards is determined based on the fair value of the Company's common stock on the date of grant. Share-based compensation costs are expensed on a straight-line basis (net of estimated forfeitures) over the relevant vesting period. The fair value of awards granted to non-employees is re-measured each period until the related service is complete. All share-based compensation costs are recorded in general and administrative or research and development costs in the statements of operations based upon the underlying employees' roles within the Company.

Debt Discount

The Company follows the authoritative guidance in Accounting Standards Codification ("ASC") 470-20-25-2, *Debt with Conversion of Other Options*, for accounting for debt discount related to the detachable stock purchase warrants issued in connection with a debt obligation. The fair value of the warrant is recorded as a discount against the related debt obligation, and is amortized using the effective interest rate method over the term of the underlying debt obligation and reflected in interest expense.

Fair Value Measurements

The Company records certain financial assets and liabilities at fair value in accordance with the provisions of ASC Topic 820, *Fair Value Measurements and Disclosures*, on fair value measurements. As defined in the guidance, fair value, defined as an exit price, represents the amount that would be received to sell an asset or pay to transfer a liability in an orderly transaction between market participants. As a result, fair value is a market-based approach that should be determined based on assumptions that market

participants would use in pricing an asset or a liability. As a basis for considering these assumptions, the guidance defines a three-tier value hierarchy that prioritizes the inputs used in the valuation methodologies in measuring fair value.

- Level 1—Unadjusted quoted prices in active, accessible markets for identical assets or liabilities.
- Level 2—Other inputs that are directly or indirectly observable in the marketplace.
- Level 3—Unobservable inputs that are supported by little or no market activity.

The fair value hierarchy also requires an entity to maximize the use of observable inputs and minimize the use of unobservable inputs when measuring fair value.

The Company's material financial instruments at December 31, 2013 and 2014 and September 30, 2015 (unaudited) consisted primarily of cash and cash equivalents, long-term debt and stock purchase warrant liabilities. The fair value of cash and cash equivalents, other current assets and accounts payable approximate their respective carrying values due to the short term nature of these instruments. The Company has determined its stock purchase warrants liability to be a Level 3 fair value measurement (Note 10).

Stock Purchase Warrants

The Company accounts for stock purchase warrants as liabilities based upon the characteristics and provisions of the underlying instruments. These liabilities are recorded at their fair value on the date of issuance within other non-current liabilities on the balance sheet and are remeasured on each subsequent reporting date, with fair value changes recognized as income (decreases in fair value) or expenses (increases in fair value) in other income (expense), net in the statements of operations. The fair value of these liabilities is estimated using the Black-Scholes method.

Income Taxes

Deferred tax assets or liabilities are recorded for temporary differences between financial statement and tax basis of assets and liabilities, using enacted rates in effect for the year in which the differences are expected to reverse. A valuation allowance is recorded if it is more likely than not that a deferred tax asset will not be realized. The Company has provided a full valuation allowance on its deferred tax assets, which primarily consist of cumulative net operating losses of $7.9 million for the period from May 26, 2011 (inception) to December 31, 2014. Due to its history of operating losses since inception and losses expected to be incurred in the foreseeable future, a full valuation allowance was considered necessary.

Recent Accounting Pronouncements

In April 2015, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") No. 2015-03, *Interest—Imputation of Interest (Subtopic 835-30): Simplifying the Presentation of Debt Issuance Costs* ("ASU 2015-03"). This pronouncement requires debt issuance costs to be presented in the balance sheet as a direct deduction from the carrying value of the associated debt liability, consistent with the presentation of a debt discount. Prior to the issuance of the pronouncement, debt issuance costs were required to be presented in the balance sheet as an asset. ASU 2015-03 is effective for fiscal years, and interim periods within those years, beginning after December 15, 2015 and early adoption is permitted. The Company adopted this pronouncement as of April 15, 2015, and it did not have a material impact on the Company's financial statements or related disclosures.

CLEARSIDE BIOMEDICAL, INC.

Notes to the Financial Statements (Continued)

In August 2014, the FASB issued ASU 2014-15, *Presentation of Financial Statements—Going Concern (Subtopic 205-40): Disclosure of Uncertainties About an Entity's Ability to Continue as a Going Concern*, which provides guidance about management's responsibility to evaluate whether there is substantial doubt about an entity's ability to continue as a going concern and to provide related footnote disclosures. The new standard is effective for the Company for the annual period ending after December 15, 2016 and for annual and interim periods thereafter, with early adoption permitted. The Company is currently evaluating the impact of this accounting standard update on the Company's financial statements or related disclosures.

In June 2014, the FASB issued ASU No. 2014-10, *Development Stage Entities (Topic 915): Elimination of Certain Financial Reporting Requirements*. This pronouncement allows the removal of the incremental reporting requirements of the development stage entity distinction, the inception-to-date information and certain other disclosures. The Company adopted this pronouncement as of January 1, 2015, and it did not have a material impact on its consolidated financial statements or related disclosures.

Net Loss per Share of Common Stock

Basic net loss per share is calculated by dividing the net loss by the weighted average number of shares of common stock outstanding for the period, without consideration of the dilutive effect of potential common stock equivalents. Diluted net loss per share gives effect to all dilutive potential shares of common stock outstanding during this period.

For all periods presented, the Company's potential common stock equivalents, which include convertible preferred stock, stock options, unvested restricted stock and stock purchase warrants, have been excluded from the computation of diluted net loss per share as their inclusion would have the effect of reducing the net loss per share. Therefore, the denominator used to calculate both basic and diluted net loss per share is the same in all periods presented.

The Company's potential common stock equivalents that have been excluded from the computation of diluted net loss per share for all periods presented because of their antidilutive effect consisted of the following:

	Year Ended December 31,		Nine Months Ended September 30,	
	2013	2014	2014	2015
			(unaudited)	
Convertible preferred stock	9,555,757	15,564,959	15,564,959	15,564,959
Outstanding stock options	1,694,198	2,416,746	1,659,246	2,266,776
Unvested restricted stock	504,271	45,523	53,335	22,087
Stock purchase warrants	16,550	1,981,639	1,981,639	321,868
	11,770,776	20,008,867	19,259,179	18,175,690

CLEARSIDE BIOMEDICAL, INC.

Notes to the Financial Statements (Continued)

3. Property and Equipment, Net

Property and equipment, net consisted of the following (dollar amounts in thousands):

	Estimated Useful Lives (Years)	December 31, 2013	December 31, 2014	September 30, 2015 (unaudited)
Furniture and fixtures	5	$ 77	$ 95	$ 66
Machinery and equipment	5	26	105	103
Computer equipment	3	7	27	27
Leasehold improvements	Lesser of useful life or remaining lease term	10	33	39
		120	260	235
Less: Accumulated depreciation		(22)	(55)	(88)
		$ 98	$205	$ 147

4. Accrued Liabilities

Accrued liabilities consisted of the following (in thousands):

	December 31, 2013	December 31, 2014	September 30, 2015 (unaudited)
Accrued expenses	$ 93	$ 825	$ 797
Accrued bonuses	289	279	383
Accrued vacation	33	53	71
Accrued interest payable	12	—	14
	$427	$1,157	$ 1,265

5. Long-Term Debt

Note Purchase Agreement

On December 20, 2012, the Company entered into a $150,000 unsecured note purchase agreement with a lender and borrowed $150,000 on that date. Amounts borrowed under the agreement bore interest at 5% per annum. All unpaid principal, together with the balance of unpaid and accrued interest, were due and payable on demand at any time after the earlier of (i) the maturity date of December 2017, (ii) the date on which the Company has achieved sustainable profitability for a period of at least two consecutive fiscal years in accordance with generally accepted accounting principles, (iii) without the prior written consent of the lender, the date on which an equity financing of the Company in which the Company issues shares of common stock, preferred stock or other equity interests in the Company in a transaction or series of related transactions and receives an investment of cash in consideration of such issuance in the amount of not less than $7.0 million or consolidation of the Company or the sale or transfer by the Company’s stockholders of

capital stock of the Company representing more than 50% of the voting power occurs or (iv) upon or after the occurrence of an event of default. The repayment acceleration provision specifically excluded the Series A-1 Preferred Stock financing that occurred in January 2013. The unsecured promissory note converted into 60,291 shares of Series B convertible preferred stock in connection with the Company's August 2014 Series B convertible preferred stock financing.

Interest expense on the borrowings under the note purchase agreement was $8,000 and $5,000 for the years ended December 31, 2013 and 2014, respectively. As of December 31, 2013 and 2014, the total amount of borrowings due under this note purchase agreement was $150,000 and $0, respectively.

Loan Agreements

In April 2013, the Company borrowed $125,000 under a loan agreement, which borrowings bore interest at a compounded annual rate of 4.25%. As of December 31, 2013, the total amount of borrowings due under the loan agreement was $125,000. All unpaid principal, together with the balance of unpaid and accrued interest, was due and payable on demand at any time after the earlier of (i) the maturity date of February 2016, (ii) the date on which the Company sells, leases, transfers or otherwise disposes of all or substantially all of its assets now owned or hereafter acquired, (iii) the date on which the Company makes a public offering of the Company's capital stock or equity interests, (iv) the date on which the Company takes any action which would result in a change in the direct or indirect control of 50% or more of the capital stock or equity interest ownership of the Company, (v) the date after December 31, 2013 on which the Company had received additional equity investments or milestone payments or license fees totaling $2.5 million in the aggregate over any 12-month period or (vi) upon or after the occurrence of an event of default. In May 2014, the Company repaid this loan in full.

Interest expense on the borrowings under the loan agreement was $4,000 and $2,000 for the years ended December 31, 2013 and 2014, respectively.

As of December 31, 2013, the Company had recorded unamortized debt discount of $7,000, relating to the detachable warrants issued in conjunction with the loan agreement (Note 10). Debt discounts are amortized using the effective interest method through the earlier of the date of maturity or the conversion of the debt. As of December 31, 2013, cumulative amortization of debt discount amounted to $3,000. The remaining debt discount was written off to interest expense during 2014 when the loan was repaid.

On April 15, 2015, the Company entered into a loan agreement with a bank for borrowings up to $6.0 million, with a floating interest rate equal to the Wall Street Journal's prime rate minus 0.50 percent. Under the terms of the loan, an initial tranche of $4.0 million was advanced on April 15, 2015 and an additional tranche of $2.0 million was advanced on May 15, 2015. The Company is required to pay accrued interest only for a period of 12 months from the date of each advance, followed by 30 equal monthly payments of principal and accrued interest. A final payment of $0.3 million, or 5.50% of the aggregate borrowed amount, is due at maturity of the loan in 2018 and is being accreted in long-term debt over the life of the loan. Closing costs of $23,000 were recorded in long-term debt and are also being accreted over the life of the loan.

Interest expense on the borrowings under the loan agreement was $72,000 for the nine months ended September 30, 2015 (unaudited). Accretion of the scheduled final payment was $65,000 for the nine

months ended September 30, 2015 (unaudited). Accretion of the deferred closing costs was $$4,600 for the nine months ended September 30, 2015 (unaudited).

As of September 30, 2015 (unaudited), the annual payments for the loan agreement with SVB, including the scheduled final payment in 2018, were as follows:

Year Ending December 31,	Principal	Interest and Final Payment	Total
2015	$ —	$ 42	$ 42
2016	1,733	152	1,885
2017	2,400	88	2,488
2018	1,867	352	2,219
	$ 6,000	$ 634	$6,634

6. Convertible Shareholder Notes Payable

In April 2014, the Company authorized the sale of convertible promissory notes (the “Bridge Notes”) to its existing stockholders, including two of its executive officers and one of its directors in their individual capacities, in the aggregate principal amount of $6.0 million. In April 2014, the Company issued $3.0 million in aggregate principal amount of Bridge Notes. The outstanding notes accrued interest at a rate of 7%, with principal plus interest due upon maturity in April 2015, unless earlier converted. The Bridge Notes were convertible upon the occurrence of a qualified financing. The Company’s August 2014 Series B convertible preferred stock financing was a qualified financing as contemplated by the Bridge Notes, and accordingly the principal and interest under all of the Bridge Notes was converted automatically into an aggregate of 1,137,652 shares of Series B convertible preferred stock in connection with this financing. In connection with the issuance of the Bridge Notes, the Company also issued warrants to the lenders to purchase an aggregate of 248,175 shares of common stock at an exercise price of $0.01 per share. Unless earlier exercised, these warrants will expire upon the closing of an initial public offering.

Interest expense on the borrowings under the Bridge Notes was $69,000 for the year ended December 31, 2014.

7. Income Taxes

No provision for U.S. federal or state income taxes has been recorded as the Company has incurred net operating losses since inception. Significant components of the Company's net deferred income tax assets consist of the following (in thousands):

	December 31, 2013	December 31, 2014
Current		
Deferred tax asset (liability)		
Non-deductible accrued expenses	$ 125	$ 20
Deferred rent	3	4
Valuation allowance	(128)	(24)
Net current deferred tax asset	$ —	$ —
Non-current		
Deferred tax asset (liability)		
Stock compensation expense	$ 39	$ 70
Net operating loss carryforwards	4,005	7,891
Depreciation differences	(17)	(31)
Federal tax credits	136	447
State tax credits	45	196
Deferred rent	8	4
Charitable contributions	2	3
Valuation allowance	(4,218)	(8,580)
Net non-current deferred tax asset	$ —	$ —

A reconciliation of the statutory tax rates and the effective tax rates is as follows:

	Year Ended December 31, 2013	Year Ended December 31, 2014
U.S. federal tax rate	34.00%	34.00%
State tax rate	4.43	4.41
Permanent difference and other	(1.60)	(1.15)
Tax credit	2.47	4.54
Valuation allowance	(39.30)	(41.79)
	0.00%	0.00%

Realization of the future tax benefits is dependent on the Company's ability to generate sufficient taxable income within the carryforward period. Due to the Company's history of operating losses, the deferred tax assets arising from the aforementioned future tax benefits are currently not likely to be realized and, accordingly, are offset by a full valuation allowance. The income tax provision varies from the expected provision determined by applying the federal statutory income tax rate to income (loss). The reasons for the difference in the expected provision, as determined by applying the federal statutory income tax rate to net income (loss) is primarily due to the increase in the deferred income tax valuation allowance of $2.8 million and $4.2 million for the years ended December 31, 2013 and 2014, respectively.

As of December 31, 2014, the Company had net deferred tax assets primarily related to net operating loss carryforwards of $7.9 million, which expire through 2034. Utilization of the net operating loss

carryforwards and credits may be subject to a substantial annual limitation due to the ownership change limitations provided by the Internal Revenue Code of 1986, as amended, and similar state provisions. The effect of an ownership change could be an imposition of an annual limitation on the use of net operating loss carryforwards attributable to periods before the change.

The U.S. federal statute of limitations remains open for the periods from inception and forward. The Company has not been the subject of examination by the taxing authorities.

The Company has no uncertain tax positions.

8. Convertible Preferred Stock

The Company has authorized 16,985,672 shares of preferred stock. Of the authorized shares of preferred stock, 5,198,826 shares have been designated as Series A Convertible Preferred Stock ("Series A"), 4,373,481 shares have been designated as Series A-1 Preferred Stock ("Series A-1") and 7,413,365 shares have been designated as Series B Preferred Stock ("Series B"). The Series A, Series A-1 and Series B shares were issued at a price of $0.78589, $1.81320 and $2.69783 per share, respectively.

The following table summarizes the activity of convertible preferred stock (dollar amounts in thousands, except per share amounts):

	Series A Preferred Stock		Series A-1 Preferred Stock		Series B Preferred Stock		Total Convertible Preferred Stock
	Shares	Amount	Shares	Amount	Shares	Amount	
Balance at January 1, 2013	5,198,826	$ 4,029	—	$ —	—	$ —	$ 4,029
Issuance of Series A-1 at $1.81320 per share, on January 31, 2013, net of issuance costs of $75	—	—	4,081,177	7,325	—	—	7,325
Issuance of Series A-1 at $1.81320 per share, on February 12, 2013, net of issuance costs of $5	—	—	275,754	495	—	—	495
Accretion of preferred stock issuance costs	—	11	—	11	—	—	22
Balance at December 31, 2013	5,198,826	4,040	4,356,931	7,831	—	—	11,871
Issuance of Series B at $2.69783 per share, on August 29, 2014, net of issuance costs of $236	—	—	—	—	4,811,259	11,501	11,501
Conversion of promissory note and interest payable at $2.69783 per share on August 29, 2014	—	—	—	—	1,197,943	3,232	3,232
Accretion of preferred stock issuance costs	—	46	—	27	—	158	231
Balance at December 31, 2014	5,198,826	4,086	4,356,931	7,858	6,009,202	14,891	26,835
Accretion of preferred stock issuance costs (unaudited)	—	—	—	32	—	361	393
Balance at September 30, 2015 (unaudited)	5,198,826	$ 4,086	4,356,931	$ 7,890	6,009,202	$ 15,252	$ 27,228

CLEARSIDE BIOMEDICAL, INC.

Notes to the Financial Statements (Continued)

Dividends

Holders of Series A, Series A-1 and Series B shares, in preference of common stockholders, shall be entitled to receive (a) when, as and if declared by the board of directors (the "Board"), but only out of funds that are legally available therefore, or (b) upon the liquidation, dissolution or winding up of the Company, whether voluntary or involuntary, cumulative cash dividends at the rate of 8% per annum of the applicable original issuance price of such series of preferred stock.

The total cumulative preferred dividends in arrears, if declared, for the preferred stock as of December 31, 2013 and 2014 and September 30, 2015 (unaudited) were $1.1 million, $2.5 million and $4.2 million, respectively.

Liquidation

Upon a liquidation event (as defined in the amended and restated certificate of incorporation) the Series A, Series A-1 and Series B holders will be paid their liquidation preference of $0.78589, $1.81320 and $2.69783 per share, respectively, which is the original issue price plus any accrued and declared but unpaid dividends on such class of capital stock. If the net assets of the Company are insufficient to cover the liquidation preference, the Company will distribute the available funds among the holders of Series A, Series A-1 and Series B shares at the time outstanding, ratably in proportion to the full amounts to which they would otherwise be entitled if such amounts had been paid in full.

Conversion

Each share of Series A, Series A-1 and Series B is convertible into a number of fully paid shares of common stock at any time at the option of the stockholder. The Series A, Series A-1 and Series B shares may be converted into common stock at a conversion price of $0.78589, $1.81320 and $2.69783, respectively. In addition, the Series A, Series A-1 and Series B shares are convertible into common stock immediately upon: (i) the closing of an initial public offering generating net proceeds of not less than $50.0 million to the Company, at a price per share of at least $8.09349; or (ii) the written consent of the holders of at least a majority of the outstanding shares of preferred stock and the holders of at least 70% of the outstanding shares of Series B convertible preferred stock. As described in the amended and restated certificate of incorporation, a reduction in the conversion price will occur if the Company sells common stock for less than the conversion price of the Series A, Series A-1 and Series B shares. Based on the conversion terms, there were no beneficial conversion features associated with Series A, Series A-1 and Series B shares.

In addition, the potential reduction in the conversion price did not result in the conversion price feature meeting the definition of a derivative, which would require separate accounting.

Voting

Each holder of the Series A, Series A-1 and Series B shares shall be entitled to the number of votes equal to the number of shares of common stock into which such shares of Series A, Series A-1 and Series B may be converted, and shall have voting rights and powers equal to the voting rights and powers of the common stock, with certain limitations.

Redemption

Series A, Series A-1 preferred stock and Series B will be subject to redemption at the option of the investors holding a majority of the Series A, Series A-1 and Series B shares at any time after the sixth anniversary of the issuance in an amount equal to the liquidation preference. On such redemption date, the Company shall redeem, on a pro rata basis in accordance with the number of shares of Series A, Series A-1 and Series B owned by each holder, that number of outstanding shares of Series A, Series A-1 and Series B determined by dividing (i) the total number of shares of Series A, Series A-1 and Series B outstanding immediately prior to such redemption date by (ii) the number of remaining redemption dates including the redemption date to which such calculation applies. If the Company does not have sufficient funds legally available to redeem on any redemption date all Series A, Series A-1 and Series B shares to be redeemed on such redemption date, the Company shall redeem a pro rata portion of each holder's Series A, Series A-1 and Series B shares out of funds legally available therefor, based on the respective amounts which would otherwise be payable in respect of the shares to be redeemed if the legally available funds were sufficient to redeem all such shares, and shall redeem the remaining shares to have been redeemed as soon as practicable after the Company has funds legally available therefor.

9. Common Stock

The Company's amended and restated certificate of incorporation authorizes the Company to issue 30,000,000 shares of $0.001 par value common stock. As of December 31, 2013 and 2014 and September 30, 2015 (unaudited), there were 3,482,916, 3,996,233 and 5,839,334 shares of common stock outstanding, respectively, which excludes 504,271, 45,523 and 22,087 shares, respectively, of unvested restricted stock. The terms, rights, preferences and privileges of the Company's common stock are as follows:

Voting

Each holder of common stock is entitled to one vote for each share of common stock held on all matters submitted to a vote of the stockholders, including the election of directors. The Company's amended and restated certificate of incorporation and bylaws do not provide for cumulative voting rights.

Dividends

Subject to preferences that may be attributable to any then outstanding convertible preferred stock, the holders of the Company's outstanding shares of common stock are entitled to receive dividends, if any, as may be declared by the Company's board of directors out of legally available funds.

Liquidation

In the event of the Company's liquidation, dissolution or winding up, holders of common stock will be entitled to share ratably in the net assets legally available for distribution to stockholders after the payment of all the Company's debts and other liabilities, subject to satisfaction of the liquidation preferences granted to the holders of any outstanding preferred stock.

Rights and Preference

Holders of the Company's common stock have no preemptive, conversion or subscription rights, and there are no redemption or other related provisions attributable to the common stock. The rights, preferences and privileges of the holders of common stock are subject to, and may be adversely affected by, the rights of the holders of shares of any series of preferred stock of the Company that may be issued.

10. Stock Purchase Warrants

During 2013, in connection with the loan agreement (Note 5), the Company issued a warrant to the lender to purchase up to 16,550 shares of Series A-1 preferred stock at a price per share of $1.8132. The term of the warrant extends until 10 years from the grant date and the warrant is exercisable at any time during that 10-year period. This warrant was outstanding at December 31, 2013 and 2014 and September 30, 2015 (unaudited) and had a weighted average remaining life of 9.12, 8.08 and 7.34 years, respectively.

The Company estimated the fair value of the warrants at issuance using the Black-Scholes option-pricing model utilizing the fair value of the underlying preferred stock. The estimates in the Black-Scholes option pricing model are based, in part, on assumptions, including but not limited to the volatility of comparable public companies, the expected life of the warrants, the risk-free interest rate and the fair value of the equity underlying the warrants.

Key assumptions utilized in the fair value calculation for the warrants appear in the table below:

	December 31,		
	2013	2014	September 30, 2015 (unaudited)
Expected term (years)	5.00	5.00	5.00
Volatility	100.28%	109.60%	113.60%
Risk-free interest rate	1.38%	2.10%	1.96%
Dividend yield	0.00%	0.00%	0.00%

The fair value of the Series A-1 warrant was $24,000, $42,000 and $45,000 at December 31, 2013 and 2014 and September 30, 2015 (unaudited), respectively.

During 2014, in connection with the issuance of the Bridge Notes (Note 6), the Company issued warrants to the lenders to purchase up to 248,175 shares of common stock at a price per share of $0.01. These warrants were outstanding at December 31, 2014 and September 30, 2015 (unaudited) and had a remaining life of 9.2 and 8.6 years, respectively. If unexercised, these warrants will expire upon the closing of an initial public offering.

In connection with its Series B convertible preferred stock financing in August 2014, the Company issued warrants to purchase an aggregate of 1,716,914 shares of common stock at an exercise price of $0.01 per share. These warrants were exercised on May 20, 2015.

At the date of issuance, the total value of the common stock warrants issued in connection with the Series B financing was estimated to be $1.2 million. In order to determine the fair value of these common warrants, the Company used a hybrid of an option pricing model and a probability-weighted expected return method ("PWERM"). The estimates in the option pricing model were based, in part, on assumptions,

including but not limited to the volatility of comparable public companies, the expected life of the warrants, the risk-free interest rate and the fair value of the equity underlying the warrants. Significant inputs for the PWERM included an estimate of the Company's equity value and an estimated probability and timing for each valuation scenario. The Company attributed a 60% weighting to option pricing model, a 24% weighting to an early 2015 IPO scenario within the PWERM and a 16% weighting to a late 2015 IPO scenario within the PWERM.

In April 2015, in connection with the loan agreement, the Company issued a warrant to the lenders to purchase up to 57,143 shares of Series B preferred stock at a price per share of $3.50. The term of the warrant extends until 10 years from the grant date and the warrant is exercisable at any time during that 10-year period. This warrant was outstanding at September 30, 2015 (unaudited) and had a weighted average remaining life of 9.50 years.

The Company estimated the fair value of the Series B preferred warrants under three scenarios, the option price modeling, for which the Company took the value from the model discounted for the lack of marketability, and two IPO scenarios, early and late. Under the IPO scenarios, the Company calculated the value of the warrant based on a call option of the common share at IPO (assuming the Series B preferred stock would convert to common stock) given the time to exit and the term of the warrants stipulated in the contract. The Company then applied a discount for lack of marketability.

The Company also ran the valuation for the Series B preferred warrants at the issue date of April 15, 2015 based on the model, financials, and capitalization table as of March 31, 2015, assuming there had been no material changes to the business over the 15-day period since the March 31, 2015 valuation. The Company utilized the same methodology to calculate the value of the warrants as of September 30, 2015. The fair value of the Series B preferred warrant was $160,000 at September 30, 2015 (unaudited).

11. Share-Based Compensation

In November 2011, the Company's Board adopted and approved the Clearside Biomedical, Inc. 2011 Stock Incentive Plan (the "Plan") which provides for the grant of share-based awards to employees, directors and consultants of the Company. The Company has reserved 3,338,776 shares of common stock for issuance under the Plan. The Board shall determine price, term and vesting conditions of all share-based awards at their grant date. Absent a public market price for the Company's common stock, the board of directors will determine the estimated fair value for the underlying common stock. Share-based awards vest over variable periods, generally from one to five years, and expire not more than ten years after the date of grant.

The total share-based compensation expense recognized is reflected in the statements of operations as follows (in thousands):

	Year Ended December 31,		Nine Months Ended September 30,	
	2013	2014	2014	2015
			(unaudited)	
Research and development	$ 213	$ 218	$ 166	$ 229
General and administrative	109	209	124	273
Total	$ 322	$ 427	$ 290	$ 502

CLEARSIDE BIOMEDICAL, INC.

Notes to the Financial Statements (Continued)

Share-based compensation is accounted for in accordance with the provisions of ASC 718, *Compensation-Stock Compensation*. The estimated fair value of options granted is determined as of the date of grant using the Black-Scholes option pricing model. The resulting fair value is recognized ratably over the requisite service period, which is generally the vesting period of the awards. Options granted to non-employees are re-measured at each financial reporting period until required services are performed.

The following table sets forth the weighted average assumptions utilized in the fair value calculation for the underlying common stock for the years ended December 31, 2013 and 2014 and the nine months ended September 30, 2014 and 2015.

	Year Ended December 31,		Nine Months Ended September 30,	
	2013	2014	2014	2015
			(unaudited)	
Expected term (years)	7.00	7.00	7.00	7.00
Expected stock price volatility	97.02%	85.64%	87.85%	89.00%
Risk-free interest rate	1.69%	1.99%	2.10%	2.04%
Expected dividend yield	0.00%	0.00%	0.00%	0.00%

Expected term (in years): The Company utilized the guidance set forth in ASC 718 to determine the expected term of options. The Company utilized the simplified method as prescribed by ASC 718, as the Company does not have sufficient historical exercise and post-vesting termination data to provide a reasonable basis upon which to estimate the expected term of stock options granted to employees.

Risk-free interest rate: The risk-free interest rate is based on the yields of U.S. Treasury securities with maturities similar to the expected time to a possible liquidity event.

Expected dividend yield: The Company has not paid and does not anticipate paying any dividends in the foreseeable future.

Expected stock price volatility: The volatility assumption is based on the historical volatilities of the stock of several public entities that are similar to the Company, as the Company does not have sufficient historical transactions in its own shares on which to base expected volatility. The same peer group of companies was utilized for 2013, 2014 and the nine months ended September 30, 2015.

Stock Options

The Company has granted stock option awards to employees, directors and consultants. Share-based compensation expense for options granted is reflected in the statements of operations as follows (in thousands):

	Year Ended December 31,		Nine Months Ended September 30,	
	2013	2014	2014	2015
			(unaudited)	
Research and development	$ 50	$ 91	$ 80	$ 229
General and administrative	71	192	107	273
Total	$ 121	$ 283	$ 187	$ 502

CLEARSIDE BIOMEDICAL, INC.

Notes to the Financial Statements (Continued)

The following table summarizes the activity related to stock options:

	Number of Shares	Weighted Average Exercise Price
Options outstanding at January 1, 2013	617,250	$ 0.07
Granted	1,435,500	0.18
Exercised	(157,444)	0.07
Cancelled/Forfeited	(201,108)	0.13
Options outstanding at December 31, 2013	1,694,198	0.16
Granted	827,500	1.54
Exercised	(54,569)	0.08
Cancelled/Forfeited	(50,383)	0.07
Options outstanding at December 31, 2014	2,416,746	0.63
Granted (unaudited)	125,000	2.80
Exercised (unaudited)	(108,893)	0.12
Cancelled/Forfeited (unaudited)	(166,077)	0.76
Options outstanding at September 30, 2015 (unaudited)	2,266,776	0.77
Options exercisable at December 31, 2014	641,210	0.14
Options exercisable at September 30, 2015 (unaudited)	839,862	0.20

The following table provides additional information about the Company's stock options that were outstanding and exercisable at December 31, 2014 (aggregate intrinsic values in thousands):

Exercise Price	Options Outstanding	Weighted Average Exercise Price	Aggregate Intrinsic Value	Weighted Average Remaining Contractual Life (Years)	Options Exercisable	Weighted Average Exercise Price	Aggregate Intrinsic Value
$0.01	25,000			6.9	25,000		
0.07	248,079			7.5	165,928		
0.18	1,316,167			8.6	450,282		
1.40	70,000			9.6	—		
1.55	757,500			10.0	—		
	2,416,746	$ 0.63	$ 5,071		641,210	$ 0.14	$ 1,658

CLEARSIDE BIOMEDICAL, INC.

Notes to the Financial Statements (Continued)

The following table provides additional information about the Company's stock options that were outstanding and exercisable at September 30, 2015 (unaudited) (aggregate intrinsic values in thousands):

Exercise Price	Options Outstanding	Weighted Average Exercise Price	Aggregate Intrinsic Value	Weighted Average Remaining Contractual Life (Years)	Options Exercisable	Weighted Average Exercise Price	Aggregate Intrinsic Value
$0.01	25,000			6.1	25,000		
0.07	160,579			6.7	140,487		
0.18	1,201,197			7.8	647,709		
1.40	70,000			8.9	20,416		
1.55	685,000			9.2	3,750		
2.80	125,000			9.8	2,500		
	2,266,776	$ 0.77	$ 4,814		839,862	$ 0.20	$ 2,259

As of December 31, 2014 and September 30, 2015 (unaudited), the Company had $2.2 million and $1.8 million, respectively, of unrecognized compensation expense related to unvested stock options granted under the Plan. This cost is expected to be recognized over a weighted average period of 1.9 and 1.6 years as of December 31, 2014 and September 30, 2015 (unaudited), respectively. The weighted average remaining contractual life of all outstanding options as of December 31, 2014 and September 30, 2015 (unaudited) was 8.9 and 9.8 years, respectively.

The intrinsic value is calculated as the difference between the estimated fair market value and the exercise price per share of the stock options. The estimated fair market value per share of common stock as of December 31, 2014 and September 30, 2015 (unaudited) was $2.73 and $2.87, respectively.

Restricted Stock

In 2011, the founders of the Company purchased restricted common stock. These shares are subject to repurchase rights whereby the Company has the right to repurchase the unvested shares at price per share equal to the lesser of (i) the fair market value of the shares at the time the right of repurchase is exercised and (ii) the original issuance price of the shares. A summary of the status of unvested restricted stock is presented below:

	Shares	Weighted Average Grant Date Value
Unvested at January 1, 2013	1,282,500	$ 0.16
Granted	83,336	0.61
Vested	(861,565)	0.16
Unvested at December 31, 2013	504,271	0.23
Vested	(458,748)	0.18
Unvested at December 31, 2014	45,523	0.26
Vested (unaudited)	(23,436)	0.25
Unvested at September 30, 2015 (unaudited)	22,087	0.26

CLEARSIDE BIOMEDICAL, INC.

Notes to the Financial Statements (Continued)

Share-based compensation expense for restricted stock granted is reflected in the statements of operations as follows (in thousands):

	Year Ended December 31,		Nine Months Ended September 30,	
	2013	2014	2014	2015
			(unaudited)	
Research and development	$163	$127	$ 86	$ —
General and administrative	38	17	17	—
Total	$201	$144	$103	$ —

As of December 31, 2014 and September 30, 2015 (unaudited), the Company had $0 of unrecognized compensation expense related to unvested restricted stock.

12. Commitments and Contingencies

Lease Commitment Summary

The Company leases office space under non-cancelable operating leases which expire in March 2017. The operating leases have renewal options and rent escalation clauses. The following table presents future minimum commitments of the Company due under non-cancelable operating leases with original or remaining terms in excess of one year at December 31, 2014.

Minimum lease payments were as follows at December 31, 2014 (in thousands):

2015	$180
2016	90
2017	23
Total minimum lease payments	$293

Rent expense, net of sublease income, was $182,000 and $198,000 for years ended December 31, 2013 and 2014, respectively, and $155,000 and $129,000 for the nine months ended September 30, 2014 and 2015 (unaudited), respectively. Total future rent income from the sub-lease agreement on an operating lease due through May 2015 was $14,000 as of December 31, 2014.

Litigation

The Company is not party to any litigation and does not have contingency reserves established for any litigation liabilities.

Contract Service Providers

In the course of the Company’s normal business operations, it has agreements with contract service providers to assist in the performance of its research and development, clinical research and manufacturing. Substantially all of these contracts are on an as needed basis.

Employment Contracts

The Company has employment agreements with its executive officers and has at will employment contracts with substantially all other employees providing for salary, benefits and bonuses.

13. License Agreements

On July 4, 2012, the Company entered into an Exclusive License Agreement with Emory University and Georgia Tech Research Corporation ("Emory/GTRC"), whereby the Company purchased a license for Methods and Devices For Drug Delivery Using Microneedles. The Company paid $30,000 for the license and made a milestone payment of $35,000 during the year ended December 31, 2012. No payments were made to Emory/GTRC during the years ended December 31, 2013 or 2014 or during the nine months ended September 30, 2015. The Exclusive License Agreement requires the Company to make a milestone payment upon the occurrence of a specified event relating to the commercialization of a drug developed using the licensed patents. Beginning on the third anniversary of this license agreement, the Company will be obligated to pay an annual license maintenance fee of $25,000, which will continue until the first commercial sale of a product covered by the licensed patents. Additionally, the Company will owe a low single-digit royalty on any worldwide net product sales related to the licensed patents, with minimum annual royalties of $15,000 after commercialization. The minimum annual royalty increases thereafter to $100,000.

In connection with the Company's Series B financing, in August 2014, the Company entered into a license agreement with NovaMedica LLC ("NovaMedica"). Under this agreement, the Company granted to NovaMedica the exclusive right in Russia and specified adjacent territories to use the Company's intellectual property to develop and commercialize products involving the use of the corticosteroid triamcinolone acetonide as the sole active pharmaceutical ingredient for administration in the suprachoroidal space. In connection with this license, NovaMedica made an upfront payment to the Company of $200,000. In addition, NovaMedica has agreed to make royalty payments equal to the amount of any royalties the Company owes to Emory or GTRC pursuant to the Emory/GTRC License Agreement as a result of NovaMedica's sales of products and services covered by the license granted to NovaMedica, up to a maximum of a low single-digit percentage of net sales of such products or services by NovaMedica. NovaMedica has also agreed to make milestone payments, totaling $12.7 million in the aggregate, upon the achievement of specified development and commercial milestones. The term of the NovaMedica license agreement will expire upon the expiration of the last-to-expire valid claim within the patents licensed to NovaMedica pursuant to the agreement. Either the Company or NovaMedica may terminate the agreement upon written notice in the event of the other party's material breach that is not cured within 20 business days of receiving written notice requesting a cure of a payment breach, and within 60 business days of receiving written notice requesting a cure in the case of all other breaches. Each party also has the right to terminate the agreement in the event of the other party's bankruptcy or insolvency. The Company may terminate the agreement immediately upon written notice in the event that NovaMedica commences or participates in any action challenging the validity or enforceability of the patents licensed to NovaMedica under the agreement.

On April 28, 2015, the Company entered into an option agreement with Spark Therapeutics, Inc. ("Spark") under which Spark acquired exclusive rights to license the Company's SCS Microinjector technology to deliver gene therapies to the back of the eye. If Spark exercises its option, in return for exclusive, worldwide rights to use the Company's microinjection technology and related intellectual property in the field of gene therapy, Spark will pay the Company an upfront licensing fee, development related milestones and commercial royalties on sales of Spark's products covered by the licensed technology. As of September 30, 2015, under this agreement Spark has made an upfront payment of $500,000.

14. Collaborative Agreement

On January 31, 2013, the Company entered into a collaborative research agreement with one of the holders of the Series A-1 preferred stock, whereby the two parties agreed to conduct feasibility studies for certain compounds. Each party to the collaborative research agreement will bear its own costs, except that certain costs incurred by the Company are limited to a defined maximum amount. The Company incurred research and development costs in relation to the collaborative research agreement of $162,000 and $98,000 for the years ended December 31, 2013 and 2014, respectively, and $51,000 and $131,000 for the nine months ended September 30, 2014 and 2015 (unaudited), respectively.

15. Unaudited Pro Forma Net Loss Per Share

The unaudited pro forma basic and diluted net loss per share for the year ended December 31, 2014 and the nine months ended September 30, 2015 gives effect to the conversion of outstanding convertible preferred stock, which will occur automatically upon the completion of the planned initial public offering, as if such conversion occurred as of the beginning of the periods presented. The following table sets forth the computation of unaudited pro forma basic and diluted net loss per share of common stock for the periods indicated (in thousands except share and per share amounts):

	Year Ended December 31, 2014	Nine Months Ended September 30, 2015
Numerator pro forma calculation:		
Net loss	$ (10,189)	$ (12,469)
Denominator for pro forma calculation:		
Weighted average number of shares outstanding—basic and diluted	3,825,052	4,910,055
Pro forma adjustment to reflect automatic conversion of outstanding convertible preferred stock	15,564,959	15,564,959
Weighted average number of pro forma shares outstanding—basic and diluted	19,390,011	20,475,014
Pro forma net loss per share—basic and diluted	$ (0.53)	$ (0.61)

16. Subsequent Events (unaudited)

The Company evaluated subsequent events through December 23, 2015, the date on which these financial statements were issued.

On November 23, 2015 and December 14, 2015, the Company issued an aggregate of 5,073,598 shares of Series C convertible preferred stock to 17 accredited investors at a per share price of $3.7917, for aggregate consideration of $19.2 million. The shares of Series C convertible preferred stock are convertible into common stock immediately upon either (i) the closing of an initial public offering generating net proceeds to the Company of at least $50.0 million and the price per share to the public is at least $5.68755 if the offering closes on or before June 30, 2016 or $11.3751 if the offering closes after June 30, 2016; or (ii) the written consent of the holders of at least a majority of the outstanding shares of preferred stock, voting on an as converted to common stock basis, and the holders of at least 50% of the outstanding shares of Series C convertible preferred stock.

Shares

COMMON STOCK

RBC CAPITAL MARKETS **STIFEL**

NEEDHAM & COMPANY **NOMURA**

, 2016

PART II

INFORMATION NOT REQUIRED IN PROSPECTUS

Item 13. ***Other Expenses of Issuance and Distribution.***

The following table sets forth all costs and expenses, other than underwriting discounts and commissions, payable by us in connection with the sale of the common stock being registered. All amounts shown are estimates except for the SEC registration fee, the Financial Industry Regulatory Authority, or FINRA, filing fee and The NASDAQ Global Market initial listing fee.

	Amount to be Paid
SEC registration fee	$ *
FINRA filing fee	*
NASDAQ Global Market initial listing fee	*
Blue sky fees and expenses	*
Printing and engraving expenses	*
Legal fees and expenses	*
Accounting fees and expenses	*
Transfer agent and registrar fees and expenses	*
Miscellaneous fees and expenses	*
Total	$ *

* To be filed by amendment.

Item 14. ***Indemnification of Directors and Officers.***

We are incorporated under the laws of the State of Delaware. Section 102 of the Delaware General Corporation Law permits a corporation to eliminate the personal liability of directors of a corporation to the corporation or its stockholders for monetary damages for a breach of fiduciary duty as a director, except where the director breached his duty of loyalty, failed to act in good faith, engaged in intentional misconduct or knowingly violated a law, authorized the payment of a dividend or approved a stock repurchase in violation of Delaware corporate law or obtained an improper personal benefit.

Section 145 of the Delaware General Corporation Law provides that a corporation has the power to indemnify a director, officer, employee or agent of the corporation and certain other persons serving at the request of the corporation in related capacities against expenses (including attorneys' fees), judgments, fines and amounts paid in settlements actually and reasonably incurred by the person in connection with an action, suit or proceeding to which he is or is threatened to be made a party by reason of such position, if such person acted in good faith and in a manner he reasonably believed to be in or not opposed to the best interests of the corporation, and, in any criminal action or proceeding, had no reasonable cause to believe his conduct was unlawful, except that, in the case of actions brought by or in the right of the corporation, no indemnification shall be made with respect to any claim, issue or matter as to which such person shall have been adjudged to be liable to the corporation unless and only to the extent that the Court of Chancery or other adjudicating court determines that, despite the adjudication of liability but in view of all of the circumstances of the case, such person is fairly and reasonably entitled to indemnity for such expenses which the Court of Chancery or such other court shall deem proper.

As permitted by the Delaware General Corporation Law, our amended and restated certificate of incorporation and bylaws to be in effect upon the closing of this offering will provide that: (i) we are required to indemnify our directors to the fullest extent permitted by the Delaware General Corporation Law; (ii) we may, in our discretion, indemnify our officers, employees and agents as set forth in the Delaware General Corporation Law; (iii) we are required, upon satisfaction of certain conditions, to advance all expenses incurred by our directors in connection with certain legal proceedings; (iv) the rights conferred in the bylaws are not exclusive; and (v) we are authorized to enter into indemnification agreements with our directors, officers, employees and agents.

We have entered into agreements with our directors that require us to indemnify them against expenses, judgments, fines, settlements and other amounts that any such person becomes legally obligated to pay (including with respect to a derivative action) in connection with any proceeding, whether actual or threatened, to which such person may be made a party by reason of the fact that such person is or was a director or officer of us or any of our affiliates, provided such person acted in good faith and in a manner such person reasonably believed to be in, or not opposed to, our best interests. The indemnification agreements also set forth certain procedures that will apply in the event of a claim for indemnification thereunder. We intend to enter into similar indemnification agreements with our executive officers prior to the completion of this offering. At present, no litigation or proceeding is pending that involves any of our directors or officers regarding which indemnification is sought, nor are we aware of any threatened litigation that may result in claims for indemnification.

We maintain a directors' and officers' liability insurance policy. The policy insures directors and officers against unindemnified losses arising from certain wrongful acts in their capacities as directors and officers and reimburses us for those losses for which we have lawfully indemnified the directors and officers. The policy contains various exclusions.

In addition, the underwriting agreement filed as Exhibit 1.1 to this Registration Statement provides for indemnification by the underwriters of us and our officers and directors for certain liabilities arising under the Securities Act, or otherwise.

Item 15. *Recent Sales of Unregistered Securities.*

Issuances of Capital Stock, Promissory Notes and Warrants

The following list sets forth information regarding all unregistered securities sold by us since January 1, 2012 through December 23, 2015.

1) In January 2012, February 2012 and July 2012, we issued an aggregate of 5,198,826 shares of our Series A convertible preferred stock to seven accredited investors at a per share price of $0.78589, for aggregate consideration of $4.1 million, including the conversion of the promissory notes described above.

2) In December 2012, we borrowed $150,000 from a lender pursuant to an unsecured promissory note.

3) In January 2013, we issued an aggregate of 4,356,931 shares of our Series A-1 convertible preferred stock to 13 accredited investors at a per share price of $1.8132, for aggregate consideration of $7.9 million.

4) In February 2013, in connection with a loan agreement, we borrowed $125,000 from a lender pursuant to a promissory note and issued the lender a warrant to purchase 16,550 shares of our Series A-1 convertible preferred stock at an exercise price of $1.81 per share, which will become a warrant to purchase 16,550 shares of our common stock following the completion of this offering.

5) In April and May 2014, we issued an aggregate principal amount of $3.0 million of unsecured 7% convertible promissory notes and warrants to purchase 248,175 shares of our common stock at an exercise price of $0.01 per share to 10 accredited investors.

6) In August 2014, we issued an aggregate of 6,009,202 shares of our Series B convertible preferred stock at a per share price of $2.69783 and warrants to purchase 1,716,914 shares of our common stock at an exercise price of $0.01 per share to 31 accredited investors, for aggregate consideration of $16.2 million. In some cases, some or all of the purchase price for these shares took the form of conversion of principal and interest under outstanding convertible promissory notes held by the respective investors.

7) In April 2015, in connection with a loan agreement, we issued the lender a warrant to purchase 57,143 shares of our Series B convertible preferred stock at an exercise price of $3.50 per share, which will become a warrant to purchase 57,143 shares of our common stock following the completion of this offering.

8) In November and December 2015, we issued an aggregate of 5,073,598 shares of our Series C convertible preferred stock at a per share price of $3.7917 to 17 accredited investors, for aggregate consideration of $19.2 million.

The offers, sales and issuances of the securities described in the paragraphs above were exempt from registration under Section 4(a)(2) of the Securities Act and Regulation D promulgated under the Securities Act. The recipients represented to us that they acquired the securities for investment only and not with a view to or for sale in connection with any distribution thereof and appropriate legends were affixed to the securities issued in these transactions. The recipients also represented to us that they were accredited investors as defined in Rule 501 promulgated under the Securities Act.

Stock Option Grants

From January 1, 2012 through December 15, 2015, we have granted options under our 2011 stock incentive plan to purchase an aggregate of 4,033,844 shares of our common stock to employees, consultants and directors, having exercise prices ranging from $0.07 to $2.80 per share. Of these, options to purchase an aggregate of 745,068 shares have been cancelled without being exercised and 563,096 shares were issued upon the exercise of stock options, at a weighted average exercise price of $0.08 per share, for aggregate proceeds of approximately $46,000.

The offers, sales and issuances of the securities described in the foregoing paragraph were exempt from registration under Rule 701 promulgated under the Securities Act in that the transactions were under compensatory benefit plans and contracts relating to compensation as provided under Rule 701. The recipients of such securities were our employees, directors or consultants and received the securities under our 2011 stock incentive plan. Appropriate legends were affixed to the securities issued in these transactions.

Item 16. ***Exhibits and Financial Statement Schedules.***

The exhibits to the registration statement are listed in the Exhibit Index attached hereto and are incorporated by reference herein.

Item 17. ***Undertakings.***

The undersigned Registrant hereby undertakes to provide to the underwriters at the closing specified in the underwriting agreement, certificates in such denominations and registered in such names as required by the underwriters to permit prompt delivery to each purchaser.

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the Registrant pursuant to the foregoing provisions, or otherwise, the Registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the Registrant of expenses incurred or paid by a director, officer or controlling person of the Registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the Registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

The undersigned Registrant hereby undertakes that:

(1) For purposes of determining any liability under the Securities Act, the information omitted from the form of prospectus filed as part of this Registration Statement in reliance upon Rule 430A and contained in a form of prospectus filed by the Registrant pursuant to Rule 424(b)(1) or (4) or 497(h) under the Securities Act shall be deemed to be part of this Registration Statement as of the time it was declared effective.

(2) For the purpose of determining any liability under the Securities Act, each post-effective amendment that contains a form of prospectus shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

SIGNATURES

Pursuant to the requirements of the Securities Act, the Registrant has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Alpharetta, State of Georgia, on the day of December , 2015.

CLEARSIDE BIOMEDICAL, INC.

By: _____

Daniel H. White
President and Chief Executive Officer

KNOW ALL BY THESE PRESENTS, that each person whose signature appears below hereby constitutes and appoints Daniel H. White, Charles A. Deignan and Brent B. Siler, and each of them, his or her true and lawful agent, proxy and attorney-in-fact, with full power of substitution and resubstitution, for him or her and in his or her name, place and stead, in any and all capacities, to (i) act on, sign and file with the Securities and Exchange Commission any and all amendments (including post-effective amendments) to this registration statement together with all schedules and exhibits thereto and any subsequent registration statement filed pursuant to Rule 462(b) under the Securities Act of 1933, as amended, together with all schedules and exhibits thereto, (ii) act on, sign and file such certificates, instruments, agreements and other documents as may be necessary or appropriate in connection therewith, (iii) act on and file any supplement to any prospectus included in this registration statement or any such amendment or any subsequent registration statement filed pursuant to Rule 462(b) under the Securities Act of 1933, as amended, and (iv) take any and all actions which may be necessary or appropriate to be done, as fully for all intents and purposes as he or she might or could do in person, hereby approving, ratifying and confirming all that such agent, proxy and attorney-in-fact or any of his substitutes may lawfully do or cause to be done by virtue thereof.

Pursuant to the requirements of the Securities Act, this Registration Statement has been signed by the following persons in the capacities and on the dates indicated.

Signature	Title	Date
_____ Daniel H. White	President, Chief Executive Officer and Director *(Principal Executive Officer)*	, 2015
_____ Charles A. Deignan	Chief Financial Officer *(Principal Financial Officer and Principal Accounting Officer)*	, 2015
_____ Christy L. Shaffer, Ph.D.	Director	, 2015
_____ Clay B. Thorp	Director	, 2015

Signature	Title	Date
William D. Humphries	Director	, 2015
Evgeny Zaytsev, M.D.	Director	, 2015
Gerald D. Cagle, Ph.D.	Director	, 2015
Derek Yoon	Director	, 2015

EXHIBIT INDEX

Exhibit Number		Description of Document
1.1	†	Form of Underwriting Agreement.
3.1		Fifth Amended and Restated Certificate of Incorporation, as currently in effect.
3.2	†	Form of Certificate of Amendment of Fifth Amended and Restated Certificate of Incorporation to be filed prior to the completion of this offering.
3.3	†	Form of Amended and Restated Certificate of Incorporation to be effective upon completion of this offering.
3.4	**	Bylaws, as currently in effect.
3.5	†	Form of Amended and Restated Bylaws to be effective upon completion of this offering.
4.1	†	Specimen stock certificate evidencing shares of Common Stock.
4.2		Third Amended and Restated Investor Rights Agreement, dated as of November 23, 2015, by and among the Registrant and certain of its stockholders.
4.3	**	Form of Common Stock Purchase Warrant issued in bridge financing.
4.4	**	Stock Warrant issued to North Carolina Biotechnology Center, dated as of February 12, 2013.
4.5		Warrant to Purchase Stock issued to Silicon Valley Bank, dated as of April 15, 2015.
5.1	†	Opinion of Cooley LLP as to legality.
10.1	#**	License Agreement, by and among the Registrant, Emory University and The Georgia Tech Research Corporation, dated as of July 4, 2012, as amended by the First Amendment to License Agreement, dated April 2, 2014.
10.2	**	Lease Agreement, dated as of March 14, 2012, by and between the Registrant and McDonald Ventures XI, LLC, as amended by the renewal letter from McDonald Ventures XI, LLC to the Registrant, dated March 18, 2014, and by the First Amendment to the Lease Agreement, dated August 22, 2014.
10.3	+**	2011 Stock Incentive Plan, as amended to date.
10.4	+**	Form of Incentive Stock Option Grant Notice and Incentive Stock Option Agreement under 2011 Stock Incentive Plan.
10.5	+**	Form of Nonqualified Stock Option Grant Notice and Nonqualified Stock Option Agreement under 2011 Stock Incentive Plan.
10.6	+†	Form of 2016 Equity Incentive Plan
10.7	+†	Form of Stock Option Grant Notice and Stock Option Agreement under 2016 Equity Incentive Plan.
10.8	+†	Form of Restricted Stock Unit Grant Notice and Restricted Stock Unit Award Agreement under 2016 Equity Incentive Plan.
10.9	+**	Form of Indemnification Agreement with non-employee directors.

Exhibit Number	Description of Document
10.10#**	Collaboration Agreement, dated as of January 31, 2013, by and among the Registrant and Santen Pharmaceutical Co., Ltd., as amended by Amendment No. 1 to Collaboration Agreement, dated as of April 29, 2014.
10.11#	Amendment No. 2 to Collaboration Agreement, dated as of April 30, 2015, by and among the Registrant and Santen Pharmaceutical Co., Ltd.
10.12+†	Form of 2016 Employee Stock Purchase Plan.
10.13+	Executive Employment Agreement, by and between the Registrant and Daniel H. White, dated as of January 1, 2015.
10.14+	Executive Employment Agreement, by and between the Registrant and Charles Deignan, dated as of January 1, 2015.
10.15+	Executive Employment Agreement, by and between the Registrant and Glenn Noronha, dated as of January 1, 2015.
10.16+†	Non-Employee Director Compensation Policy to be in effect upon completion of this offering.
10.17#**	License Agreement, by and between the Registrant and NovaMedica LLC, dated as of August 29, 2014.
10.18#	Research, Option and License Agreement, by and between the Registrant and Spark Therapeutics, Inc., dated as of April 27, 2015.
10.19	Loan and Securities Agreement, by and between and Registrant and Silicon Valley Bank, dated as of April 15, 2015.
23.1†	Consent of Ernst & Young LLP, independent registered public accounting firm.
23.2†	Consent of Cooley LLP (included in Exhibit 5.1).

† To be filed by amendment.

+ Indicates management contract or compensatory plan.

** Previously submitted.

Portions of this exhibit (indicated by asterisks) have been omitted pursuant to a request for confidential treatment and have been separately filed with the Securities and Exchange Commission.

Exhibit 3.1

FIFTH AMENDED AND RESTATED CERTIFICATE OF INCORPORATION
OF
CLEARSIDE BIOMEDICAL, INC.

Pursuant to Sections 228, 242 and 245 of the General Corporation Law of the State of Delaware, the undersigned corporation hereby submits the following for the purpose of amending and restating its Fourth Amended and Restated Certificate of Incorporation, and does hereby certify as follows.

1. The name of the corporation is Clearside Biomedical, Inc. The corporation's original Certificate of Incorporation was filed on May 26, 2011.

2. The corporation's Fourth Amended and Restated Certificate of Incorporation was filed on August 27, 2014.

3. The corporation's Fourth Amended and Restated Certificate of Incorporation is hereby amended and restated in its entirety, as set forth in the text of the Fifth Amended and Restated Certificate of Incorporation attached hereto as Exhibit A.

4. This Fifth Amended and Restated Certificate of Incorporation will be effective upon filing.

[Signature page to follow.]

IN WITNESS WHEREOF, said Clearside Biomedical, Inc. has caused this Fifth Amended and Restated Certificate of Incorporation to be signed by its Chief Executive Officer this 23rd day of November, 2015.

CLEARSIDE BIOMEDICAL, INC.

By: /s/ Daniel White
Name: Daniel White
Title: Chief Executive Officer

EXHIBIT A

FIFTH AMENDED AND RESTATED CERTIFICATE OF INCORPORATION
OF
CLEARSIDE BIOMEDICAL, INC.

ARTICLE I

The name of the corporation shall be "Clearside Biomedical, Inc." (the "***Corporation***").

ARTICLE II

The address of the registered office of the Corporation in the State of Delaware is 2711 Centerville Road, Suite 400, Wilmington, New Castle County, Delaware 19808, and the name of the registered agent is Corporation Service Company.

ARTICLE III

The purpose for which the Corporation is organized is to engage in any lawful act or activity for which corporations may be organized under the General Corporation Law of Delaware.

ARTICLE IV

The Corporation shall have the authority to issue 60,913,331 shares of capital stock, $0.001 par value per share, of which 40,000,000 shares shall be designated Common Stock (the "***Common Stock***") and 20,913,331 shares shall be designated Preferred Stock (the "***Preferred Stock***"). Of the authorized shares of Preferred Stock, 5,198,826 shares shall be designated Series A Preferred Stock (the "***Series A Preferred Stock***"), 4,373,481 shares shall be designated Series A-1 Preferred Stock (the "***Series A-1 Preferred Stock***" and together with the Series A Preferred Stock, the "***Series A/A-1 Preferred Stock***"), 6,066,345 shares shall be designated Series B Preferred Stock (the "***Series B Preferred Stock***") and 5,274,679 shares shall be designated Series C Preferred Stock (the "***Series C Preferred Stock***"). The Preferred Stock shall have the rights, preferences, privileges and restrictions set forth below in Article V.

ARTICLE V

The rights, preferences, privileges, restrictions and other matters relating to the Preferred Stock are as follows.

A. Dividends.

1. Preferred Stock. From and after the date of the issuance of any shares of Preferred Stock, dividends at the rate per annum of: $0.06287 per share shall accrue on such shares of Series A Preferred Stock; $0.14506 per share shall accrue on such shares of Series A-1 Preferred Stock; $0.215826 per share shall accrue on such shares of Series B Preferred Stock; and $0.303336 per share shall accrue on such shares of Series C Preferred Stock (in each case, subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to the Preferred Stock) (the ***"Accruing Dividends"***). Accruing Dividends shall accrue from day to day, whether or not declared; provided however, that except as set forth in Subsections B.1, B.2 or B.3, such

Accruing Dividends shall be payable only when, as, and if declared by the Board of Directors and the Corporation shall be under no obligation to pay such Accruing Dividends. The Corporation shall, upon the written request of any holder of Preferred Stock, furnish or cause to be furnished to such holder a certificate setting forth the accrued dividends with respect to that holder's Preferred Stock and the basis for calculating the accrued dividends.

2. Series C Preferred Stock Dividend. The Corporation shall not declare, pay or set aside any dividend on shares of any other class or series of capital stock of the Corporation (other than dividends on shares of Common Stock payable in shares of Common Stock) unless (in addition to the obtaining of any consents required elsewhere in this Fifth Amended and Restated Certificate of Incorporation (this "***Restated Certificate***")) the holders of the Series C Preferred Stock then outstanding shall first receive, or simultaneously receive, a dividend on each outstanding share of Series C Preferred Stock in an amount equal to the amount of the aggregate Accruing Dividends then accrued on such share of Series C Preferred Stock and not previously paid.

3. Series B Preferred Stock Dividend. The Corporation shall not declare, pay or set aside any dividends on shares of any other class or series of capital stock of the Corporation (other than dividends permitted by Section A(2) above or dividends on shares of Common Stock payable in shares of Common Stock) unless (in addition to the obtaining of any consents required elsewhere in this Restated Certificate) the holders of the Series B Preferred Stock then outstanding shall first receive, or simultaneously receive, a dividend on each outstanding share of Series B Preferred Stock in an amount equal to the amount of the aggregate Accruing Dividends then accrued on such share of Series B Preferred Stock and not previously paid.

3. Series A/A-1 Preferred Stock Dividend. The Corporation shall not declare, pay or set aside any dividends on shares of any other class or series of capital stock of the Corporation (other than dividends permitted by Section A(2) or A(3) above or dividends on shares of Common Stock payable in shares of Common Stock) unless (in addition to the obtaining of any consents required elsewhere in this Restated Certificate) the holders of Series A Preferred Stock and Series A-1 Preferred Stock then outstanding shall first receive, or simultaneously receive, a dividend on each outstanding share of Series A Preferred Stock and Series A-1 Preferred Stock in an amount equal to the amount of the aggregate Accruing Dividends then accrued on such share of Series A Preferred Stock or Series A-1 Preferred Stock, as applicable, and not previously paid. Payment of any dividends to the holders of Series A Preferred Stock and Series A-1 Preferred Stock shall be on a *pro rata, pari passu* basis in proportion to the Accrued Dividends for such series of Preferred Stock.

4. Additional Dividends. After the payment or setting aside for payment of the dividends described in Sections A(1), A(2) and A(3), any additional dividends (other than dividends on Common Stock payable solely in Common Stock) set aside or paid in any fiscal year shall be set aside or paid among the holders of the Preferred Stock and Common Stock then outstanding in proportion to the greatest whole number of shares of Common Stock which would be held by each such holder if all shares of Preferred Stock were converted at the then-effective Conversion Rate (as defined in Section D).

B. Preference on Liquidation.

1. Upon the occurrence of any Liquidating Event (as defined below), before any payment shall be made in respect of the Corporation's Common Stock, the Series A/A-1 Preferred Stock, the Series B Preferred Stock or any other class or series of the Corporation's capital stock, each holder of Series C Preferred Stock then outstanding shall be entitled to receive, out of the assets of the Corporation available for distribution to its stockholders an amount per share of Series C Preferred Stock equal to $3.7917, subject to equitable adjustment for any stock splits, combinations, consolidations,

recapitalizations, reorganizations, reclassifications, stock distributions, stock dividends or other similar events (collectively, "***Recapitalizations***") with respect to such share (as so adjusted from time to time, the "***Series C Original Price***"), plus all declared but unpaid Accruing Dividends plus (without duplication) any other declared but unpaid dividends on such share (such amounts, the "***Series C Preference Amount***").

If, upon the occurrence of a Liquidating Event, the assets and funds distributed among the holders of Series C Preferred Stock shall be insufficient to permit the payment to such holders of the full aforesaid Series C Preference Amount then the entire assets and funds of the Corporation legally available for distribution shall be distributed ratably among the holders of Series C Preferred Stock in proportion to the aggregate of the Series C Preference Amount each such holder is entitled to receive.

2. Upon the occurrence of any Liquidating Event (as defined below), after payment of the Series C Preference Amount and before any payment shall be made in respect of the Corporation's Common Stock, the Series A/A-1 Preferred Stock or any other class or series of the Corporation's capital stock, each holder of Series B Preferred Stock then outstanding shall be entitled to receive, out of the assets of the Corporation available for distribution to its stockholders an amount per share of Series B Preferred Stock equal to the product of (i) $2.69783, subject to equitable adjustment for any Recapitalizations with respect to such share (as so adjusted from time to time, the "***Series B Original Price***"), multiplied by (ii) 1.50, plus all declared but unpaid Accruing Dividends plus (without duplication) any other declared but unpaid dividends on such share (such amounts, the "***Series B Preference Amount***").

If, upon the occurrence of a Liquidating Event, and after the payment in full of the Series C Preference Amount, the remaining assets and funds distributed among the holders of Series B Preferred Stock shall be insufficient to permit the payment to such holders of the full aforesaid Series B Preference Amount then the entire assets and funds of the Corporation legally available for distribution shall be distributed ratably among the holders of Series B Preferred Stock in proportion to the aggregate of the Series B Preference Amount each such holder is entitled to receive.

3. Upon the occurrence of any Liquidating Event, after payment of the Series C Preference Amount and the Series B Preference Amount and before any payment shall be made in respect of the Corporation's Common Stock, each holder of Series A/A-1 Preferred Stock then outstanding shall be entitled to receive, out of the assets of the Corporation available for distribution to its stockholders:

(a) an amount per share of Series A Preferred Stock equal to $0.78589, subject to equitable adjustment for any Recapitalizations with respect to such share (as so adjusted from time to time, the "***Series A Original Price***"), plus all declared but unpaid Accruing Dividends plus (without duplication) any other declared but unpaid dividends on such share;

(b) an amount per share of Series A-1 Preferred Stock equal to $1.8132, subject to equitable adjustment for any Recapitalizations with respect to such share (as so adjusted from time to time, the "***Series A-1 Original Price***"), plus all declared but unpaid Accruing Dividends plus (without duplication) any other declared but unpaid dividends on such share (together with the amounts set forth in subsection (a), the "***Series A/A-1 Preference Amount***" and, together with the Series C Preference Amount and the Series B Preference Amount, the "***Preference Amount***");

If, upon the occurrence of a Liquidating Event, and after the payment in full of the Series B Preference Amount, the remaining assets and funds available for distribution among the holders of Series A/A-1 Preferred Stock shall be insufficient to permit the payment to such holders of the full aforesaid Series A/A-1 Preference Amount then such remaining funds shall be distributed ratably among the holders of Series A/A-1 Preferred Stock in proportion to the aggregate of the Series A/A-1 Preference Amount each such holder is entitled to receive.

4. After payment has been made to the holders of Preferred Stock of the full Preference Amount to which they shall be entitled as aforesaid, the remaining assets of the Corporation legally available for distribution, if any, shall be distributed ratably among the holders of the Corporation's Common Stock and Preferred Stock, as if the shares of Preferred Stock had been converted voluntarily into Common Stock immediately prior to such Liquidating Event at the then-applicable conversion rate.

5. A "***Liquidating Event***" shall mean (a) any liquidation, dissolution or winding up of the Corporation, either voluntary or involuntary, or (b) a transaction or series of related transactions resulting in any of the following: (1) a sale, lease, transfer, exclusive license, exchange or other disposition of all or substantially all the assets of the Corporation, (2) a merger, consolidation, sale or reorganization as a result of which stockholders of the Corporation immediately prior to such merger, consolidation, sale or reorganization possess less than 50% of the voting power of the acquiring, surviving or successor entity immediately following such merger, consolidation, sale or reorganization, or (3) the transfer by one or more stockholders of the Corporation of securities of the Corporation representing 50% or more of the combined voting power of the then outstanding securities of the Corporation; provided, however, if the holders of at least a majority of the shares of Preferred Stock then outstanding, voting on an as-if converted basis (a "***Preferred Majority***"), so elect by giving written notice to the Corporation before the effective date of a merger, consolidation, sale or reorganization that would otherwise be a Liquidating Event as defined herein, such merger, consolidation, sale or reorganization shall not be deemed a Liquidating Event and the provisions of Subsection D.7 shall apply, and provided further that a "Liquidating Event" shall not include any transaction or series of related transactions principally undertaken for bona fide equity financing purposes in which cash is received by the Corporation or any successor or indebtedness of the Corporation is cancelled or converted, or a combination thereof. Upon the occurrence of any Liquidating Event that would involve the distribution of assets other than cash with respect to the outstanding shares of Preferred Stock, the amount of such distribution shall be the fair market value thereof at the time of such distribution as determined in good faith by the Board of Directors of the Corporation, and any securities to be distributed in such event shall be valued as follows:

(i) Securities not subject to investment letter or other similar restrictions on free marketability covered by subsection (ii) hereof:

(A) if traded on a securities exchange, the value shall be deemed to be the average of the closing prices of the securities on such exchange over the 30-day period ending three (3) business days prior to the closing;

(B) if actively traded over-the-counter, the value shall be deemed to be the average of the closing bid or sale prices (whichever is applicable) over the 30-day period ending three (3) business days prior to the closing; and

(C) if there is no active public market, the value shall be the fair market value thereof, as reasonably determined by the Board of Directors of the Corporation in good faith.

(ii) The method of valuation of securities subject to investment letter or other restrictions on free marketability (other than restrictions arising solely by virtue of a stockholder's status as an affiliate or former affiliate) shall be to make an appropriate discount from the market value determined as provided in clauses (A), (B) or (C) of subsection (i) hereof, to reflect the adjusted fair market value thereof, as reasonably determined by the Board of Directors of the Corporation in good faith.

6. Allocation of Escrow and Contingent Consideration. Upon the occurrence of any Liquidating Event, if any portion of the consideration payable to the stockholders of the Corporation is payable only upon satisfaction of contingencies (the "***Additional Consideration***"), the transaction documents for such Liquidating Event shall provide that (a) the portion of such consideration that is not Additional Consideration (such portion, the "***Initial Consideration***") shall be allocated among the holders of capital stock of the Corporation in accordance with this Section B as if the Initial Consideration were the only consideration payable in connection with such Liquidating Event and (b) any Additional Consideration which becomes payable to the stockholders of the Corporation upon satisfaction of such contingencies shall be allocated among the holders of capital stock of the Corporation in accordance with this Section B after taking into account the previous payment of the Initial Consideration as part of the same transaction. For the purposes of this Section 5, consideration placed into escrow or retained as holdback to be available for satisfaction of indemnification or similar obligations in connection with such Liquidating Event shall be deemed to be Additional Consideration.

C. Voting.

1. General Rights. Except as otherwise expressly provided herein or as required by law, the holder of each share of Preferred Stock shall be entitled to the number of votes equal to the number of shares of Common Stock into which such share of Preferred Stock could then be converted and shall have voting rights and powers equal to the voting rights and powers of the Common Stock (except as otherwise expressly provided herein or as required by law, voting together with the Common Stock as a single class) and shall be entitled to notice of any stockholders' meeting in accordance with the Bylaws of the Corporation. Fractional votes shall not, however, be permitted and any fractional voting rights resulting from the above formula (after aggregating all shares of Common Stock into which shares of Preferred Stock held by each holder could be converted) shall be reduced to the nearest whole number.

2. Protective Provisions. In addition to any other rights provided by law or as set forth in this Restated Certificate, for so long as any shares of Preferred Stock are outstanding the Corporation shall not, without first obtaining the affirmative vote or written consent of the holders of at least a majority of the then outstanding shares of Preferred Stock, including holders of at least 50% of the then outstanding shares of Series C Preferred Stock (such required holders, the "***Requisite Preferred Holders***"), consenting or voting together as a separate class on an as-converted to Common Stock basis, take any of the following actions (whether by merger, consolidation, recapitalization or otherwise):

(a) authorize or effect any Liquidating Event;

(b) authorize or effect a merger, consolidation or share exchange between the Corporation and another entity or a sale, lease, license or other disposition of all or substantially all of the Corporation's assets, or effect a sale or other disposition which results in the holders of the Corporation's capital stock prior to the transaction owning less than fifty percent (50%) of the voting power of the Corporation's capital stock after the transaction, or some other reorganization or acquisition of the Corporation, whether or not any of the foregoing would constitute a Liquidating Event;

(c) redeem, purchase, pay any dividend on or otherwise acquire for value any shares of Common Stock or any Preferred Stock (other than employee, director or consultant shares repurchased at the lower of cost or fair market value pursuant to equity incentive agreements or other similar arrangements providing for the right to repurchase shares upon the termination of services) prior to the Preferred Stock;

(d) authorize or issue any shares of capital stock having rights, preferences or privileges superior to or on parity with the Preferred Stock, or authorize or issue any securities exchangeable, convertible or exercisable for shares of such capital stock;

(e) reclassify any shares of Common Stock or any other class or series of capital stock of the Corporation;

(f) increase the authorized number of shares of any class or series of capital stock of the Corporation;

(g) alter or change any of the powers, preferences, privileges or rights of the Preferred Stock;

(h) amend, repeal or add to any provision of this Restated Certificate or the Corporation's Bylaws as in effect on the date this Restated Certificate is filed with the Secretary of State of the State of Delaware (the "***Effective Date***");

(i) convert the Corporation into another form of business entity or into a corporation organized in a jurisdiction other than Delaware;

(j) change the fundamental business of the Corporation;

(k) increase or decrease the size of the Corporation's Board of Directors;

(l) create or authorize the creation of any debt security, other than equipment leases or bank lines of credit unless such debt security has received the prior approval of the Board of Directors of the Corporation, including the approval of the Series C Director then serving;

(m) create or hold capital stock in any subsidiary that is not a wholly-owned subsidiary or dispose of any subsidiary stock or all or substantially all of the assets of any subsidiary; or

(n) incur any indebtedness in excess of $500,000.

3. Election of Directors. At each meeting of the stockholders held for the election of directors, or upon the taking of a written consent of stockholders for such purpose, (i) the holders of Common Stock shall be entitled, voting as a separate class, to elect one (1) member of the Board of Directors of the Corporation, (ii) for so long as at least 1,000,000 shares of the Series A/A-1 Preferred Stock

remain outstanding (subject to equitable adjustment for any Recapitalizations), the holders of Series A/A-1 Preferred Stock shall be entitled, voting together as a separate class on an as-converted to Common Stock basis, to elect two (2) members of the Board of Directors of the Corporation (the "***Series A Directors***"), (iii) for so long as at least 1,000,000 shares of the Series B Preferred Stock remain outstanding (subject to equitable adjustment for any Recapitalizations), the holders of Series B Preferred Stock shall be entitled, voting together as a separate class, to elect one (1) member of the Board of Directors of the Corporation (the "***Series B Director***") and (iv) for so long as at least 1,000,000 shares of the Series C Preferred Stock remain outstanding (subject to equitable adjustment for any Recapitalizations), the holders of Series C Preferred Stock shall be entitled, voting together as a separate class, to elect one (1) member of the Board of Directors of the Corporation (the "***Series C Director***"). All remaining directors of the Corporation shall be elected by the holders of Common Stock and Preferred Stock, voting together as a single class on an as-converted to Common Stock basis. In the event the holders of Series C Preferred Stock, Series B Preferred Stock, Series A/A-1 Preferred Stock or Common Stock, as the case may be, fail to elect a member of the Board of Directors of the Corporation as set forth above, such directorship shall remain vacant until a member of the Board of Directors is elected by the holders of Series C Preferred Stock, Series B Preferred Stock, Series A/A-1 Preferred Stock or Common Stock, as the case may be, and no such directorship shall be filled by stockholders of the Corporation other than by the stockholders of the Corporation that are entitled to elect a person to fill such directorship, voting as a separate class. Any director who shall have been elected by the holders of Series C Preferred Stock, Series B Preferred Stock, Series A/A-1 Preferred Stock or Common Stock, as the case may be, may be removed during the aforesaid term of office, either with or without cause, by, and only by, the affirmative vote of the holders of a majority of the shares of Series C Preferred Stock, Series B Preferred Stock, Series A/A-1 Preferred Stock or Common Stock, as the case may be, in accordance with the Bylaws of the Corporation, given either at a special meeting of such stockholders duly called for that purpose or pursuant to a written consent of stockholders, and any vacancy thereby created may be filled by the holders of a majority of the shares of the Series C Preferred Stock, Series B Preferred Stock, Series A/A-1 Preferred Stock or Common Stock, as the case may be, represented at a meeting or pursuant to written consent.

D. Conversion Rights.

Each share of Preferred Stock shall be convertible at the option of the holder thereof, at any time after the issuance of such share, into fully paid and nonassessable shares of Common Stock of the Corporation. The number of shares of Common Stock into which each share of the Series A Preferred Stock, Series A-1 Preferred Stock, Series B Preferred Stock or Series C Preferred Stock may be converted shall be determined by dividing the Series A Original Price by the Series A Conversion Price, the Series A-1 Original Price by the Series A-1 Conversion Price, the Series B Original Price by the Series B Conversion Price or the Series C Original Price by the Series C Conversion Price, as applicable, (each as determined as hereinafter provided) in effect at the time of the conversion.

1. Conversion Price. Before any adjustment pursuant to Section E hereof, the Series A conversion price (the "***Series A Conversion Price***") shall be equal to the Series A Original Price, the Series A-1 conversion price (the "***Series A-1 Conversion Price***") shall be equal to the Series A-1 Original Price, the Series B conversion price (the "***Series B Conversion Price***") shall be equal to the Series B Original Price and the Series C conversion price (the "***Series C Conversion Price***") shall be equal to the Series C Original Price (the Series A Conversion Price, the Series A-1 Conversion Price, the Series B Conversion Price and the Series C Conversion Price shall each be a "***Conversion Price***").

2. Mechanics of Conversion. The holder of any shares of Preferred Stock may exercise the conversion rights as to such shares or any part thereof by delivering to the Corporation

during regular business hours, at the office of any transfer agent of the Corporation for the Preferred Stock, or at the principal office of the Corporation or at such other place as may be designated by the Corporation, the certificate or certificates for the shares to be converted, duly endorsed for transfer to the Corporation or accompanied by a written instrument or instruments of transfer (if required by it), accompanied by written notice stating that the holder elects to convert all or a number of such shares represented by the certificate or certificates. Such notice shall also state such holder's name or the names of the nominees in which such holder wishes the certificate or certificates for shares of Common Stock to be issued. Conversion shall be deemed to have been effected on the date when such delivery is made, and such date is referred to herein as the "***Conversion Date***." As promptly as practicable thereafter the Corporation shall issue and deliver to such holder, at such office or other place designated by the Corporation, a certificate or certificates for the number of full shares of Common Stock to which such holder is entitled and a check for cash with respect to any fractional interest in a share of Common Stock as provided in Subsection D.3 below. All shares of Preferred Stock which shall have been surrendered for conversion as herein provided shall no longer be deemed to be outstanding and all rights with respect to such shares, including the rights, if any, to receive notices and to vote, shall immediately cease and terminate upon the Conversion Date, except only the right of the holder thereof to receive shares of Common Stock in exchange therefor. The holder shall be deemed to have become a stockholder of record with respect to the shares of Common Stock on the applicable Conversion Date. Upon conversion of only a portion of the number of shares of Preferred Stock represented by a certificate surrendered for conversion, the Corporation shall issue and deliver to the holder of the certificate so surrendered for conversion, at the expense of the Corporation, a new certificate covering the number of shares of Preferred Stock representing the unconverted portion of the certificate so surrendered.

3. Fractional Shares. No fractional shares of Common Stock or scrip shall be issued upon conversion of shares of Preferred Stock. If more than one share of Preferred Stock shall be surrendered for conversion at any one time by the same holder, the number of full shares of Common Stock issuable upon conversion thereof shall be computed on the basis of the aggregate number of shares of Preferred Stock so surrendered. Instead of any fractional shares of Common Stock that would otherwise be issuable upon conversion of any shares of Preferred Stock, the Corporation shall pay a cash adjustment in respect of such fractional interest equal to the fair market value of such fractional interest as determined in good faith by the Corporation's Board of Directors.

4. Payment of Taxes. The Corporation shall pay any and all issue and transfer taxes that may be payable in respect of any issue or delivery of shares of Common Stock on conversion of the Preferred Stock pursuant hereto. The Corporation shall not, however, be required to pay any tax that may be payable in respect of any transfer involved in the issue and delivery of shares of Common Stock in a name other than that in which the Preferred Stock so converted was registered, and no such issue or delivery shall be made unless and until the person requesting such issue has paid to the Corporation the amount of any such tax or has established, to the satisfaction of the Corporation, that such tax has been paid.

5. Reservation of Stock Issuable Upon Conversion. The Corporation shall at all times reserve and keep available, out of its authorized but unissued Common Stock, solely for the purpose of effecting the conversion of the Preferred Stock, the full number of shares of Common Stock deliverable upon the conversion of all the Preferred Stock from time to time outstanding. The Corporation shall from time to time use its best effort to obtain necessary director and stockholder approvals, in accordance with the laws of the State of Delaware, to increase the authorized amount of its Common Stock if at any time the authorized amount of its Common Stock remaining unissued shall not be sufficient to permit the conversion of all of the shares of Preferred Stock at the time outstanding, and

shall take all such actions as are necessary to increase such authorized amount of Common Stock upon obtaining such approvals. Before taking any action that would cause an adjustment reducing the Series A Conversion Price, Series A-1 Conversion Price, the Series B Conversion Price or the Series C Conversion Price below the then-par value of the shares of Common Stock issuable upon the conversion of the Preferred Stock, the Corporation will take any corporate action that may, in the opinion of its counsel, be necessary in order that the Corporation may validly and legally issue fully paid and nonassessable shares of Common Stock at such adjusted Conversion Price.

6. Adjustment for Reclassification, Exchange and Substitution. If the Common Stock issuable upon the conversion of the Preferred Stock shall be changed into the same or a different number of shares of any class or classes of stock, whether by capital reorganization, reclassification, or otherwise (other than a subdivision or combination of shares or stock dividend provided for in Subsection E.1), then and in each such event the holder of each share of Preferred Stock shall have the right thereafter to convert such share into the kind and amount of shares of stock and other securities and property receivable upon such reorganization, reclassification, or other change, by holders of the number of shares of Common Stock into which such shares of Preferred Stock might have been converted immediately prior to such reorganization, reclassification, or change.

7. Reorganizations, Mergers or Consolidations. In case of any consolidation or merger of the Corporation with or into another corporation (other than a consolidation, merger or sale treated as a Liquidating Event pursuant to Subsection B.5 above), each share of Preferred Stock shall thereafter be convertible into the kind and amount of shares of stock or other securities or property to which a holder of the number of shares of Common Stock of the Corporation deliverable upon conversion of the Preferred Stock would have been entitled upon such consolidation, merger or sale; and in such case, appropriate adjustment (as determined in good faith by the Board of Directors of the Corporation) shall be made in the application of the provisions of Sections D and E with respect to the rights and interest thereafter of the holders of Preferred Stock, to the end that the provisions set forth in Sections D and E shall thereafter be applicable, as nearly as reasonably may be, in relation to any shares of stock or other property thereafter deliverable upon the conversion of the Preferred Stock.

8. Listing of Shares Issuable Upon Conversion. If any shares of Common Stock to be reserved for the purpose of conversion of shares of Preferred Stock require registration or listing with, or approval of, any governmental authority, stock exchange or other regulatory body under any federal or state law or regulation or otherwise, before such shares may be validly issued or delivered upon conversion, the Corporation will in good faith and as expeditiously as possible endeavor to secure such registration, listing or approval, as the case may be.

9. Valid Issuance. All shares of Common Stock that may be issued upon conversion of the shares of Preferred Stock will, upon issuance by the Corporation, be validly issued, fully paid and nonassessable and free from all taxes, liens and charges with respect to the issuance thereof.

10. No Dilution or Impairment. The Corporation will not, by amendment of this Restated Certificate or through any reorganization, transfer of assets, consolidation, merger, dissolution, issue or sale of securities or any other voluntary action, avoid or seek to avoid the observance or performance of any of the terms to be observed or performed hereunder by the Corporation, but will at all times in good faith assist in the carrying out of all of the provisions of Sections D and E and in the taking of all such action as may be necessary or appropriate in order to protect the conversion rights of the holders of Preferred Stock against impairment.

E. Adjustment of Conversion Prices.

The Conversion Prices from time to time in effect shall be subject to adjustment from time to time as follows.

1. Stock Splits, Dividends and Combinations. In case the Corporation shall at any time subdivide the outstanding shares of Common Stock or shall issue a dividend in Common Stock on its outstanding Common Stock without a corresponding subdivision of or dividend on each series of Preferred Stock, the Conversion Price in effect for each non-participating series of Preferred Stock immediately prior to such subdivision or the issuance of such dividend shall be proportionately decreased, and in case the Corporation shall at any time combine the outstanding shares of Common Stock into a lesser number of shares of Common Stock without a corresponding combination of each series of Preferred Stock, the Conversion Price in effect for each non-participating series of Preferred Stock immediately prior to such combination shall be proportionately increased, concurrently with the effectiveness of such subdivision, dividend or combination, as the case may be.

2. Noncash Dividends, Stock Purchase Rights, Capital Reorganizations and Dissolutions. In case:

(a) the Corporation shall take a record of the holders of its Common Stock for the purpose of entitling them to receive a dividend or any other distribution, payable otherwise than in cash; or

(b) the Corporation shall take a record of the holders of its Common Stock for the purpose of entitling them to subscribe for or purchase any shares of stock of any class or to receive any other rights; or

(c) of any capital reorganization of the Corporation, reclassification of the capital stock of the Corporation (other than a subdivision or combination of its outstanding shares of Common Stock), consolidation or merger of the Corporation with or into another Corporation that is not a Liquidating Event or conveyance of all or substantially all of the assets of the Corporation to another corporation that is not a Liquidating Event;

then, and in any such case, the Corporation shall cause to be mailed to the transfer agent for the Preferred Stock (if any) and to the holders of record of the outstanding Preferred Stock, at least ten (10) days prior to the date hereinafter specified, a notice stating the date on which (i) a record is to be taken for the purpose of such dividend, distribution or rights, or (ii) such reclassification, reorganization, consolidation, merger, conveyance, dissolution, liquidation or winding up is to take place and the date, if any is to be fixed, as of which holders of Common Stock of record shall be entitled to exchange their shares of Common Stock for securities or other property deliverable upon such reclassification, reorganization, consolidation, merger, conveyance, dissolution, liquidation or winding up.

3. Issuances at Less Than the Conversion Price. Upon the issuance or sale by the Corporation of:

(a) Common Stock for a consideration per share less than a Conversion Price in effect immediately prior to the time of such issue or sale; or

(b) any Stock Purchase Rights (as hereinafter defined) where the consideration per share for which shares of Common Stock may at any time thereafter be issuable upon

exercise thereof (or, in the case of Stock Purchase Rights exercisable for the purchase of Convertible Securities (as hereinafter defined), upon the subsequent conversion or exchange of such Convertible Securities) shall be less than a Conversion Price in effect immediately prior to the time of the issue or sale of such Stock Purchase Rights; or

(c) any Convertible Securities where the consideration per share for which shares of Common Stock may at any time thereafter be issuable pursuant to the terms of such Convertible Securities shall be less than a Conversion Price in effect immediately prior to the time of the issue or sale of such Convertible Securities;

other than an issuance of Common Stock pursuant to Subsections E.1 or E.6 hereof (any such issuance shall be referred to hereinafter as a "***Dilutive Issuance***"), then, forthwith upon such issue or sale, each then effective Conversion Price which exceeds the consideration per share received, shall be reduced concurrently with such issue in order to increase the number of shares of Common Stock into which the Preferred Stock, as applicable, is convertible to a price (calculated to the nearest cent) determined by the following formula:

$$CP^1 = CP * \frac{N + C}{N + AS}$$

where:

CP^1	=	the Conversion Price as so adjusted;
CP	=	the former Conversion Price immediately prior to the Dilutive Issuance;
N	=	the number of shares of Common Stock outstanding immediately prior to such issuance (or deemed issuance) assuming exercise or conversion of all outstanding Convertible Securities and Stock Purchase Rights;
C	=	the number of shares of Common Stock that the aggregate consideration received or deemed to be received by the Corporation for the total number of additional securities so issued or deemed to be issued would purchase if the purchase price per share were equal to CP; and
AS	=	the number of shares of Common Stock so issued or deemed to be issued.

Notwithstanding the foregoing, the applicable Conversion Price shall not at such time be reduced if such reduction would be an amount less than $0.01, but any such amount shall be carried forward and deduction with respect thereto made at the time of and together with any subsequent reduction that, together with such amount and any other amount or amounts so carried forward, shall aggregate $0.01 or more.

4. Defined Terms. For purposes of this Section E, the following provisions will be applicable.

(a) "***Convertible Securities***" shall mean evidences of indebtedness, shares of stock (including, without limitation, the Preferred Stock) or other securities that are convertible into or exchangeable for, with or without payment of additional consideration, shares of Common Stock.

(b) "***Stock Purchase Rights***" shall mean any warrants, options or other rights to subscribe for, purchase or otherwise acquire any shares of Common Stock or any Convertible Securities.

(c) The Common Stock underlying the Convertible Securities and Stock Purchase Rights shall be deemed outstanding and issued or sold at the time of the issue or sale of the Convertible Security or Stock Purchase Right.

5. Determination of Consideration. The "consideration" actually received by the Corporation for the issuance, sale, grant or assumption of shares of Common Stock, Stock Purchase Rights or Convertible Securities, irrespective of the accounting treatment of such consideration, shall be valued as follows:

(a) in the case of cash, the net amount received by the Corporation after deduction of any accrued interest or dividends and before deducting any expenses paid or incurred and any underwriting commissions or concessions paid or allowed by the Corporation in connection with such issue or sale;

(b) in the case of consideration other than cash, the fair market value of such consideration, which shall not include the value of any Convertible Securities being converted or exchanged, as determined by the Board of Directors of the Corporation in good faith, after deducting any accrued interest or dividends; and

(c) with respect to the issuance of Stock Purchase Rights and Convertible Securities, the total consideration, if any, received by the Corporation as consideration for the issuance of the Stock Purchase Rights or the Convertible Securities, as the case may be, plus the minimum aggregate amount of additional consideration, if any, payable to the Corporation upon the exercise of such Stock Purchase Rights or upon the conversion or exchange of such Convertible Securities, as the case may be, in each case after deducting any accrued interest or dividends.

In the event of any change in (i) the consideration, if any, payable upon exercise of any Stock Purchase Rights or upon the conversion or exchange of any Convertible Securities, or (ii) the rate at which any Convertible Securities are convertible into or exchangeable for shares of Common Stock, the applicable Conversion Price, as computed upon the original issue thereof shall forthwith be readjusted to the Conversion Price that would have been in effect at such time had such Stock Purchase Rights or Convertible Securities provided for such changed purchase price, consideration or conversion rate, as the case may be, at the time initially granted, issued or sold. On the expiration of any Stock Purchase Rights not exercised or of any right to convert or exchange under any Convertible Securities not exercised, the Conversion Price then in effect shall forthwith be increased to the Conversion Price that would have been in effect at the time of such expiration had such Stock Purchase Rights or Convertible Securities never been issued. No readjustment of the Conversion Price pursuant to this paragraph shall (A) increase the Conversion Price by an amount in excess of the adjustment originally made to the Conversion Price in respect of the issue, sale or grant of the applicable Stock Purchase Rights or Convertible Securities, or (B) require any adjustment to the amount paid or number of shares of Common Stock received by any holder of Preferred Stock upon any conversion of any share of Preferred Stock prior to the date upon which such readjustment to the Conversion Price shall occur.

6. Exclusions for Adjustment for Issuances at Less Than the Conversion Price. Anything herein to the contrary notwithstanding, the Corporation shall not be required to make any adjustment of any Conversion Price in the case of: (a) Common Stock or Stock Purchase Rights issued

or issuable to employees, officers, consultants or directors of the Corporation pursuant to any incentive plan, agreement or arrangement approved by the Board of Directors of the Corporation, which approval must include the Series C Director then serving; (b) securities issued in a Qualified Public Offering; (c) securities issued upon conversion of the Convertible Securities or the exercise of Stock Purchase Rights; or (d) Common Stock or Preferred Stock issued by way of dividend or other comparable distribution on the Preferred Stock (each of (a) through (d), "***Excluded Securities***").

7. Certificate of Adjustment. Upon the occurrence of each adjustment or readjustment of any Conversion Price pursuant to this Section E, the Corporation at its expense shall promptly compute such adjustment or readjustment in accordance with the terms thereof, and prepare and furnish to each holder of Preferred Stock affected thereby a certificate setting forth such adjustment or readjustment and showing in detail the facts upon which such adjustment or readjustment is based. The Corporation shall, upon the written notice at any time of any affected holder of Preferred Stock furnish or cause to be furnished to such holder a like certificate setting forth (a) such adjustment or readjustment, (b) the Conversion Price at the time in effect, and (c) the number of shares of Common Stock and the amount, if any, of other property that at the time would be received upon the conversion of such holder's shares.

F. Mandatory Conversion.

1. Mandatory Conversion Triggers. Each share of Preferred Stock shall automatically be converted into shares of Common Stock at the then-applicable conversion rate upon the occurrence of a Qualified Public Offering. "***Qualified Public Offering***" means a closing of an underwritten public offering pursuant to an effective registration statement under the Securities Act of 1933, as amended, covering the offer and sale of Common Stock of the Corporation to the public where the Corporation receives proceeds of not less than $50,000,000 (net of underwriters discounts and commissions), and the price per share to the public yields a price per share to the public of not less than (a) if occurring on or prior to June 30, 2016, 1.50 times the Series C Original Price or (b) if occurring after June 30, 2016, 3.0 times the Series C Original Price. In addition, each share of Preferred Stock shall automatically be converted into shares of Common Stock at the then applicable conversion rate upon the affirmative vote of the Requisite Preferred Holders, voting separately as a single class on an as-converted to Common Stock basis. All holders of record of shares of Preferred Stock will be given at least thirty (30) days prior written notice of the date fixed for mandatory conversion of the Preferred Stock and the event causing the mandatory conversion of the Preferred Stock into Common Stock. Such notice shall be sent by first class mail, postage prepaid, to each holder of record of Preferred Stock at such holder's address as shown in the records of the Corporation.

2. Mechanics of Mandatory Conversion. On or before the date so fixed for conversion, each holder of shares of the Preferred Stock shall surrender the certificate or certificates for all such shares to the Corporation at the place designated in such notice and shall thereafter receive certificates for the number of shares of Common Stock to which such holder is entitled. All certificates evidencing shares of Preferred Stock which are required to be surrendered for conversion on such date shall, from and after such date, be deemed to have been retired and cancelled and the shares of Preferred Stock represented thereby shall be deemed converted into shares of Common Stock for all purposes, notwithstanding the failure of the holder or holders thereof to surrender such certificates or warrants on or prior to such date. The mechanics for conversion and other provisions relating to conversion of Preferred Stock into Common Stock set forth elsewhere in this Restated Certificate shall apply to the mandatory conversion of the Preferred Stock.

G. Redemption

1. Redemption. Shares of Preferred Stock shall be redeemed by the Corporation at a price equal to the Series A Original Price, Series A-1 Original Price, Series B Original Price or Series C Original Price, as applicable, plus all declared but unpaid dividends as of the Redemption Date (the "***Redemption Price***"), in three (3) equal annual installments commencing not more than sixty (60) days after receipt by the Corporation at any time on or after the third anniversary of the first sale by the Corporation of the Series C Preferred Stock, from the Requisite Preferred Holders, voting together as a separate class on an as-converted to Common Stock basis, of written notice requesting redemption of all shares of Preferred Stock (a "***Redemption Request***"). Upon receipt of a Redemption Request, the Corporation shall apply all of its assets to any such redemption, and to no other corporate purpose, except to the extent prohibited by Delaware law governing distributions to stockholders. The date of each installment shall be referred to as a "***Redemption Date***."

2. Redemption Mechanics.

(a) Notice. The Corporation shall send written notice of the redemption (the "***Redemption Notice***") to each holder of record of Preferred Stock not less than 30 days prior to the Redemption Date. The Redemption Notice shall state:

(i) the number of shares of Preferred Stock held by the holder that the Corporation shall redeem on the Redemption Date specified in the Redemption Notice;

(ii) the Redemption Date and the Redemption Price;

(iii) that the holder is to surrender to the Corporation, in the manner and at the place designated, his, her or its certificate or certificates representing the shares of Preferred Stock to be redeemed.

(b) Number of Shares to Be Redeemed. On each Redemption Date, the Corporation shall redeem, on a pro rata basis in accordance with the number of shares of Preferred Stock, to be redeemed from each holder, that number of shares of Preferred Stock, determined by dividing (i) the total number of shares of each series of Preferred Stock to be redeemed immediately prior to such Redemption Date by (ii) the number of applicable remaining Redemption Dates (including the Redemption Date to which such calculation applies). If the redemption by the Corporation of all shares of Preferred Stock to be redeemed on such Redemption Date would be prohibited by Delaware law governing distributions to stockholders, the Corporation shall redeem a pro rata portion of each holder's redeemable shares of each series of Preferred Stock to the extent such redemption would not be prohibited by the DGCL governing distributions to stockholders, based on the respective amounts which would otherwise be payable in respect of the shares to be redeemed if the redemption of all such shares would not be prohibited by Delaware law governing distributions to stockholders, and shall redeem the remaining shares of Preferred Stock to have been redeemed as soon as practicable after the Corporation would not be prohibited from making such redemption under Delaware law governing distributions to stockholders.

(c) Exchange of Certificates; Payment. On or before the applicable Redemption Date, each holder of shares of Preferred Stock to be redeemed on the Redemption Date, unless such holder has exercised his, her or its right to convert such shares as provided in Section 4, shall surrender the certificate or certificates representing such shares (or, if such registered holder alleges that

such certificate has been lost, stolen or destroyed, a lost certificate affidavit and agreement reasonably acceptable to the Corporation to indemnify the Corporation against any claim that may be made against the Corporation on account of the alleged loss, theft or destruction of such certificate) to the Corporation, in the manner and at the place designated in the Redemption Notice, and thereupon the Redemption Price for such shares shall be payable to the order of the person whose name appears on such certificate or certificates as the owner thereof. In the event less than all of the shares of Preferred Stock represented by a certificate are redeemed, a new certificate representing the unredeemed shares of Preferred Stock shall promptly be issued to such holder.

3. Rights Subsequent to Redemption. If the Redemption Notice shall have been duly given, and if on the Redemption Date the Redemption Price payable upon redemption of the shares of Preferred Stock to be redeemed on such Redemption Date is paid or tendered for payment or deposited with an independent payment agent so as to be available therefor in a timely manner, then notwithstanding that the certificates evidencing any of the shares of Preferred Stock so called for redemption shall not have been surrendered, dividends with respect to such shares of Preferred Stock shall cease to accrue after such Redemption Date and all rights with respect to such shares shall forthwith after the Redemption Date terminate, except only the right of the holders to receive the Redemption Price without interest upon surrender of their certificate or certificates therefor.

4. Redeemed or Otherwise Acquired Shares. Any shares of Preferred Stock that are redeemed or otherwise acquired by the Corporation or any of its subsidiaries shall be automatically and immediately cancelled and retired and shall not be reissued, sold or transferred. Neither the Corporation nor any of its subsidiaries may exercise any voting or other rights granted to the holders of Preferred Stock following redemption.

ARTICLE VI

The voting, dividend and liquidation rights of the holders of the Common Stock are subject to and qualified by the rights, powers and preferences of the holders of Preferred Stock set forth herein. The holders of the Common Stock are entitled to one vote for each share of Common Stock held by them at all meetings of stockholders (and for all written actions of stockholders in lieu of meetings).

ARTICLE VII

The number of directors of the Corporation, which constitute the whole Board of Directors of the Corporation, may be fixed by the Bylaws of the Corporation. Elections of directors may be, but shall not be required to be, by written ballot.

ARTICLE VIII

In furtherance and not in limitation of the powers conferred by the laws of the State of Delaware, the Board of Directors of the Corporation is expressly authorized to make, alter and repeal the Bylaws of the Corporation, subject to the power of the stockholders of the Corporation to alter or repeal any bylaw whether adopted by them or otherwise.

ARTICLE IX

The Corporation is to have perpetual existence.

ARTICLE X

Notwithstanding the provisions of Section 242 of the Delaware General Corporation Law but subject to obtaining any other vote expressly provided for herein, the number of authorized shares of Common Stock may be increased or decreased (but not below the number of shares of Common Stock then outstanding) by an affirmative vote of the holders of a majority of the outstanding capital stock of the Corporation.

ARTICLE XI

To the fullest extent permitted by the Delaware General Corporation Law as the same exists or as may hereafter be amended, no present or former director of the Corporation shall be personally liable to the Corporation or its stockholders for monetary damages for breach of fiduciary duty as a director. Neither any amendment nor repeal of this Article, nor the adoption of any provision of this Restated Certificate inconsistent with this Article, shall eliminate or reduce the effect of this Article in respect of any matter occurring, or any cause of action, suit or claim that, but for this Article, would accrue or arise, prior to such amendment, repeal or adoption of an inconsistent provision.

ARTICLE XII

The Corporation shall have the power to indemnify any person who was or is a party or is threatened to be made a party to, or testifies in, any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative in nature, by reason of the fact such person is or was a director, officer or employee or agent of the Corporation, or is or was serving at the request of the Corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, employee benefit plan, trust or other enterprise, against expenses (including attorney's fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by such person in connection with such action, suit or proceeding to the full extent permitted by law, and the Corporation may adopt bylaws or enter into agreements with any such person for the purpose of providing for such indemnification.

ARTICLE XIII

All provisions relating to any exchange, reclassification or cancellation of issued shares are set forth in this Restated Certificate.

ARTICLE XIV

Any shares of Preferred Stock redeemed, purchased, converted or otherwise acquired by the Corporation shall be deemed retired and shall be cancelled and may not under any circumstances thereafter be reissued or otherwise disposed of by the Corporation.

ARTICLE XV

Any of the rights, powers, preferences and other terms of a series of Preferred Stock set forth herein may be waived on behalf of all holders of such series of Preferred Stock only by the affirmative written consent or affirmative vote of (a) in the case of Series A Preferred Stock or Series A-1 Preferred Stock, the holders of a majority of the then outstanding shares of Series A/A-1 Preferred Stock, (b) in the case of Series B Preferred Stock, the holders of a majority of the then outstanding shares of Series B Preferred Stock or (c) in the case of Series C Preferred Stock, the Requisite Preferred Holders, in each case voting together as a separate class on an as-converted to Common Stock basis.

ARTICLE XVI

The Corporation renounces, to the fullest extent permitted by law, any interest or expectancy of the Corporation in, or in being offered an opportunity to participate in, any Excluded Opportunity. An "***Excluded Opportunity***" is any matter, transaction or interest that is presented to, or acquired, created or developed by, or which otherwise comes into the possession of, (i) any director of the Corporation who is not an employee of the Corporation or any of its subsidiaries, or (ii) any holder of Preferred Stock or any partner, member, director, stockholder, employee or agent of any such holder, other than someone who is an employee of the Corporation or any of its subsidiaries (collectively, "***Covered Persons***"), unless such matter, transaction or interest is presented to, or acquired, created or developed by, or otherwise comes into the possession of, a Covered Person expressly and solely in such Covered Person's capacity as a director of the Corporation.

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CLEARSIDE BIOMEDICAL, INC.

THIRD AMENDED AND RESTATED INVESTOR RIGHTS AGREEMENT

November 23, 2015

CLEARSIDE BIOMEDICAL, INC.

THIRD AMENDED AND RESTATED INVESTOR RIGHTS AGREEMENT

This Third Amended and Restated Investor Rights Agreement (this "***Agreement***") is entered into as of the 23rd day of November, 2015, by and among Clearside Biomedical, Inc., a Delaware corporation (the "***Company***"), and the holders of shares of the Company's Preferred Stock from time to time outstanding (the "***Investor Stock***") listed on Exhibit A attached hereto (the "***Investors***").

RECITAL

WHEREAS, certain of the Investors (the "***Prior Investors***") are holders of shares of the Company's Series A Preferred Stock, Series A-1 Preferred Stock and Series B Preferred Stock and are party to a Second Amended and Restated Investor Rights Agreement dated as of August 29, 2014 (the "***Prior Agreement***");

WHEREAS, in connection with the issuance and sale of shares of Series C Preferred Stock to certain of the Investors pursuant to that certain Series C Preferred Stock Purchase Agreement, dated as of the date hereof, by and among the Company and certain Investors (the "***Purchase Agreement***"), the parties to the Prior Agreement desire to amend and restate the Prior Agreement in its entirety, to accept the rights, obligations and covenants hereof in lieu of their rights, obligations and covenants under the Prior Agreement.

AGREEMENT

NOW, THEREFORE, in consideration of the mutual agreements, covenants and conditions contained herein, the Company and the Investors hereby agree as follows.

Section 1. RESTRICTIONS ON TRANSFER

1.1 Restrictive Legend. Each certificate representing (a) the Investor Stock, (b) the Common Stock of the Company (the "***Common Stock***") issued upon conversion of the Investor Stock, and (c) any other securities issued in respect of the Investor Stock or Common Stock issued upon conversion of the Investor Stock upon any stock split, stock dividend, recapitalization, merger, consolidation or similar event, shall (unless otherwise permitted by the provisions of Section 1.2 below) be stamped or otherwise imprinted with a legend in substantially the following form (in addition to any legend required under applicable state securities laws).

THE SECURITIES REPRESENTED BY THIS CERTIFICATE HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED, OR APPLICABLE STATE SECURITIES LAWS. THESE SECURITIES HAVE BEEN ACQUIRED FOR INVESTMENT AND NOT WITH A VIEW TO DISTRIBUTION OR RESALE, AND MAY NOT BE SOLD, MORTGAGED, PLEDGED, HYPOTHECATED OR OTHERWISE TRANSFERRED WITHOUT AN EFFECTIVE REGISTRATION STATEMENT FOR SUCH SECURITIES UNDER THE SECURITIES ACT OF 1933, AS AMENDED, AND ANY APPLICABLE STATE SECURITIES LAWS, OR THE AVAILABILITY OF AN EXEMPTION FROM THE REGISTRATION PROVISIONS OF THE SECURITIES ACT OF 1933, AS

AMENDED, AND APPLICABLE STATE SECURITIES LAWS. COPIES OF THE INVESTOR RIGHTS AGREEMENT PROVIDING FOR RESTRICTIONS ON TRANSFER OF THESE SECURITIES MAY BE OBTAINED UPON WRITTEN REQUEST BY THE HOLDER OF RECORD OF THIS CERTIFICATE TO THE SECRETARY OF THE CORPORATION AT THE PRINCIPAL EXECUTIVE OFFICES OF THE CORPORATION.

Each stockholder consents to the Company's making a notation on its records and giving instructions to any transfer agent of the Investor Stock or the Common Stock in order to implement the restrictions on transfer established in this Section 1. Such legend shall be removed by the Company from any certificate at such time as the holder of the shares represented by the certificate satisfies the requirements of Rule 144(d) under the Securities Act of 1933, as amended (the "***1933 Act***").

1.2 Notice of Proposed Transfers. The holder of each certificate representing company capital stock (the "***Company Stock***") by acceptance thereof agrees to comply in all respects with the provisions of this Section 1.2. Prior to any proposed sale, assignment, transfer or pledge of any Company Stock, unless there is in effect a registration statement under the 1933 Act and any applicable state securities laws covering the proposed transfer, the holder thereof shall give written notice to the Company of such stockholder's intention to effect such transfer, sale, assignment or pledge. Each such notice shall describe the manner and circumstances of the proposed transfer, sale, assignment or pledge in sufficient detail and, if reasonably requested by the Company, shall be accompanied at such holder's expense by a written opinion of legal counsel who shall, and whose legal opinion shall, be reasonably satisfactory to the Company addressed to the Company, to the effect that the proposed transfer of the Company Stock may be effected without such registration. Each certificate evidencing the Company Stock transferred as above provided shall bear, except if such transfer is made pursuant to Rule 144, the appropriate restrictive legend set forth in Section 1.1 above, except that such certificate shall not bear such restrictive legend if in the opinion of counsel for such holder and the Company such legend is not required in order to establish compliance with any provisions of the 1933 Act or any applicable state securities laws. Notwithstanding the foregoing, no such opinion of counsel shall be necessary for a transfer by a stockholder which is (a) a partnership transferring to its partners or former partners in accordance with the partnership interests, (b) a limited liability company transferring to its members or former members in accordance with their interest in the limited liability company, or (c) a corporation transferring to its stockholders in accordance with their interest in the corporation; provided that in each case the transferee will be subject to the terms of this Agreement to the same extent as if he or she were an original stockholder hereunder.

Section 2. PREEMPTIVE RIGHTS

2.1 Certain Definitions. As used in this Section 2:

(a) The term "***Eligible Holder***" shall mean a holder of Investor Stock, that holds (either individually or collectively with its affiliates) at least 500,000 shares of the outstanding Preferred Stock of the Company (subject to adjustment in the case of a stock split, stock dividend, recapitalization, merger, consolidation or similar event).

(b) The term "***New Securities***" shall mean any capital stock of the Company, whether now authorized or not, and rights, options or warrants to purchase such capital stock, and securities of any type whatsoever that are, or may become, convertible into such capital stock; provided that the term "New Securities" does not include the following issuances: (i) Excluded Securities (as such term is defined in the Company's Fifth Amended and Restated Certificate of Incorporation (as it may be amended from time to time, the "***Charter***"); or (ii) the securities sold or to be sold in the future pursuant to the Purchase Agreement.

(c) The term "***Pro Rata Share***" shall mean the ratio, (i) the numerator of which is the number of shares of Common Stock held by such Eligible Holder, or issuable to such Eligible Holder upon the conversion of shares of Investor Stock held by such Eligible Holder, on the date of the Company's written notice pursuant to Section 2.3 hereof, and (ii) the denominator of which is the number of shares of Common Stock outstanding, assuming for this purpose conversion or exercise of all securities convertible into or exercisable for Common Stock of the Company.

2.2 Preemptive Rights. The Company hereby grants to each Eligible Holder, subject to the terms and conditions specified in this Section 2, the right of first refusal to purchase, on the terms and conditions set forth in the Company's notice pursuant to Section 2.3 hereof, up to its Pro Rata Share of all New Securities that the Company may, from time to time, propose to sell and issue.

2.3 Required Notices. In the event the Company proposes to undertake an issuance of New Securities, it shall give each Eligible Holder written notice of its intention, describing the type of New Securities, the price and the general terms upon which the Company proposes to issue the same. Each Eligible Holder shall have thirty (30) days from the date of any such notice to exercise its preemptive right under Section 2.2 hereof to purchase such New Securities for the price and upon the general terms specified in the notice by giving written notice to the Company and stating therein the quantity of New Securities to be purchased.

2.4 Company's Right to Sell. If not all of the Eligible Holders elect to purchase their Pro Rata Share of the New Securities, then the Company shall promptly notify in writing the Eligible Holders who do so elect and shall offer such Eligible Holders the right to acquire such unsubscribed securities on a *pro rata* basis. The Eligible Holders shall have five (5) days after receipt of such notice to notify the Company of its election to purchase all or a portion of such unsubscribed securities. The Company shall have ninety (90) days after the thirty (30) day period described in Section 2.3 hereof to sell all such New Securities respecting which the Eligible Holders' preemptive rights hereunder were not exercised, at a price and upon terms no more favorable in any material respect to the purchasers thereof than specified in the Company's notice. In the event the Company has not sold all such New Securities within such ninety (90) day period, the Company shall not thereafter issue or sell any New Securities without first offering such New Securities to the Eligible Holders in the manner provided herein.

2.5 Assignment of Preemptive Rights. The rights contained in this Section 2 may be assigned or otherwise conveyed to transferees or assignees of Eligible Holders; provided that (i) such transfer is effected in compliance with Section 1.2 hereof, (ii) such transferee (A) is a current or former principal, manager, member, limited partner, general partner, stockholder, subsidiary, officer or affiliate of such transferor of the capital stock, (B) is a family member of the transferor or a trust or other similar entity for the benefit of the transferor or a family member of the transferor, or (C) acquires at least 250,000 shares of the transferor's capital stock (as adjusted for stock splits, stock dividends, recapitalizations and other combinations), (iii) such transferee agrees to be subject to all restrictions set forth in this Agreement, (iv) the Company is provided with written notice of such transfer and (v) such transferee is an accredited investor or otherwise eligible under applicable securities law to acquire the New Securities without the same being registered under the 1933 Act or any similar law.

2.6 Expiration of Right. The rights granted under this Section 2 shall not apply to, and shall expire upon, the first to occur of (a) the effectiveness of a registration statement for the sale of the Company's shares of Common Stock in a firm commitment underwritten public offering registered under the 1933 Act (a "***Qualified Public Offering***"), or (b) a merger, consolidation, sale or reorganization that constitutes a Liquidating Event under the Charter.

Section 3. COMPANY COVENANTS

3.1 Affirmative Covenants.

(a) Financial Statements and Information. The Company will cause to be furnished to each Major Investor (as defined below) the following reports (prepared in accordance with United States generally accepted accounting principles applied on a consistent basis, except that the unaudited reports may not contain notes or reserves and will be subject to year-end adjustment), provided, however, that the Company shall not be obligated pursuant to this Section 3.1(a) to provide financial information to any person whom the Company reasonably believes is a competitor of the Company; provided, further, that the Company agrees and acknowledges that Santen Pharmaceutical Co., Ltd. ("***Santen***") shall not be deemed a competitor for purposes of Sections 3.1(a) and 3.1(b). As used herein, the term "***Major Investor***" means any Investor owning (either individually or collectively with its affiliates) not less than 500,000 of the outstanding shares of the Company's Preferred Stock and each transferee who holds no less than that number of shares of the Company's Preferred Stock.

(i) As soon as practicable, but in any event within one hundred twenty (120) days after the end of each fiscal year of the Company, the Company will furnish to each Major Investor (A) reviewed or audited consolidated balance sheets of the Company and its subsidiaries, if any, as at the end of such fiscal year, and reviewed or audited consolidated statements of income and losses, stockholders' equity and cash flows of the Company and its subsidiaries, if any, for such fiscal year, setting forth in each case in comparative form the figures for the previous fiscal year, if any, all in reasonable detail and accompanied by a report and opinion thereon by independent auditors selected by the Company's Board of Directors (the "***Board***"), and (B) a copy of such auditors' management letter prepared in connection therewith, if any.

(ii) As soon as practicable after the end of each quarter, but in any event within thirty (30) days after the end of each such quarter, the Company will furnish to each Major Investor the unaudited consolidated balance sheets of the Company and its subsidiaries, if any, as of the end of such quarter, an up-to-date capitalization table and its unaudited consolidated statements of income and losses, stockholders' equity and cash flows for such quarter, setting forth in each case in comparative form the figures for the corresponding period of the preceding fiscal year, all in reasonable detail except that such financial statements may not contain notes or reserves and will be subject to year-end adjustment.

(iii) The Company will furnish to each Major Investor with reasonable promptness, such other information respecting the business, properties or the condition or operations, financial or other, of the Company or any subsidiary as any Major Investor may from time to time reasonably request or as determined by the Board.

(iv) As soon as practicable, but in any event no less than thirty (30) days before the beginning of each fiscal year, the Company will furnish to each Major Investor an annual operating plan and budget for the following fiscal year (which budget and plan shall include capital and operating expense budgets, cash flow projections, profit and loss projections and projected balance sheets for such year on a monthly basis), accompanied by a report from the CEO detailing the assumptions underlying the budget and any other information necessary to make such budget and plan accurate and not misleading, and, as soon as practicable after the adoption thereof, copies of any revisions to such annual operating plan.

(b) Inspection. The Company shall permit each Major Investor and its transferee(s) (provided such transfer is effected in compliance with Section 1.2 hereof), its attorney or its other representative, after executing a confidentiality agreement reasonably acceptable to the Board, to visit and inspect the Company's properties, to examine the Company's books of account and other records, to make copies or extracts therefrom and to discuss the Company's affairs, finances and accounts with its officers, management, employees and independent auditors all at such reasonable times during the Company's normal business hours and as often as such Major Investor or transferee may reasonably request; provided, however, that the Company shall not be obligated pursuant to this Section 3.1(b) to provide trade secrets or confidential information or to provide information to any person whom the Company reasonably believes is a competitor of the Company; provided, further, that such Investor shall bear any out-of-pocket costs or expenses of such investigations or inquiries.

(c) Confidentiality. Unless otherwise expressly set forth in another agreement between an Investor and the Company, each Investor agrees not to use Confidential Information (as hereinafter defined) of the Company for its own use or for any purpose except to evaluate and enforce its equity investment in the Company. Except as permitted under this Section, each Investor agrees to use all reasonable efforts not to disclose such Confidential Information to any third parties. Each Investor shall undertake to treat such Confidential Information in a manner consistent with the treatment of its own information of such proprietary nature and agrees that it shall protect the confidentiality of and use all reasonable efforts to prevent disclosure of the Confidential Information to prevent it from falling into the public domain or the possession of unauthorized persons. Each transferee of any Investor who receives Confidential Information shall agree to be bound by such provisions. For purposes of this Section, "***Confidential Information***" means any information, trade secrets, data, or know-how, including, but not limited to, the Company's patent applications, test or clinical data, licenses, research, products, services, development, inventions, consultants' or advisors' identities, samples, processes, designs, engineering, marketing, finances, or business partners disclosed by the Company either directly or indirectly in writing, orally or by drawings or inspection of samples. Confidential Information does not include information, technical data or know-how which (i) is in the Investor's possession at the time of disclosure as shown by Investor's files and records immediately prior to the time of disclosure; (ii) before or after it has been disclosed to the Investor, it is part of the public knowledge or literature, not as a result of any action or inaction of the Investor; (iii) is approved for release by written authorization of Company; or (iv) is rightfully disclosed to Investor by a third party without restriction. The provisions of this Section shall not apply (a) to the extent that an Investor is required to disclose Confidential Information pursuant to any law, statute, rule or regulation or any order of any court or judicial process or pursuant to any direction, request or requirement (whether or not having the force of law but if not having the force of law being of a type with which institutional investors in the relevant jurisdiction are accustomed to comply) of any self-regulating organization or any governmental, fiscal, monetary or other authority; (b) to the disclosure of Confidential Information to an Investor's employees, counsel, accountants or other professional advisors; (c) to the extent that an Investor needs to disclose Confidential Information for the protection of any of such Investor's rights or interest against the Company, whether under this Agreement or otherwise; or (d) to the disclosure of Confidential Information to a prospective transferee of securities which agrees to be bound by the provisions of this Section 3.1(c) in connection with the receipt of such Confidential Information.

(d) Reservation of Common Stock. The Company will at all times reserve and keep available, solely for issuance and delivery upon the conversion of the Investor Stock, all shares of Common Stock issuable upon such conversion.

(e) Board Matters. The reasonable out-of-pocket expenses of members of the Board associated with attending meetings or business related to the Company will be borne by the Company, and all directors will be treated identically with regard to expense reimbursement related to their service as members of the Board. The Board shall meet at least quarterly, unless otherwise agreed to by a vote of a majority of the Board.

(f) Observer Rights.

(i) For so long as it or its affiliates (i) hold less than two (2) seats on the Board; and (ii) own at least 500,000 shares of the Preferred Stock of the Company, Hatteras shall have the right to designate one person to receive notice of all meetings of the Board, to attend any such meeting as a nonvoting observer and to comment for the record at any such meeting (for purposes of this Section 3.1(f)(i), the term "meeting" shall be deemed to include all "executive sessions" and any other similar meeting of all or part of the Board or any committee thereof); provided, however, that such observer shall agree to hold in confidence and trust and to act in a fiduciary manner with respect to all information so provided; and provided further, that the Company reserves the right to withhold any information and to exclude such observer from any meeting or portion thereof if access to such information or attendance at such meeting could adversely affect the attorney-client privilege between the Company and its counsel or result in disclosure of trade secrets or a conflict of interest, or if such Investor or its representative is a competitor of the Company. Each observer so appointed as provided above shall sign a confidentiality agreement reasonably acceptable to the Board of the Company prior to his or her first attendance to his or her first meeting of the Board.

(ii) Until the later of January 31, 2016 or such time as Santen does not hold at least 5% of the Company's capital stock (on an as converted, fully diluted basis), Santen shall have the right to designate one person to receive notice of all meetings of the Board, to attend any such meeting as a nonvoting observer, to comment for the record at any such meeting and to receive copies of all notices, minutes, consents, and other materials that it provides, at the same time such materials are provided, to its members of the Board; provided, however, that such observer shall agree to hold in confidence and trust and to act in a fiduciary manner with respect to all information so provided; and provided further, that the Company reserves the right to withhold any information and to exclude such observer from any meeting or portion thereof if (a) access to such information or attendance at such meeting could adversely affect the attorney-client privilege between the Company and its counsel, (b) access to such information or attendance at such meeting could result in disclosure of trade secrets or a conflict of interest, (c) such Investor or its representative is a competitor of the Company or (d) such information or materials relate to the use of the Company's technology with any proprietary pharmaceutical molecule or formulation of a third party, including preclinical and clinical data and the terms of any agreement related to the combined use of Company technology with any such third party molecule or formulation. The rights in this Section 3.1(f)(ii) are personal to Santen and shall in no event be assignable to any person or entity without the express consent of the Company.

(iii) For so long as MGC Venture Partners 2013, L.P. and its affiliates (collectively, "***MGC***") own at least 250,000 shares of the Preferred Stock of the Company (subject to adjustment for stock splits, consolidations, reclassifications, etc.), MGC shall have the right to designate one person to receive notice of all meetings of the Board, to attend any such meeting as a nonvoting observer, to comment for the record at any such meeting and to receive copies of all notices, minutes, consents, and other materials that it provides, at the same time such materials are provided, to its members of the Board; provided, however, that such observer shall agree to hold in confidence and trust and to act in a fiduciary manner with respect to all information so provided; and provided further, that the Company reserves the right to withhold any information and to exclude such observer from any meeting or portion thereof if access to such information or attendance at such meeting could adversely affect the attorney-client privilege between the Company and its counsel or result in disclosure of trade secrets or a conflict of interest, or if such Investor or its representative is a competitor of the Company.

(iv) For so long as RMI Investments S.a.r.l. and its affiliates (collectively, "***RMI***") own at least 250,000 shares of the Preferred Stock of the Company (subject to adjustment for stock splits, consolidations, reclassifications, etc.), RMI shall have the right to designate one person to receive notice of all meetings of the Board, to attend any such meeting as a nonvoting observer, to comment for the record at any such meeting and to receive copies of all notices, minutes, consents, and other materials that it provides, at the same time such materials are provided, to its members of the Board; provided, however, that such observer shall agree to hold in confidence and trust and to act in a fiduciary manner with respect to all information so provided; and provided further, that the Company reserves the right to withhold any information and to exclude such observer from any meeting or portion thereof if access to such information or attendance at such meeting could adversely affect the attorney-client privilege between the Company and its counsel or result in disclosure of trade secrets or a conflict of interest, or if such Investor or its representative is a competitor of the Company.

(g) Committees of the Board. The Series B Director and the Series C Director shall have the right to serve as a member of the Compensation Committee, the Audit Committee and the Pricing Committee of the Board.

(h) Directors and Officers Insurance. The Company will maintain a Directors and Officers insurance policy in an amount of at least five million dollars ($5,000,000).

(i) Successor Indemnification. If the Company or any of its successors or assignees consolidates with or merges into any other Person and is not the continuing or surviving corporation or entity of such consolidation or merger, then to the extent necessary, proper provision shall be made so that the successors and assignees of the Company assume the obligations of the Company with respect to indemnification of members of the Board as in effect immediately before such transaction, whether such obligations are contained in the Company's Bylaws, its Certificate of Incorporation, an indemnification agreement between the Company and each member of the Board or elsewhere, as the case may be.

(j) Key Person Insurance. The Company hereby covenants and agrees that it shall use commercially reasonable efforts to secure and maintain "key man" life and disability insurance on Daniel White in an amount acceptable to the Board. The proceeds of such policy shall be payable to the Company.

(k) Employee Agreements. The Company has previously caused or will cause (i) each person now or hereafter employed by it or by any subsidiary (or engaged by the Company or any subsidiary as a consultant/independent contractor) with access to confidential information and/or trade secrets to enter into a nondisclosure and proprietary rights assignment agreement; and (ii) each Key Employee to enter into a one (1) year noncompetition and nonsolicitation agreement, substantially in the form approved by the Board. For purposes of this Agreement, the term "***Key Employee***" shall mean each of Daniel H. White, Raphael V. Andino, Charles A. Deignan and Glenn Noronha, each executive-level employee (including, division director and vice president-level positions) as well as any employee who, either alone or in concert with others, develops, invents, programs, or designs any material intellectual property of the Company.

3.2 Negative Covenants. During the term of this Agreement and so long as the holders of Series C Preferred Stock are entitled to elect a Series C Director (as such term is defined in the Charter) (each member of the Board so elected by the holders of Series C Preferred Stock, a "***Series C Director***") pursuant to the terms of the Charter, and notwithstanding anything to the contrary contained in any other agreements, the following actions of the Company shall require the prior approval of the Board (which approval must specifically include the affirmative vote, consent or approval of the Series C Director then serving):

(a) make any loan or advance to, or own any stock or other securities of, any subsidiary or other corporation, partnership or other entity unless it is wholly owned by the Company;

(b) make any loan or advance to any person, including, any employee or director, except advances and similar expenditures in the ordinary course of business or under the terms of an employee stock or option plan approved by the Board;

(c) guarantee any indebtedness except for trade accounts of the Company or any subsidiary arising in the ordinary course of business;

(d) make any investment inconsistent with any investment policy approved by the Board;

(e) incur any aggregate indebtedness in excess of US$100,000 that is not already included in a Board-approved budget, other than trade credit incurred in the ordinary course of business;

(f) enter into or be a party to any transaction with any director, officer or employee of the Company or any "associate" (as defined in Rule 12b-2 promulgated under the Exchange Act) of any such person, or transactions made in the ordinary course of business and pursuant to reasonable requirements of the Company's business and upon fair and reasonable terms that are approved by a majority of the Board;

(g) hire, fire, or change the compensation of the executive officers, including approving any option grants to such executive officers;

(h) change the principal business of the Company, enter new lines of business, or exit the current line of business;

(i) sell, assign, license, sublicense, pledge or encumber material technology or intellectual property, other than licenses granted in the ordinary course of business; or

(j) enter into any corporate strategic relationship involving the payment, contribution or assignment by the Company or to the Company of assets greater than US$500,000 other than in the ordinary course of business.

3.3 Expiration of Covenants. The covenants set forth in this Section 3 shall expire and be of no further force or effect upon the effectiveness of a Qualified Public Offering (as defined in Section 2.6 hereof). After such time, the Investors shall be entitled to receive such annual and quarterly reports as the Company shall distribute to its stockholders generally.

Section 4. REGISTRATION RIGHTS

4.1 Certain Definitions. For purposes of this Section 4:

(a) "***1934 Act***" means the Securities Exchange Act of 1934, as amended, and the rules and regulations promulgated thereunder.

(b) "***Damages***" means any loss, damage, claim or liability (joint or several) to which a party hereto may become subject under the 1933 Act, the 1934 Act, or other federal or state law, insofar as such loss, damage, claim or liability (or any action in respect thereof) arises out of or is based upon: (i) any untrue statement or alleged untrue statement of a material fact contained in any registration statement of the Company, including any preliminary prospectus or final prospectus contained therein or any

amendments or supplements thereto; (ii) an omission or alleged omission to state therein a material fact required to be stated therein, or necessary to make the statements therein not misleading; or (iii) any violation or alleged violation by the indemnifying party (or any of its agents or Affiliates) of the 1933 Act, the 1934 Act, any state securities law, or any rule or regulation promulgated under the 1933 Act, the 1934 Act, or any state securities law.

(c) "***Excluded Registration***" means (i) a registration relating to the sale of securities to employees of the Company or a subsidiary pursuant to a stock option, stock purchase, or similar plan; (ii) a registration relating to an SEC Rule 145 transaction; (iii) a registration on any form that does not include substantially the same information as would be required to be included in a registration statement covering the sale of the Registrable Securities; or (iv) a registration in which the only Common Stock being registered is Common Stock issuable upon conversion of debt securities that are also being registered.

(d) "***Form S-1***" means such form under the Securities Act as in effect on the date hereof or any successor registration form under the Securities Act subsequently adopted by the SEC.

(e) "***Form S-3***" means such form under the Securities Act as in effect on the date hereof or any registration form under the Securities Act subsequently adopted by the SEC that permits incorporation of substantial information by reference to other documents filed by the Company with the SEC.

(f) "***Holder***" means any holder of Registrable Securities who is a party to this Agreement.

(g) "***Immediate Family Member***" means a child, stepchild, grandchild, parent, stepparent, grandparent, spouse, sibling, mother-in-law, father-in-law, son-in-law, daughter-in-law, brother-in-law, or sister-in-law, including, adoptive relationships, of a natural person referred to herein.

(h) "***Initiating Holders***" means, collectively, Holders who properly initiate a registration request under this Agreement.

(i) "***IPO***" means the Company's first underwritten public offering of its Common Stock under the 1933 Act.

(j) "***Person***" means any individual, corporation, partnership, trust, limited liability company, association or other entity.

(k) "***Registrable Securities***" means (i) the Common Stock issuable or issued upon conversion of the Company's Preferred Stock; (ii) any Common Stock, or any Common Stock issued or issuable (directly or indirectly) upon conversion and/or exercise of any other securities of the Company, acquired by the Investors after the date hereof; and (iii) any Common Stock issued as (or issuable upon the conversion or exercise of any warrant, right, or other security that is issued as) a dividend or other distribution with respect to, or in exchange for or in replacement of, the shares referenced in clauses (i) and (ii) above.

(l) "***Registrable Securities then outstanding***" means the number of shares determined by adding the number of shares of outstanding Common Stock that are Registrable Securities and the number of shares of Common Stock issuable (directly or indirectly) pursuant to then exercisable and/or convertible securities that are Registrable Securities.

(m) "***SEC***" means the Securities and Exchange Commission.

(n) "***Selling Expenses***" means all underwriting discounts, selling commissions, and stock transfer taxes applicable to the sale of Registrable Securities, and fees and disbursements of counsel for any Holder, except for the fees and disbursements of the Selling Holder Counsel borne and paid by the Company as provided in Subsection 4.7.

4.2 Demand Registration.

(a) If at any time after the earlier of (i) three (3) years after the date of this Agreement or (ii) one hundred eighty (180) days after the effective date of the registration statement for the IPO, the Company receives a request from Holders holding forty percent (40%) of the Registrable Securities then outstanding that the Company file a Form S-1 registration statement with respect to the Registrable Securities then outstanding if the anticipated aggregate offering price, net of Selling Expenses, would exceed $10 million, then the Company shall (x) within ten (10) days after the date such request is given, give notice thereof (the "***Demand Notice***") to all Holders other than the Initiating Holders; and (y) as soon as practicable, and in any event within sixty (60) days after the date such request is given by the Initiating Holders, file a Form S-1 registration statement under the Securities Act covering all Registrable Securities that the Initiating Holders requested to be registered and any additional Registrable Securities requested to be included in such registration by any other Holders, as specified by notice given by each such Holder to the Company within twenty (20) days of the date the Demand Notice is given, and in each case, subject to the limitations of Subsections 4.2(c) and 4.4.

(b) If at any time when it is eligible to use a Form S-3 registration statement, the Company receives a request from Holders of at least twenty percent (20%) of the Registrable Securities then outstanding that the Company file a Form S-3 registration statement with respect to outstanding Registrable Securities of such Holders having an anticipated aggregate offering price, net of Selling Expenses, of at least $1 million, then the Company shall (i) within ten (10) days after the date such request is given, give a Demand Notice to all Holders other than the Initiating Holders; and (ii) as soon as practicable, and in any event within forty-five (45) days after the date such request is given by the Initiating Holders, file a Form S-3 registration statement under the Securities Act covering all Registrable Securities requested to be included in such registration by any other Holders, as specified by notice given by each such Holder to the Company within twenty (20) days of the date the Demand Notice is given, and in each case, subject to the limitations of Subsections 4.2(c) and 4.4.

(c) Notwithstanding the foregoing obligations, if the Company furnishes to Holders requesting a registration pursuant to this Subsection 4.2 a certificate signed by the Company's chief executive officer stating that in the good faith judgment of the Company's Board it would be materially detrimental to the Company and its stockholders for such registration statement to either become effective or remain effective for as long as such registration statement otherwise would be required to remain effective, because such action would (i) materially interfere with a significant acquisition, corporate reorganization, or other similar transaction involving the Company; (ii) require premature disclosure of material information that the Company has a bona fide business purpose for preserving as confidential; or (iii) render the Company unable to comply with requirements under the 1933 Act or 1934 Act, then the Company shall have the right to defer taking action with respect to such filing, and any time periods with respect to filing or effectiveness thereof shall be tolled correspondingly, for a period of not more than ninety (90) days after the request of the Initiating Holders is given; provided, however, that the Company may not invoke this right more than twice in any twelve (12) month period; and provided further that the Company shall not register any securities for its own account or that of any other stockholder during such ninety (90) day period other than an Excluded Registration.

(d) The Company shall not be obligated to effect, or to take any action to effect, any registration pursuant to Subsection 4.2(a): (i) during the period that is sixty (60) days before the Company's good faith estimate of the date of filing of, and ending on a date that is one hundred eighty (180) days after the effective date of, a Company-initiated registration, provided that the Company is actively employing in good faith commercially reasonable efforts to cause such registration statement to become effective; (ii) after the Company has effected two registrations pursuant to Subsection 4.2(a); or (iii) if the Initiating Holders propose to dispose of shares of Registrable Securities that may be immediately registered on Form S-3 pursuant to a request made pursuant to Subsection 4.2(b). The Company shall not be obligated to effect, or to take any action to effect, any registration pursuant to Subsection 4.2(b): (i) during the period that is thirty (30) days before the Company's good faith estimate of the date of filing of, and ending on a date that is ninety (90) days after the effective date of, a Company-initiated registration, provided that the Company is actively employing in good faith commercially reasonable efforts to cause such registration statement to become effective; or (ii) if the Company has effected two registrations pursuant to Subsection 4.2(b) within the twelve (12) month period immediately preceding the date of such request. A registration shall not be counted as "effected" for purposes of this Subsection 4.2(d) until such time as the applicable registration statement has been declared effective by the SEC, unless the Initiating Holders withdraw their request for such registration, elect not to pay the registration expenses therefor, and forfeit their right to one demand registration statement pursuant to Subsection 2.6, in which case such withdrawn registration statement shall be counted as "effected" for purposes of this Subsection 4.2(d).

4.3 Company Registration. If the Company proposes to register (including, for this purpose, a registration effected by the Company for stockholders other than the Holders) any of its securities under the 1933 Act in connection with the public offering of such securities solely for cash (other than in an Excluded Registration), the Company shall, at such time, promptly give each Holder notice of such registration. Upon the request of each Holder given within twenty (20) days after such notice is given by the Company, the Company shall, subject to the provisions of Subsection 4.4, cause to be registered all of the Registrable Securities that each such Holder has requested to be included in such registration. The Company shall have the right to terminate or withdraw any registration initiated by it under this Subsection 4.3 before the effective date of such registration, whether or not any Holder has elected to include Registrable Securities in such registration. The expenses (other than Selling Expenses) of such withdrawn registration shall be borne by the Company in accordance with Subsection 4.7.

4.4 Underwriting Requirements.

(a) If, pursuant to Subsection 4.2, the Initiating Holders intend to distribute the Registrable Securities covered by their request by means of an underwriting, they shall so advise the Company as a part of their request made pursuant to Subsection 4.2, and the Company shall include such information in the Demand Notice. The underwriter(s) will be selected by the Company and shall be reasonably acceptable to a majority in interest of the Initiating Holders. In such event, the right of any Holder to include such Holder's Registrable Securities in such registration shall be conditioned upon such Holder's participation in such underwriting and the inclusion of such Holder's Registrable Securities in the underwriting to the extent provided herein. All Holders proposing to distribute their securities through such underwriting shall (together with the Company as provided in Subsection 4.5(e)) enter into an underwriting agreement in customary form with the underwriter(s) selected for such underwriting. Notwithstanding any other provision of this Subsection 4.4, if the managing underwriter(s) advise(s) the Initiating Holders in writing that marketing factors require a limitation on the number of shares to be underwritten, then the Initiating Holders shall so advise all Holders of Registrable Securities that otherwise would be underwritten pursuant hereto, and the number of Registrable Securities that may be included in the underwriting shall be allocated among such Holders of Registrable Securities, including the Initiating Holders, in proportion (as nearly as practicable) to the number of Registrable Securities

owned by each Holder or in such other proportion as shall mutually be agreed to by all such selling Holders; provided, however, that the number of Registrable Securities held by the Holders to be included in such underwriting shall not be reduced unless all other securities are first entirely excluded from the underwriting. To facilitate the allocation of shares in accordance with the above provisions, the Company or the underwriters may round the number of shares allocated to any Holder to the nearest one hundred (100) shares.

(b) In connection with any offering involving an underwriting of shares of the Company's capital stock pursuant to Subsection 4.3, the Company shall not be required to include any of the Holders' Registrable Securities in such underwriting unless the Holders accept the terms of the underwriting as agreed upon between the Company and its underwriters, and then only in such quantity as the underwriters in their sole discretion determine will not jeopardize the success of the offering by the Company. If the total number of securities, including Registrable Securities, requested by stockholders to be included in such offering exceeds the number of securities to be sold (other than by the Company) that the underwriters in their reasonable discretion determine is compatible with the success of the offering, then the Company shall be required to include in the offering only that number of such securities, including Registrable Securities, which the underwriters and the Company in their sole discretion determine will not jeopardize the success of the offering. If the underwriters determine that less than all of the Registrable Securities requested to be registered can be included in such offering, then the Registrable Securities that are included in such offering shall be allocated among the selling Holders in proportion (as nearly as practicable to) the number of Registrable Securities owned by each selling Holder or in such other proportions as shall mutually be agreed to by all such selling Holders. To facilitate the allocation of shares in accordance with the above provisions, the Company or the underwriters may round the number of shares allocated to any Holder to the nearest one hundred (100) shares. Notwithstanding the foregoing, in no event shall (i) the number of Registrable Securities included in the offering be reduced unless all other securities (other than securities to be sold by the Company) are first entirely excluded from the offering, or (ii) the number of Registrable Securities included in the offering be reduced below twenty percent (20%) of the total number of securities included in such offering, unless such offering is the IPO, in which case the selling Holders may be excluded further if the underwriters make the determination described above and no other stockholder's securities are included in such offering. For purposes of the provision in this Subsection 4.4(b) concerning apportionment, for any selling Holder that is a partnership, limited liability company, or corporation, the partners, members, retired partners, retired members, shareholders, and Affiliates of such Holder, or the estates and Immediate Family Members of any such partners, retired partners, members, and retired members and any trusts for the benefit of any of the foregoing Persons, shall be deemed to be a single "selling Holder," and any pro rata reduction with respect to such "selling Holder" shall be based upon the aggregate number of Registrable Securities owned by all Persons included in such "selling Holder," as defined in this sentence.

(c) For purposes of Subsection 4.2, a registration shall not be counted as "effected" if, as a result of an exercise of the underwriter's cutback provisions in Subsection 4.4(a), fewer than fifty percent (50%) of the total number of Registrable Securities that Holders have requested to be included in such registration statement are actually included.

4.5 Obligations of the Company. Whenever required under this Section 4 to effect the registration of any Registrable Securities, the Company shall, as expeditiously as reasonably possible:

(a) prepare and file with the SEC a registration statement with respect to such Registrable Securities and use its commercially reasonable efforts to cause such registration statement to become effective and, upon the request of the Holders of a majority of the Registrable Securities registered thereunder, keep such registration statement effective for a period of up to one hundred twenty

(120) days or, if earlier, until the distribution contemplated in the registration statement has been completed; provided, however, that (i) such one hundred twenty (120) day period shall be extended for a period of time equal to the period the Holder refrains, at the request of an underwriter of Common Stock (or other securities) of the Company, from selling any securities included in such registration, and (ii) in the case of any registration of Registrable Securities on Form S-3 that are intended to be offered on a continuous or delayed basis, subject to compliance with applicable SEC rules, such one hundred twenty (120) day period shall be extended for up to sixty (60) days, if necessary, to keep the registration statement effective until all such Registrable Securities are sold;

(b) prepare and file with the SEC such amendments and supplements to such registration statement, and the prospectus used in connection with such registration statement, as may be necessary to comply with the Securities Act in order to enable the disposition of all securities covered by such registration statement;

(c) furnish to the selling Holders such numbers of copies of a prospectus, including a preliminary prospectus, as required by the 1933 Act, and such other documents as the Holders may reasonably request in order to facilitate their disposition of their Registrable Securities;

(d) use its commercially reasonable efforts to register and qualify the securities covered by such registration statement under such other securities or blue-sky laws of such jurisdictions as shall be reasonably requested by the selling Holders; provided that the Company shall not be required to qualify to do business or to file a general consent to service of process in any such states or jurisdictions, unless the Company is already subject to service in such jurisdiction and except as may be required by the 1933 Act;

(e) in the event of any underwritten public offering, enter into and perform its obligations under an underwriting agreement, in usual and customary form, with the underwriter(s) of such offering;

(f) use its commercially reasonable efforts to cause all such Registrable Securities covered by such registration statement to be listed on a national securities exchange or trading system and each securities exchange and trading system (if any) on which similar securities issued by the Company are then listed;

(g) provide a transfer agent and registrar for all Registrable Securities registered pursuant to this Agreement and provide a CUSIP number for all such Registrable Securities, in each case not later than the effective date of such registration;

(h) promptly make available for inspection by the selling Holders, any managing underwriter(s) participating in any disposition pursuant to such registration statement, and any attorney or accountant or other agent retained by any such underwriter or selected by the selling Holders, all financial and other records, pertinent corporate documents, and properties of the Company, and cause the Company's officers, directors, employees, and independent accountants to supply all information reasonably requested by any such seller, underwriter, attorney, accountant, or agent, in each case, as necessary or advisable to verify the accuracy of the information in such registration statement and to conduct appropriate due diligence in connection therewith;

(i) notify each selling Holder, promptly after the Company receives notice thereof, of the time when such registration statement has been declared effective or a supplement to any prospectus forming a part of such registration statement has been filed; and

(j) after such registration statement becomes effective, notify each selling Holder of any request by the SEC that the Company amend or supplement such registration statement or prospectus.

In addition, the Company shall ensure that, at all times after any registration statement covering a public offering of securities of the Company under the Securities Act shall have become effective, its insider trading policy shall provide that the Company's directors may implement a trading program under Rule 10b5-1 of the Exchange Act.

4.6 Furnish Information. It shall be a condition precedent to the obligations of the Company to take any action pursuant to this Section 4 with respect to the Registrable Securities of any selling Holder that such Holder shall furnish to the Company such information regarding itself, the Registrable Securities held by it, and the intended method of disposition of such securities as is reasonably required to effect the registration of such Holder's Registrable Securities.

4.7 Expenses of Registration. All expenses (other than Selling Expenses) incurred in connection with registrations, filings, or qualifications pursuant to Section 4, including all registration, filing, and qualification fees; printers' and accounting fees; fees and disbursements of counsel for the Company; and the reasonable fees and disbursements (not to exceed $30,000), of one counsel for the selling Holders ("***Selling Holder Counsel***"), shall be borne and paid by the Company; provided, however, that the Company shall not be required to pay for any expenses of any registration proceeding begun pursuant to Subsection 4.2 if the registration request is subsequently withdrawn at the request of the Holders of a majority of the Registrable Securities to be registered (in which case all selling Holders shall bear such expenses pro rata based upon the number of Registrable Securities that were to be included in the withdrawn registration), unless the Holders of a majority of the Registrable Securities agree to forfeit their right to one registration pursuant to Subsections 4.2(a) or 4.2(b), as the case may be; provided further that if, at the time of such withdrawal, the Holders shall have learned of a material adverse change in the condition, business, or prospects of the Company from that known to the Holders at the time of their request and have withdrawn the request with reasonable promptness after learning of such information then the Holders shall not be required to pay any of such expenses and shall not forfeit their right to one registration pursuant to Subsections 4.2(a) or 4.2(b). All Selling Expenses relating to Registrable Securities registered pursuant to this Section 4 shall be borne and paid by the Holders pro rata on the basis of the number of Registrable Securities registered on their behalf.

4.8 Delay of Registration. No Holder shall have any right to obtain or seek an injunction restraining or otherwise delaying any registration pursuant to this Agreement as the result of any controversy that might arise with respect to the interpretation or implementation of this Section 4.

4.9 Indemnification. If any Registrable Securities are included in a registration statement under this Section 4:

(a) To the extent permitted by law, the Company will indemnify and hold harmless each selling Holder, and the partners, members, officers, directors, and shareholders of each such Holder; legal counsel and accountants for each such Holder; any underwriter (as defined in the 1933 Act) for each such Holder; and each Person, if any, who controls such Holder or underwriter within the meaning of the 1933 Act or the 1934 Act, against any Damages, and the Company will pay to each such Holder, underwriter, controlling Person, or other aforementioned Person any legal or other expenses reasonably incurred thereby in connection with investigating or defending any claim or proceeding from which Damages may result, as such expenses are incurred; provided, however, that the indemnity agreement contained in this Subsection 4.9(a) shall not apply to amounts paid in settlement of any such claim or proceeding if such settlement is effected without the consent of the Company, which consent shall not be unreasonably withheld, nor shall the Company be liable for any Damages to the extent that they arise out

of or are based upon actions or omissions made in reliance upon and in conformity with written information furnished by or on behalf of any such Holder, underwriter, controlling Person, or other aforementioned Person expressly for use in connection with such registration.

(b) To the extent permitted by law, each selling Holder, severally and not jointly, will indemnify and hold harmless the Company, and each of its directors, each of its officers who has signed the registration statement, each Person (if any), who controls the Company within the meaning of the 1933 Act, legal counsel and accountants for the Company, any underwriter (as defined in the 1933 Act), any other Holder selling securities in such registration statement, and any controlling Person of any such underwriter or other Holder, against any Damages, in each case only to the extent that such Damages arise out of or are based upon actions or omissions made in reliance upon and in conformity with written information furnished by or on behalf of such selling Holder expressly for use in connection with such registration; and each such selling Holder will pay to the Company and each other aforementioned Person any legal or other expenses reasonably incurred thereby in connection with investigating or defending any claim or proceeding from which Damages may result, as such expenses are incurred; provided, however, that the indemnity agreement contained in this Subsection 4.9(b) shall not apply to amounts paid in settlement of any such claim or proceeding if such settlement is effected without the consent of the Holder, which consent shall not be unreasonably withheld; and provided further that in no event shall the aggregate amounts payable by any Holder by way of indemnity or contribution under Subsections 4.9(b) and 4.9(d) exceed the proceeds from the offering received by such Holder (net of any Selling Expenses paid by such Holder), except in the case of fraud or willful misconduct by such Holder.

(c) Promptly after receipt by an indemnified party under this Subsection 4.9 of notice of the commencement of any action (including any governmental action) for which a party may be entitled to indemnification hereunder, such indemnified party will, if a claim in respect thereof is to be made against any indemnifying party under this Subsection 4.9, give the indemnifying party notice of the commencement thereof. The indemnifying party shall have the right to participate in such action and, to the extent the indemnifying party so desires, participate jointly with any other indemnifying party to which notice has been given, and to assume the defense thereof with counsel mutually satisfactory to the parties; provided, however, that an indemnified party (together with all other indemnified parties that may be represented without conflict by one counsel) shall have the right to retain one separate counsel, with the fees and expenses to be paid by the indemnifying party, if representation of such indemnified party by the counsel retained by the indemnifying party would be inappropriate due to actual or potential differing interests between such indemnified party and any other party represented by such counsel in such action. The failure to give notice to the indemnifying party within a reasonable time of the commencement of any such action shall relieve such indemnifying party of any liability to the indemnified party under this Subsection 4.9, to the extent that such failure materially prejudices the indemnifying party’s ability to defend such action. The failure to give notice to the indemnifying party will not relieve it of any liability that it may have to any indemnified party otherwise than under this Subsection 4.9.

(d) To provide for just and equitable contribution to joint liability under the 1933 Act in any case in which either: (i) any party otherwise entitled to indemnification hereunder makes a claim for indemnification pursuant to this Subsection 4.9 but it is judicially determined (by the entry of a final judgment or decree by a court of competent jurisdiction and the expiration of time to appeal or the denial of the last right of appeal) that such indemnification may not be enforced in such case, notwithstanding the fact that this Subsection 4.9 provides for indemnification in such case, or (ii) contribution under the 1933 Act may be required on the part of any party hereto for which indemnification is provided under this Subsection 4.9, then, and in each such case, such parties will contribute to the aggregate losses, claims, damages, liabilities, or expenses to which they may be subject (after contribution from others) in such proportion as is appropriate to reflect the relative fault of each of the indemnifying party and the indemnified party in connection with the statements, omissions, or other actions that resulted in such loss,

claim, damage, liability, or expense, as well as to reflect any other relevant equitable considerations. The relative fault of the indemnifying party and of the indemnified party shall be determined by reference to, among other things, whether the untrue or allegedly untrue statement of a material fact, or the omission or alleged omission of a material fact, relates to information supplied by the indemnifying party or by the indemnified party and the parties' relative intent, knowledge, access to information, and opportunity to correct or prevent such statement or omission; provided, however, that, in any such case (x) no Holder will be required to contribute any amount in excess of the public offering price of all such Registrable Securities offered and sold by such Holder pursuant to such registration statement, and (y) no Person guilty of fraudulent misrepresentation (within the meaning of Section 11(f) of the 1933 Act) will be entitled to contribution from any Person who was not guilty of such fraudulent misrepresentation; and provided further that in no event shall a Holder's liability pursuant to this Subsection 4.9(d), when combined with the amounts paid or payable by such Holder pursuant to Subsection 4.9(b), exceed the proceeds from the offering received by such Holder (net of any Selling Expenses paid by such Holder), except in the case of willful misconduct or fraud by such Holder.

(e) Notwithstanding the foregoing, to the extent that the provisions on indemnification and contribution contained in the underwriting agreement entered into in connection with the underwritten public offering are in conflict with the foregoing provisions, the provisions in the underwriting agreement shall control.

(f) Unless otherwise superseded by an underwriting agreement entered into in connection with the underwritten public offering, the obligations of the Company and Holders under this Subsection 4.9 shall survive the completion of any offering of Registrable Securities in a registration under this Section 4, and otherwise shall survive the termination of this Agreement.

4.10 Reports Under 1934 Act. With a view to making available to the Holders the benefits of SEC Rule 144 and any other rule or regulation of the SEC that may at any time permit a Holder to sell securities of the Company to the public without registration or pursuant to a registration on Form S-3, the Company shall:

(a) make and keep available adequate current public information, as those terms are understood and defined in SEC Rule 144, at all times after the effective date of the registration statement filed by the Company for the IPO;

(b) use commercially reasonable efforts to file with the SEC in a timely manner all reports and other documents required of the Company under the 1933 Act and the 1934Act (at any time after the Company has become subject to such reporting requirements); and

(c) furnish to any Holder, so long as the Holder owns any Registrable Securities, forthwith upon request (i) to the extent accurate, a written statement by the Company that it has complied with the reporting requirements of SEC Rule 144 (at any time after ninety (90) days after the effective date of the registration statement filed by the Company for the IPO), the 1933 Act, and the 1934 Act (at any time after the Company has become subject to such reporting requirements), or that it qualifies as a registrant whose securities may be resold pursuant to Form S-3 (at any time after the Company so qualifies); and (ii) such other information as may be reasonably requested in availing any Holder of any rule or regulation of the SEC that permits the selling of any such securities without registration (at any time after the Company has become subject to the reporting requirements under the 1934 Act) or pursuant to Form S-3 (at any time after the Company so qualifies to use such form).

4.11 Limitations on Subsequent Registration Rights. From and after the date of this Agreement, the Company shall not, without the prior written consent of the Holders of a majority of the

Registrable Securities then outstanding, enter into any agreement with any holder or prospective holder of any securities of the Company that would provide to such holder the right to include securities in any registration on other than either a pro rata basis with respect to the Registrable Securities or on a subordinate basis after all Holders have had the opportunity to include in the registration and offering all shares of Registrable Securities that they wish to so include; provided that this limitation shall not apply to any additional Investor who becomes a party to this Agreement.

4.12 "Market Stand off" Agreement. Each Holder hereby agrees that it will not, without the prior written consent of the managing underwriter, during the period commencing on the date of the final prospectus relating to the registration by the Company of shares of its Common Stock or any other equity securities under the 1933 Act on a registration statement on Form S-1, and ending on the date specified by the Company and the managing underwriter (such period not to exceed one hundred eighty (180) days in the case of the IPO, or such other period as may be requested by the Company or an underwriter to accommodate regulatory restrictions on (1) the publication or other distribution of research reports, and (2) analyst recommendations and opinions, including, but not limited to, the restrictions contained in FINRA Rule 2711(f)(4) or NYSE Rule 472(f)(4), or any successor provisions or amendments thereto), (i) lend; offer; pledge; sell; contract to sell; sell any option or contract to purchase; purchase any option or contract to sell; grant any option, right, or warrant to purchase; or otherwise transfer or dispose of, directly or indirectly, any shares of Common Stock or any securities convertible into or exercisable or exchangeable (directly or indirectly) for Common Stock (whether such shares or any such securities are then owned by the Holder or are thereafter acquired) or (ii) enter into any swap or other arrangement that transfers to another, in whole or in part, any of the economic consequences of ownership of such securities, whether any such transaction described in clause (i) or (ii) above is to be settled by delivery of Common Stock or other securities, in cash, or otherwise. The foregoing provisions of this Subsection 4.12 shall apply only to the IPO, shall not apply to the sale of any shares to an underwriter pursuant to an underwriting agreement, or the transfer of any shares to any trust for the direct or indirect benefit of the Holder or the immediate family of the Holder, provided that the trustee of the trust agrees to be bound in writing by the restrictions set forth herein, and provided further that any such transfer shall not involve a disposition for value, and shall be applicable to the Holders only if all officers, directors and shareholders individually owning more than one percent (1%) of the Company's outstanding Common Stock (after giving effect to conversion into Common Stock of all outstanding Preferred Stock) are subject to the same restrictions. The underwriters in connection with such registration are intended third party beneficiaries of this Subsection 4.12 and shall have the right, power and authority to enforce the provisions hereof as though they were a party hereto. Each Holder further agrees to execute such agreements as may be reasonably requested by the underwriters in connection with such registration that are consistent with this Subsection 4.12 or that are necessary to give further effect thereto. Any discretionary waiver or termination of the restrictions of any or all of such agreements by the Company or the underwriters shall apply pro rata to all Holders subject to such agreements, based on the number of shares subject to such agreements.

4.13 Termination of Registration Rights. The right of any Holder to request registration or inclusion of Registrable Securities in any registration pursuant to Subsections 4.2 or 4.3 shall terminate upon the earliest to occur of:

(a) the closing of a Liquidating Event, as such term is defined in the Charter; and

(b) the fifth (5th) anniversary of the IPO.

Section 5. MISCELLANEOUS

5.1 Governing Law. This Agreement shall be governed by the laws of the State of Delaware without regard to conflicts of law provisions.

5.2 Successors and Assigns. Except as otherwise expressly provided herein, the provisions hereof shall inure to the benefit of, and be binding upon, the successors, assigns, heirs, executors and administrators of the parties hereto.

5.3 Entire Agreement. This Agreement constitutes the full and entire understanding and agreement among the parties with regard to the subjects hereof. Nothing in this Agreement, express or implied, is intended to confer upon any party, other than the parties hereto and their successors and assigns, any rights, remedies, obligations or liabilities under or by reason of this Agreement, except as expressly provided herein.

5.4 Severability. Any invalidity, illegality or limitation of the enforceability with respect to any stockholder of any one or more of the provisions of this Agreement, or any part thereof, whether arising by reason of the law of any such person's domicile or otherwise, shall in no way affect or impair the validity, legality or enforceability of this Agreement with respect to any other stockholder. In case any provision of this Agreement shall be invalid, illegal or unenforceable, it shall to the extent practicable, be modified so as to make it valid, legal and enforceable and to retain as nearly as practicable the intent of the parties, and the validity, legality, and enforceability of the remaining provisions shall not in any way be affected or impaired thereby.

5.5 Amendment and Waiver. Except as otherwise expressly provided herein, any term of this Agreement may be amended and the observance of any term of this Agreement may be waived (either generally or in a particular instance, either retroactively or prospectively and either for a specified period of time or indefinitely) with the written consent of the Company and the Investors, or their transferees, holding at least a majority of the shares of Investor Stock and voting together as a single group (treated as if converted at the conversion rate then in effect and including, for such purposes, shares of Common Stock into which any shares of Investor Stock shall have been converted that are held by a stockholder); provided, however, that no such amendment or waiver shall reduce the aforesaid percentage of Investor Stock and Common Stock issued upon conversion thereof, the holders of which are required to consent to any waiver or supplemental agreement, without the consent of the holders of all of such Investor Stock and Common Stock. Notwithstanding anything to the contrary in this Section 5.5, this Agreement may not be amended, modified or terminated and the observance of any term hereunder may not be waived with respect to any Investor without the written consent of such Investor unless such amendment, modification, termination or waiver applies to all Investors in the same fashion. Notwithstanding anything to the contrary in this Section 5.5, Section 3.1(f)(ii) of this Agreement may not be amended without the consent of Santen. Notwithstanding anything to the contrary in this Section 5.5, Investors purchasing Series C Preferred Stock of the Company pursuant to the Purchase Agreement may join as a party to this Agreement and Exhibit A hereto may be amended without the written consent of the Investors. Any amendment or waiver effected in accordance with this Section 5.5 shall be binding upon the Company, each Investor and each transferee of the Company Stock. Upon the effectuation of each such amendment or waiver, the Company shall promptly give written notice thereof to the Investors who have not previously consented thereto in writing.

5.6 Delays or Omissions. No delay or omission to exercise any right, power or remedy accruing to the Company, the Investors, or any transferees upon any breach, default or noncompliance of the Investors or any transferee or the Company under this Agreement, shall impair any such right, power or remedy, nor shall it be construed to be a waiver of any such breach, default or noncompliance, or any acquiescence therein, or of any similar breach, default or noncompliance thereafter occurring. It is further agreed that any waiver, permit, consent or approval of any kind or character on the part of the Company

or the Investors of any breach, default or noncompliance under this Agreement or any waiver on the Company's or the Investors' part of any provisions or conditions of this Agreement must be in writing and shall be effective only to the extent specifically set forth in such writing and that all remedies, either under this Agreement, by law, or otherwise afforded to the Company and the Investors, shall be cumulative and not alternative.

5.7 Notices, etc. Any notice required or permitted under this Agreement shall be given in writing and shall be deemed effectively given and received: (a) upon personal delivery to the party to be notified; (b) upon delivery by confirmed facsimile transmission if received by the recipient before 5:00 p.m. local time on a business day, and if not, then the next business day; (c) if to a U.S. resident, five (5) days after deposit with the United States Post Office, by registered or certified mail, postage prepaid; or (d) if to a U.S. resident, one (1) business day after deposit with a nationally recognized overnight courier service (or if to a non-U.S. resident, two (2) business days after deposit with an internationally recognized overnight courier service, specifying international priority delivery), and addressed:

(a) if to the Company, at:

Clearside Biomedical, Inc.
1220 Old Alpharetta Rd., Suite 300
Alpharetta, GA 30005
Attn: Chief Executive Officer

With copies to:

Hutchison PLLC
3110 Edwards Mill Road, Suite 300
Raleigh, North Carolina 27612
Attn: William N. Wofford
Telephone: (919) 829-9600
Facsimile: (919) 829-9696

Cooley LLP
1299 Pennsylvania Avenue, NW
Suite 700
Washington, DC 20004
Attn : Brent Siler
Telephone : (202) 728-7040
Facsimile : (703) 456-8100

or at such other address as the Company shall have furnished to the Investors in writing;

(b) if to the Investors, at the addresses of such Investors specified on Exhibit A hereto, or at such other addresses as the Investors shall have furnished to the Company in writing; and

(c) if to a stockholder other than the Investors, at such stockholder's address as shall have been furnished to the Company in writing.

5.8 Attorneys' Fees. In the event that any suit or action is instituted under or in relation to this Agreement, including without limitation to enforce any provision in this Agreement, the prevailing party in such dispute shall be entitled to recover from the losing party all fees, costs and expenses of enforcing any right of such prevailing party under or with respect to this Agreement, including without limitation, such reasonable fees and expenses of attorneys and accountants, which shall include, without limitation, all fees, costs and expenses of appeals.

5.9 Aggregation of Stock. All shares of Company Stock held or acquired by affiliated entities or persons or persons or entities under common management or control shall be aggregated together for the purpose of determining the availability of any rights under this Agreement.

5.10 Titles and Subtitles. The titles of the sections and subsections of this Agreement are for convenience of reference only and are not to be considered in construing this Agreement.

5.11 Counterparts. This Agreement may be executed in any number of counterparts, each of which shall be deemed an original, but all of which together shall constitute one instrument.

[The next page is the signature page.]

IN WITNESS WHEREOF, this Third Amended and Restated Investor Rights Agreement has been duly executed and delivered by the parties as of the date first above written.

COMPANY:

Clearside Biomedical, Inc.

By: /s/ Daniel H. White
Name: Daniel H. White
Title: President & CEO

IN WITNESS WHEREOF, this Third Amended and Restated Investor Rights Agreement has been duly executed and delivered by the parties as of the date first above written.

INVESTOR:

Cormorant Global Healthcare Master Fund, LP

By: /s/ Bihua Chen
Name: Bihua Chen
Title: Managing Member of the General Partner

IN WITNESS WHEREOF, this Third Amended and Restated Investor Rights Agreement has been duly executed and delivered by the parties as of the date first above written.

INVESTOR: Hatteras Venture Partners III, LP

By: Hatteras Venture Advisors III, LLC, its General Partner

By: /s/ Clay Thorp
Name: Clay Thorp
Title: Manager

INVESTOR: Hatteras Venture Partners IV SBIC, LP

By: Hatteras Venture Advisors IV, SBIC, LLC, its General Partner

By: /s/ Clay Thorp
Name: Clay Thorp
Title: Manager

INVESTOR: Hatteras Venture Affiliates III, LP

By: Hatteras Venture Advisors III, LLC, its General Partner

By: /s/ Clay Thorp
Name: Clay Thorp
Title: Manager

IN WITNESS WHEREOF, this Third Amended and Restated Investor Rights Agreement has been duly executed and delivered by the parties as of the date first above written.

INVESTOR:

MGC Venture Partners 2013, LP
By: MGC Venture Partners 2013 GP, LLC
Its: General Partner

By: /s/ Joe C. Cook, III
Joe C. Cook, III
Managing Member

IN WITNESS WHEREOF, this Third Amended and Restated Investor Rights Agreement has been duly executed and delivered by the parties as of the date first above written.

INVESTOR:

MMIC Investment Holdings, Inc.

By: /s/ Jason T. Sander
Name: Jason T. Sander
Title: CFO

IN WITNESS WHEREOF, this Third Amended and Restated Investor Rights Agreement has been duly executed and delivered by the parties as of the date first above written.

INVESTOR:

Perceptive Life Sciences Master Fund LTD

By: /s/ James H. Mannix
Name: James H. Mannix
Title: C.O.O

IN WITNESS WHEREOF, this Third Amended and Restated Investor Rights Agreement has been duly executed and delivered by the parties as of the date first above written.

INVESTOR:

Rock Springs Capital Master Fund LP

By: Rock Springs GP LLC, its General Partner

By: /s/ Graham McPhail
Name: Graham McPhail
Title: Managing Director

IN WITNESS WHEREOF, this Third Amended and Restated Investor Rights Agreement has been duly executed and delivered by the parties as of the date first above written.

INVESTOR:

Titan Perc LTD

By: /s/ Darren Ross

Name: Darren Ross

Title: Director

IN WITNESS WHEREOF, this Third Amended and Restated Investor Rights Agreement has been duly executed and delivered by the parties as of the date first above written.

INVESTOR:

By: /s/ Jerry Cagle
Jerry Cagle

IN WITNESS WHEREOF, this Third Amended and Restated Investor Rights Agreement has been duly executed and delivered by the parties as of the date first above written.

INVESTOR:

By: /s/ Charles A. Deignan
Charles A. Deignan

IN WITNESS WHEREOF, this Third Amended and Restated Investor Rights Agreement has been duly executed and delivered by the parties as of the date first above written.

INVESTOR:

Hatteras NC Fund

By: /s/ Clay Thorp

Name: Clay Thorp

Title: Manager

IN WITNESS WHEREOF, this Third Amended and Restated Investor Rights Agreement has been duly executed and delivered by the parties as of the date first above written.

INVESTOR:

H&M Holdings, LLC

By: /s/ William N. Wofford
Name: William N. Wofford
Title: Manager

IN WITNESS WHEREOF, this Third Amended and Restated Investor Rights Agreement has been duly executed and delivered by the parties as of the date first above written.

INVESTOR:

RMI Investments

By: /s/ PAVEL ILIEV
Name: PAVEL ILIEV
Title: CATEGORY A MANAGER

IN WITNESS WHEREOF, this Third Amended and Restated Investor Rights Agreement has been duly executed and delivered by the parties as of the date first above written.

INVESTOR:

By: /s/ Daniel H. White
Daniel H. White

IN WITNESS WHEREOF, this Third Amended and Restated Investor Rights Agreement has been duly executed and delivered by the parties as of the date first above written.

INVESTOR:

Santen Pharmaceutical Co., Ltd.

By: /s/ Akira Kurokawa
Name: Akira Kurokawa
Title: President and Chief Executive Officer

IN WITNESS WHEREOF, this Third Amended and Restated Investor Rights Agreement has been duly executed and delivered by the parties as of the date first above written.

INVESTOR:

AJU Life Science Overseas Expansion Platform Fund

By: AJU IB Investment Co. Ltd., its General Partner

By: /s/ Ji-Won Kim
Name: Ji-Won Kim
Title: CEO

IN WITNESS WHEREOF, this Third Amended and Restated Investor Rights Agreement has been duly executed and delivered by the parties as of the date first above written.

INVESTOR:

By: /s/ Daniel Kiernan
Daniel Kiernan

IN WITNESS WHEREOF, this Third Amended and Restated Investor Rights Agreement has been duly executed and delivered by the parties as of the date first above written.

INVESTOR:

By: /s/ Joseph Cook, Jr.
Joseph Cook, Jr.

IN WITNESS WHEREOF, this Third Amended and Restated Investor Rights Agreement has been duly executed and delivered by the parties as of the date first above written.

INVESTOR:

Farview Management, LP

By: /s/ Joe C. Cook, Jr.

Name: Joe C. Cook, Jr.

Title: General Partner

IN WITNESS WHEREOF, this Third Amended and Restated Investor Rights Agreement has been duly executed and delivered by the parties as of the date first above written.

INVESTOR:

By: /s/ Byron Smith
Byron Smith

IN WITNESS WHEREOF, this Third Amended and Restated Investor Rights Agreement has been duly executed and delivered by the parties as of the date first above written.

INVESTOR:

GRA Venture Fund, LLC

By: /s/ Diana Murphy
Name: Diana Murphy
Title: Managing Director

INVESTOR:

GRA Venture Fund (T.E.), LLC

By: /s/ Diana Murphy
Name: Diana Murphy
Title: Managing Director

IN WITNESS WHEREOF, this Third Amended and Restated Investor Rights Agreement has been duly executed and delivered by the parties as of the date first above written.

INVESTOR:

KFBSF Private Equity Fund III, L.P.

By: KFBSF, Inc., its General Partner

By: /s/ David W. Stevens
Name: David W. Stevens
Title: Treasurer

EXHIBIT A

SCHEDULE OF INVESTORS

Investor	Address
AJU Life Science Overseas Expansion Platform Fund	c/o AJU IB Investment Co. Ltd. 201 Teheran-ro, 5th floor Gangnam-gu Seoul, Korea 135-978 Attention: Mr. Ji-Won Kim, CEO
Cormorant Global Healthcare Master Fund, LP	200 Clarendon Street, 52nd Floor Boston, MA 02116
Rock Springs Capital Master Fund LP	650 S. Exeter Street, Suite 1070 Baltimore, MD 21202
Titan Perc LTD	750 Washington Blvd, 10th Floor Stamford, CT 06901
Perceptive Life Sciences Master Fund LTD	499 Park Ave New York, NY 10022
Bansal, Amar	1187 CleAnder Court Naperville, IL 60540
Biren M. Patel Revocable Trust	16 Baker Ln. Naperville, IL 60565
Cagle, Jerry	6309 Greenway Rd. Fort Worth, TX 76116
Cook, Jr., Joseph	3835 Cleghorn Ave. Suite 300 Nashville, TN 37215 Attn: Joseph Cook, Jr.
Deignan, Charlie	1860 Broadwell Oaks Drive Alpharetta, GA 30004
Farview Management, LP	3835 Cleghorn Ave. Suite 300 Nashville, TN 37215 Attn: Joseph Cook, Jr.
Georgia Research Alliance, Inc.	191 Peachtree Street, NE Suite 849 Atlanta, GA 30303 Attention: Ashley Cornelison and Diana Murphy
GRA Venture Fund (T.E.), LLC	c/o Georgia Research Alliance, Inc. 191 Peachtree Street, NE Suite 849 Atlanta, GA 30303 Attention: Ashley Cornelison and Diana Murphy

GRA Venture Fund, LLC	c/o Georgia Research Alliance, Inc. 191 Peachtree Street, NE Suite 849 Atlanta, GA 30303 Attention: Ashley Cornelison and Diana Murphy
H&M Holdings, LLC	3110 Edwards Mill Road, Suite 300 Raleigh, NC 27612 Attn: William N. Wofford
Hariprasad, Jaya	4626 South Woodlawn Avenue Chicago, IL 60653
Hatteras NC Fund	280 S. Mangum St., Suite 350 Durham, NC 27701 Attn: Clay Thorp
Hatteras Venture Affiliates III, LP	280 S. Mangum St., Suite 350 Durham, NC 27701 Attn: Clay Thorp
Hatteras Venture Partners III, LP	280 S. Mangum St., Suite 350 Durham, NC 27701 Attn: Clay Thorp
Hatteras Venture Partners IV SBIC, LP	280 S. Mangum St., Suite 350 Durham, NC 27701 Attn: Clay Thorp
Jain, Sidney	3386 Harvest Ridge Road Geneva, IL 60134
Johnson, Wyatt Thomas	3290 Northside Parkway, Suite 375 Atlanta, GA 30327
KFBSF Private Equity Fund II, LP	University of North Carolina Center for Entrepreneurial Studies Kenan-Flagler Business School CB# 3440 Kenan Center Chapel Hill, NC 27599-3440 Attn: Tamala M. Grissett
KFBSF Private Equity Fund III, L.P.	Kenan-Flagler Business School Attention: Mr. David W. Stevens McColl Building, Bowles Drive Chapel Hill, NC 27599-3490
Kiernan, Daniel F.	100 Banks Ave #1311 Rockville Centre, NY 11570
MGC Venture Partners 2013, L.P.	3835 Cleghorn Ave. Suite 300 Nashville, TN 37215 Attn: Joseph Cook, Jr.
MMIC Investment Holdings, Inc.	c/o Medical Mutual Insurance Company of North Carolina 700 Spring Forest Road Suite 400 Raleigh, North Carolina 27609 Attn: Jason Sandner, CFO

Rao, Sanjay	16 Kimberley Circle Oak Brook, IL. 60523
RMI Investments S.a.r.l.	7, Rue Robert Stümper L-2557 Luxembourg Attn: Vladimir Gurdus
Rogers, Jr., Joe W.	3290 Northside Parkway, Suite 375 Atlanta, GA 30327
Santen Pharmaceutical Co., Ltd.	4-20, Ofukacho Kita-ku3Osaka 530-8552, Japan Attn: ¬General Manager, Finance & Accounting Group Facsimile: 81-6-6321-7332 With a copy to: Head of Global Business Development Facsimile: 81-6-6359-3832 With a second copy to: Santen, Inc. 2100 Powell Street, Suite 1600 Emeryville, California 94608 Attn: Yusuf Ali
Smith, Byron	3835 Cleghorn Ave. Suite 300 Nashville, TN 37215 Attn: Byron Smith
Starr Moore 2007 Revocable Trust	3290 Northside Parkway, Suite 375 Atlanta, GA 30327
Sunil Raichand Revocable Trust Dated May 7, 2014 Sunil Raichand Trustee	3012 Lincoln Road Oak Brook IL 60523
Thakur, Tripti Prasad	1728 Waller Street San Francisco, CA 94117
The JWR Jr Family Trust	3290 Northside Parkway, Suite 375 Atlanta, GA 30327
White, Daniel H.	212 Rivergate Dr. Sawanee, GA 30024
White, Daniel H. (IRA)	Millennium Trust Company c/o Daniel White 2001 Spring Road, Suite 700 Oak Brook, IL 60523

THIS WARRANT AND THE SHARES ISSUABLE HEREUNDER HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED (THE "ACT"), OR THE SECURITIES LAWS OF ANY STATE AND, EXCEPT AS SET FORTH IN SECTIONS 5.3 AND 5.4 BELOW, MAY NOT BE OFFERED, SOLD, PLEDGED OR OTHERWISE TRANSFERRED UNLESS AND UNTIL REGISTERED UNDER SAID ACT AND LAWS OR IN FORM AND SUBSTANCE SATISFACTORY TO THE COMPANY, SUCH OFFER, SALE, PLEDGE OR OTHER TRANSFER IS EXEMPT FROM SUCH REGISTRATION.

WARRANT TO PURCHASE STOCK

Company: CLEARSIDE BIOMEDICAL, INC.
Number of Shares: 57,143
Type/Series of Stock: Series B Preferred
Warrant Price: $3.50 per share
Issue Date: April 15, 2015
Expiration Date: April 15, 2025 See also Section 5.1(b).
Credit Facility: This Warrant to Purchase Stock ("**Warrant**") is issued in connection with that certain Loan and Security Agreement of even date herewith between Silicon Valley Bank and the Company (the "**Loan Agreement**").

THIS WARRANT CERTIFIES THAT, for good and valuable consideration, SILICON VALLEY BANK (together with any successor or permitted assignee or transferee of this Warrant or of any shares issued upon exercise hereof, "**Holder**") is entitled to purchase the number of fully paid and non-assessable shares (the "**Shares**") of the above-stated Type/Series of Stock (the "**Class**") of the above-named company (the "**Company**") at the above-stated Warrant Price, all as set forth above and as adjusted pursuant to Section 2 of this Warrant, subject to the provisions and upon the terms and conditions set forth in this Warrant. Reference is made to Section 5.4 of this Warrant whereby Silicon Valley Bank shall transfer this Warrant to its parent company, SVB Financial Group.

SECTION 1. EXERCISE.

1.1 Method of Exercise. Holder may at any time and from time to time through the Expiration Date exercise this Warrant, in whole or in part, by delivering to the Company the original of this Warrant together with a duly executed Notice of Exercise in substantially the form attached hereto as Appendix 1 and, unless Holder is exercising this Warrant pursuant to a cashless exercise set forth in Section 1.2, a check, wire transfer of same-day funds (to an account designated by the Company), or other form of payment acceptable to the Company for the aggregate Warrant Price for the Shares being purchased.

1.2 Cashless Exercise. On any exercise of this Warrant, in lieu of payment of the aggregate Warrant Price in the manner as specified in Section 1.1 above, but otherwise in accordance with the requirements of Section 1.1, Holder may elect to receive Shares equal to the value of this Warrant, or portion hereof as to which this Warrant is being exercised as set forth in the following sentence. Thereupon, the Company shall issue to Holder such number of fully paid and non-assessable Shares as are computed using the following formula:

$$X = Y(A-B)/A$$

where:

X = the number of Shares to be issued to Holder;

Y = the number of Shares with respect to which this Warrant is being exercised (inclusive of the Shares surrendered to the Company in payment of the aggregate Warrant Price);

A = the Fair Market Value (as determined pursuant to Section 1.3 below) of one Share; and

B = the Warrant Price.

1.3 Fair Market Value. If the Company's common stock is then traded or quoted on a nationally recognized securities exchange, inter-dealer quotation system or over-the-counter market (a "**Trading Market**") and the Class is common stock, the fair market value of a Share shall be the closing price or last sale price of a share of common stock reported for the Business Day immediately before the date on which Holder delivers this Warrant together with its Notice of Exercise to the Company. If the Company's common stock is then traded in a Trading Market and the Class is a series of the Company's convertible preferred stock, the fair market value of a Share shall be the closing price or last sale price of a share of the Company's common stock reported for the Business Day immediately before the date on which Holder delivers this Warrant together with its Notice of Exercise to the Company multiplied by the number of shares of the Company's common stock into which a Share is then convertible. If the Company's common stock is not traded in a Trading Market, the Board of Directors of the Company shall determine the fair market value of a Share in its reasonable good faith judgment; provided, however, if the Warrant is exercised in connection with the Company's initial, underwritten public offering and sale of its common stock pursuant to an effective registration statement under the Act (the "**IPO**"), the fair market value of one Share shall be the per share offering price set forth in the final prospectus filed by the Company under Rule 424(b) of the Act in connection with the IPO.

1.4 Delivery of Certificate and New Warrant. Within a reasonable time after Holder exercises this Warrant in the manner set forth in Section 1.1 or 1.2 above, the Company shall deliver to Holder a certificate representing the Shares issued to Holder upon such exercise and, if this Warrant has not been fully exercised and has not expired, a new warrant of like tenor representing the Shares not so acquired.

1.5 Replacement of Warrant. On receipt of evidence reasonably satisfactory to the Company of the loss, theft, destruction or mutilation of this Warrant and, in the case of loss, theft or destruction, on delivery of an indemnity agreement reasonably satisfactory in form, substance and amount to the Company or, in the case of mutilation, on surrender of this Warrant to the Company for cancellation, the Company shall, within a reasonable time, execute and deliver to Holder, in lieu of this Warrant, a new warrant of like tenor and amount.

1.6 Treatment of Warrant Upon Acquisition of Company.

(a) Acquisition. For the purpose of this Warrant, "**Acquisition**" means any transaction or series of related transactions involving: (i) the sale, lease, exclusive license, or other disposition of all or substantially all of the assets of the Company (ii) any merger or consolidation of the Company into or with another person or entity (other than a merger or consolidation effected exclusively to change the Company's domicile), or any other corporate reorganization, in which the stockholders of the Company in their capacity as such immediately prior to such merger, consolidation or reorganization, own less than a majority of the Company's (or the surviving or successor entity's) outstanding voting power immediately after such merger, consolidation or reorganization; or (iii) any sale or other transfer by the stockholders of the Company of shares representing at least a majority of the Company's then-total outstanding combined voting power. For avoidance of doubt, "Acquisition" shall exclude any transaction in which the Company sells and issues its capital stock to venture capital investors, for capital raising purposes, in a bona fide round of preferred stock financing.

(b) Treatment of Warrant at Acquisition. In the event of an Acquisition in which the consideration to be received by the Company's stockholders consists solely of cash, solely of Marketable Securities or a combination of cash and Marketable Securities (a "Cash/Public Acquisition"), and the fair market value of one Share as determined in accordance with Section 1.3 above would be greater than the Warrant Price in effect on such date immediately prior to such Cash/Public Acquisition, and Holder has not exercised this Warrant pursuant to Section 1.1 above as to all Shares, then this Warrant shall automatically be deemed to be Cashless Exercised pursuant to Section 1.2 above as to all Shares effective immediately prior to and contingent upon the consummation of a Cash/Public Acquisition. In connection with such Cashless Exercise, Holder shall be deemed to have restated each of the representations and warranties in Section 4 of the Warrant as the date thereof and the Company shall promptly notify Holder of the number of Shares (or such other securities) issued upon exercise. In the event of a Cash/Public Acquisition where the fair market value of one Share as determined in accordance with Section 1.3 above would be less than the Warrant Price in effect immediately prior to such Cash/Public Acquisition, then this Warrant will expire immediately prior to the consummation of such Cash/Public Acquisition and shall no longer be exercisable.

(c) Upon the closing of any Acquisition other than a Cash/Public Acquisition defined above, the acquiring, surviving or successor entity shall assume the obligations of this Warrant, and this Warrant shall thereafter be exercisable for the same securities and/or other property as would have been paid for the Shares issuable upon exercise of the unexercised portion of this Warrant as if such Shares were outstanding on and as of the closing of such Acquisition, subject to further adjustment from time to time in accordance with the provisions of this Warrant.

(d) As used in this Warrant, "**Marketable Securities**" means securities meeting all of the following requirements, determined as of immediately prior to the closing of an Acquisition: (i) the issuer thereof is then subject to the reporting requirements of Section 13 or Section 15(d) of the Securities Exchange Act of 1934, as amended (the "**Exchange Act**"), and is then current in its filing of all required reports and other information under the Act and the Exchange Act; (ii) the class and series of shares or other security of the issuer that would be

received by Holder in connection with the Acquisition were Holder to exercise this Warrant on or prior to the closing thereof is then traded in Trading Market, and (iii) Holder would be able to publicly re-sell, within six (6) months following the closing of such Acquisition, all of the issuer's shares and/or other securities that would be received by Holder in such Acquisition were Holder to exercise this Warrant in full on or prior to the closing of such Acquisition.

SECTION 2. ADJUSTMENTS TO THE SHARES AND WARRANT PRICE.

2.1 Stock Dividends, Splits, Etc. If the Company declares or pays a dividend or distribution on the outstanding shares of the Class payable in common stock or other securities or property (other than cash), then upon exercise of this Warrant, for each Share acquired, Holder shall receive, without additional cost to Holder, the total number and kind of securities and property which Holder would have received had Holder owned the Shares of record as of the date the dividend or distribution occurred. If the Company subdivides the outstanding shares of the Class by reclassification or otherwise into a greater number of shares, the number of Shares purchasable hereunder shall be proportionately increased and the Warrant Price shall be proportionately decreased. If the outstanding shares of the Class are combined or consolidated, by reclassification or otherwise, into a lesser number of shares, the Warrant Price shall be proportionately increased and the number of Shares shall be proportionately decreased.

2.2 Reclassification, Exchange, Combinations or Substitution. Upon any event whereby all of the outstanding shares of the Class are reclassified, exchanged, combined, substituted, or replaced for, into, with or by Company securities of a different class and/or series, then from and after the consummation of such event, this Warrant will be exercisable for the number, class and series of Company securities that Holder would have received had the Shares been outstanding on and as of the consummation of such event, and subject to further adjustment thereafter from time to time in accordance with the provisions of this Warrant. The provisions of this Section 2.2 shall similarly apply to successive reclassifications, exchanges, combinations substitutions, replacements or other similar events.

2.3 Conversion of Preferred Stock. If the Class is a class and series of the Company's convertible preferred stock, in the event that all outstanding shares of the Class are converted, automatically or by action of the holders thereof, into common stock pursuant to the provisions of the Company's Certificate of Incorporation, including, without limitation, in connection with the IPO, then from and after the date on which all outstanding shares of the Class have been so converted, this Warrant shall be exercisable for such number of shares of common stock into which the Shares would have been converted had the Shares been outstanding on the date of such conversion, and the Warrant Price shall equal the Warrant Price in effect as of immediately prior to such conversion divided by the number of shares of common stock into which one Share would have been converted, all subject to further adjustment thereafter from time to time in accordance with the provisions of this Warrant.

2.4 Adjustments for Diluting Issuances. Without duplication of any adjustment otherwise provided for in this Section 2, the number of shares of common stock issuable upon conversion of the Shares shall be subject to anti-dilution adjustment from time to time in the manner set forth in the Company's Articles or Certificate of Incorporation as if the Shares were issued and outstanding on and as of the date of any such required adjustment.

2.5 No Fractional Share. No fractional Share shall be issuable upon exercise of this Warrant and the number of Shares to be issued shall be rounded down to the nearest whole Share. If a fractional Share interest arises upon any exercise of the Warrant, the Company shall eliminate such fractional Share interest by paying Holder in cash the amount computed by multiplying the fractional interest by (i) the fair market value (as determined in accordance with Section 1.3 above) of a full Share, less (ii) the then-effective Warrant Price.

2.6 Notice/Certificate as to Adjustments. Upon each adjustment of the Warrant Price, Class and/or number of Shares, the Company, at the Company's expense, shall notify Holder in writing within a reasonable time setting forth the adjustments to the Warrant Price, Class and/or number of Shares and facts upon which such adjustment is based. The Company shall, upon written request from Holder, furnish Holder with a certificate of its Chief Financial Officer, including computations of such adjustment and the Warrant Price, Class and number of Shares in effect upon the date of such adjustment.

SECTION 3. REPRESENTATIONS, WARRANTIES AND COVENANTS OF THE COMPANY.

3.1 Representations and Warranties. The Company represents and warrants to, and agrees with, Holder as follows:

(a) The initial Warrant Price referenced on the first page of this Warrant is not greater than the fair market value of a share of the Company's common stock as determined by a valuation of the Company's common stock for purposes of compliance with Section 409A of the Internal Revenue Code of 1986, as amended.

(b) All Shares which may be issued upon the exercise of this Warrant, and all securities, if any, issuable upon conversion of the Shares, shall, upon issuance, be duly authorized, validly issued, fully paid and non-assessable, and free of any liens and encumbrances except for restrictions on transfer provided for herein, under the Company's Certificate of Incorporation, Bylaws, as amended from time to time, and the Second Amended and Restated Investor Rights Agreement, dated August 29, 2014, by and among the Company and the Stockholders (as defined therein), as amended from time to time (the "***Investor Rights Agreement***"), or under applicable federal and state securities laws. The Company covenants that it shall at all times cause to be reserved and kept available out of its authorized and unissued capital stock such number of shares of the Class, common stock and other securities as will be sufficient to permit the exercise in full of this Warrant and the conversion of the Shares into common stock or such other securities.

(c) The Company's capitalization table attached hereto as Schedule 1 is true and complete, in all material respects, as of the Issue Date.

3.2 Notice of Certain Events. If the Company proposes at any time to:

(a) declare any dividend or distribution upon the outstanding shares of the Class or common stock, whether in cash, property, stock, or other securities and whether or not a regular cash dividend;

(b) offer for subscription or sale pro rata to the holders of the outstanding shares of the Class any additional shares of any class or series of the Company's stock (other than pursuant to contractual pre-emptive rights);

(c) effect any reclassification, exchange, combination, substitution, reorganization or recapitalization of the outstanding shares of the Class;

(d) effect an Acquisition or to liquidate, dissolve or wind up; or

(e) effect an IPO;

then, in connection with each such event, the Company shall give Holder:

(1) at least seven (7) Business Days prior written notice of the date on which a record will be taken for such dividend, distribution, or subscription rights (and specifying the date on which the holders of outstanding shares of the Class will be entitled thereto) or for determining rights to vote, if any, in respect of the matters referred to in (a) and (b) above;

(2) in the case of the matters referred to in (c) and (d) above at least seven (7) Business Days prior written notice of the date when the same will take place (and specifying the date on which the holders of outstanding shares of the Class will be entitled to exchange their shares for the securities or other property deliverable upon the occurrence of such event and such reasonable information as Holder may reasonably require regarding the treatment of this Warrant in connection with such event giving rise to the notice); and

(3) with respect to the IPO, at least seven (7) Business Days prior written notice of the date on which the Company proposes to file its registration statement in connection therewith.

Company will also provide information requested by Holder that is reasonably necessary to enable Holder to comply with Holder's accounting or reporting requirements.

SECTION 4. REPRESENTATIONS, WARRANTIES AND COVENANTS OF HOLDER.

Holder represents, warrants and covenants to the Company as follows:

4.1 Purchase for Own Account. This Warrant and the securities to be acquired upon exercise of this Warrant by Holder are being acquired for investment for Holder's account, not as a nominee or agent, and not with a view to the public resale or distribution within the meaning of the Act. Holder also represents that it has not been formed for the specific purpose of acquiring this Warrant or the Shares.

4.2 Disclosure of Information. Holder is aware of the Company's business affairs and financial condition and has received or has had full access to all the information it considers necessary or appropriate to make an informed investment decision with respect to the acquisition of this Warrant and its underlying securities. Holder further has had an opportunity

to ask questions and receive answers from the Company regarding the terms and conditions of the offering of this Warrant and its underlying securities and to obtain additional information (to the extent the Company possessed such information or could acquire it without unreasonable effort or expense) necessary to verify any information furnished to Holder or to which Holder has access.

4.3 Investment Experience. Holder understands that the purchase of this Warrant and its underlying securities involves substantial risk. Holder has experience as an investor in securities of companies in the development stage and acknowledges that Holder can bear the economic risk of such Holder's investment in this Warrant and its underlying securities and has such knowledge and experience in financial or business matters that Holder is capable of evaluating the merits and risks of its investment in this Warrant and its underlying securities and/or has a preexisting personal or business relationship with the Company and certain of its officers, directors or controlling persons of a nature and duration that enables Holder to be aware of the character, business acumen and financial circumstances of such persons.

4.4 Accredited Investor Status. Holder is an "accredited investor" within the meaning of Regulation D promulgated under the Act.

4.5 The Act. Holder understands that this Warrant and the Shares issuable upon exercise hereof have not been registered under the Act in reliance upon a specific exemption therefrom, which exemption depends upon, among other things, the bona fide nature of Holder's investment intent as expressed herein. Holder understands that this Warrant and the Shares issued upon any exercise hereof must be held indefinitely unless subsequently registered under the Act and qualified under applicable state securities laws, or unless exemption from such registration and qualification are otherwise available. Holder is aware of the provisions of Rule 144 promulgated under the Act. Holder acknowledges that if an exemption from registration or qualification is available, it may be conditioned on various requirements including, but not limited to, the time and manner of sale, the holding period, and requirements relating to the Company which are outside of Holder's control, and which the Company is under no obligation and may not reasonably be able to satisfy.

4.6 Market Stand-off Agreement. Holder agrees that the Shares shall be subject to the Market Standoff provisions in Section 4.12 of the Investor Rights Agreement or similar agreement.

4.7 No Voting Rights; No Stockholder Rights. Holder, as a Holder of this Warrant, will not have any voting rights or otherwise be entitled to any other rights afforded to a stockholder of the Company until the exercise of this Warrant.

SECTION 5. MISCELLANEOUS.

5.1 Term and Automatic Conversion Upon Expiration.

(a) Term. Subject to the provisions of Section 1.6 above, this Warrant is exercisable in whole or in part at any time and from time to time on or before 6:00 PM, Pacific time, on the Expiration Date and shall be void thereafter.

(b) Automatic Cashless Exercise upon Expiration. In the event that, upon the Expiration Date, the fair market value of one Share (or other security issuable upon the exercise hereof) as determined in accordance with Section 1.3 above is greater than the Warrant Price in effect on such date, then this Warrant shall automatically be deemed on and as of such date to be exercised pursuant to Section 1.2 above as to all Shares (or such other securities) for which it shall not previously have been exercised, and the Company shall, within a reasonable time, deliver a certificate representing the Shares (or such other securities) issued upon such exercise to Holder.

5.2 Legends. The Shares (and the securities issuable, directly or indirectly, upon conversion of the Shares, if any) shall be imprinted with a legend in substantially the following form (as well as any other legends required by the Company's Certificate of Incorporation, Bylaws, each as amended from time to time, and the Investor Rights Agreement, as applicable):

(a) Securities Law Legend:

THE SHARES EVIDENCED BY THIS CERTIFICATE HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED (THE "**ACT**"), OR THE SECURITIES LAWS OF ANY STATE AND, EXCEPT AS SET FORTH IN THAT CERTAIN WARRANT TO PURCHASE STOCK ISSUED BY THE ISSUER TO SILICON VALLEY BANK DATED APRIL 15, 2015, MAY NOT BE OFFERED, SOLD, PLEDGED OR OTHERWISE TRANSFERRED UNLESS AND UNTIL REGISTERED UNDER SAID ACT AND LAWS OR IN FORM AND SUBSTANCE SATISFACTORY TO THE ISSUER, SUCH OFFER, SALE, PLEDGE OR OTHER TRANSFER IS EXEMPT FROM SUCH REGISTRATION.

(b) Market Stand-Off Legend:

THE SHARES REPRESENTED BY THIS CERTIFICATE ARE SUBJECT TO RESTRICTIONS ON TRANSFERABILITY AND RESALE, INCLUDING A LOCK-UP PERIOD IN THE EVENT OF AN INITIAL PUBLIC OFFERING, AS SET FORTH IN THAT CERTAIN WARRANT TO PURCHASE STOCK ISSUED BY THE ISSUER TO SILICON VALLEY BANK DATED APRIL 15, 2015, PURSUANT TO WHICH THESE SHARES WERE ISSUED.

5.3 Compliance with Securities Laws on Transfer. This Warrant and the Shares issuable upon exercise of this Warrant (and the securities issuable, directly or indirectly, upon conversion of the Shares, if any) may not be transferred or assigned in whole or in part except in compliance with applicable federal and state securities laws by the transferor and the transferee (including, without limitation, the delivery of investment representation letters and legal opinions reasonably satisfactory to the Company, as reasonably requested by the Company). The Company shall not require Holder to provide an opinion of counsel if the transfer is to SVB Financial Group (Silicon Valley Bank's parent company) or any other affiliate

of Holder, provided that any such transferee is an "accredited investor" as defined in Regulation D promulgated under the Act. Additionally, the Company shall also not require an opinion of counsel if there is no material question as to the availability of Rule 144 promulgated under the Act; provided that, Holder represents that it has complied with Rule 144 in reasonable detail, the selling broker represents that it has complied with Rule 144, and the Company is provided with a copy of Holder's notice of proposed sale.

5.4 Transfer Procedure. After receipt by Silicon Valley Bank of the executed Warrant, Silicon Valley Bank will transfer all of this Warrant to its parent company, SVB Financial Group. By its acceptance of this Warrant, SVB Financial Group hereby makes to the Company each of the representations and warranties set forth in Section 4 hereof and agrees to be bound by all of the terms and conditions of this Warrant as if the original Holder hereof. Subject to the provisions of Section 5.3 and upon providing the Company with written notice, SVB Financial Group and any subsequent Holder may transfer all or part of this Warrant or the Shares issuable upon exercise of this Warrant (or the securities issuable directly or indirectly, upon conversion of the Shares, if any) to any transferee, provided, however, in connection with any such transfer, SVB Financial Group or any subsequent Holder will give the Company notice of the portion of the Warrant being transferred with the name, address and taxpayer identification number of the transferee and Holder will surrender this Warrant to the Company for reissuance to the transferee(s) (and Holder if applicable); and provided further, that any subsequent transferee other than SVB Financial Group shall agree in writing with the Company to be bound by all of the terms and conditions of this Warrant. Notwithstanding any contrary provision herein, at all times prior to the IPO, Holder may not, without the Company's prior written consent, transfer this Warrant or any portion hereof, or any Shares issued upon any exercise hereof, or any shares or other securities issued upon any conversion of any Shares issued upon any exercise hereof, to any person or entity who directly competes with the Company, except in connection with an Acquisition of the Company by such a direct competitor.

5.5 Notices. All notices and other communications hereunder from the Company to Holder, or vice versa, shall be deemed delivered and effective (i) when given personally, (ii) on the third (3rd) Business Day after being mailed by first-class registered or certified mail, postage prepaid, (iii) upon actual receipt if given by facsimile or electronic mail and such receipt is confirmed in writing by the recipient, or (iv) on the first Business Day following delivery to a reliable overnight courier service, courier fee prepaid, in any case at such address as may have been furnished to the Company or Holder, as the case may be, in writing by the Company or such Holder from time to time in accordance with the provisions of this Section 5.5. All notices to Holder shall be addressed as follows until the Company receives notice of a change of address in connection with a transfer or otherwise:

SVB Financial Group
Attn: Treasury Department
3003 Tasman Drive, HC 215
Santa Clara, CA 95054
Telephone: (408) 654-7400
Facsimile: (408) 988-8317
Email address: derivatives@svb.com

Notice to the Company shall be addressed as follows until Holder receives notice of a change in address:

CLEARSIDE BIOMEDICAL, INC.
Attn: Charles A. Deignan – Chief Financial Officer
1220 Old Alpharetta Road, Suite 300
Alpharetta, Georgia 30005
Telephone:
Facsimile:
Email: charlie.deignan@clearsidebio.com

5.6 Waiver. This Warrant and any term hereof may be changed, waived, discharged or terminated (either generally or in a particular instance and either retroactively or prospectively) only by an instrument in writing signed by the party against which enforcement of such change, waiver, discharge or termination is sought.

5.7 Attorney's Fees. In the event of any dispute between the parties concerning the terms and provisions of this Warrant, the party prevailing in such dispute shall be entitled to collect from the other party all costs incurred in such dispute, including reasonable attorneys' fees.

5.8 Counterparts; Facsimile/Electronic Signatures. This Warrant may be executed in counterparts, all of which together shall constitute one and the same agreement. Any signature page delivered electronically or by facsimile shall be binding to the same extent as an original signature page with regards to any agreement subject to the terms hereof or any amendment thereto.

5.9 Governing Law. This Warrant shall be governed by and construed in accordance with the laws of the State of Delaware, without giving effect to its principles regarding conflicts of law.

5.10 Headings. The headings in this Warrant are for purposes of reference only and shall not limit or otherwise affect the meaning of any provision of this Warrant.

5.11 Business Days. "**Business Day**" is any day that is not a Saturday, Sunday or a day on which Silicon Valley Bank is closed.

[Remainder of page left blank intentionally]
[Signature page follows]

IN WITNESS WHEREOF, the parties have caused this Warrant to Purchase Stock to be executed by their duly authorized representatives effective as of the Issue Date written above.

"COMPANY"

CLEARSIDE BIOMEDICAL, INC.

By: /s/ Daniel H White

Name: Daniel H White
(Print)

Title: President & CEO

"HOLDER"

SILICON VALLEY BANK

By: _____

Name: _____
(Print)

Title:

IN WITNESS WHEREOF, the parties have caused this Warrant to Purchase Stock to be executed by their duly authorized representatives effective as of the Issue Date written above.

“COMPANY”

CLEARSIDE BIOMEDICAL, INC.

By: _____

Name: _____
(Print)

Title:

“HOLDER”

SILICON VALLEY BANK

By: /s/ Ryan Roller

Name: Ryan Roller
(Print)

Title: Vice President

APPENDIX 1

NOTICE OF EXERCISE

1. The undersigned Holder hereby exercises its right purchase shares of the Series B Preferred Stock of CLEARSIDE BIOMEDICAL, INC. (the "Company") in accordance with the attached Warrant To Purchase Stock, and tenders payment of the aggregate Warrant Price for such shares as follows:

[ ] check in the amount of $ payable to order of the Company enclosed herewith

[ ] Wire transfer of immediately available funds to the Company's account

[ ] Cashless Exercise pursuant to Section 1.2 of the Warrant

[ ] Other [Describe] _____

2. Please issue a certificate or certificates representing the Shares in the name specified below:

_____
Holder's Name

_____

_____
(Address)

3. By its execution below and for the benefit of the Company, Holder hereby restates each of the representations and warranties in Section 4 of the Warrant to Purchase Stock as of the date hereof.

HOLDER:

_____

By: _____

Name: _____

Title: _____

(Date): _____

AMENDMENT NO. 2 TO
COLLABORATION AGREEMENT

This Amendment No. 2 to COLLABORATION AGREEMENT ("Second Amendment") is entered into as of April 30, 2015 (the "Second Amendment Date"), by and between **Santen Pharmaceutical Co., Ltd.**, a corporation organized under the laws of Japan, with offices at 4-20, Ofukacho, Kita-ku3, Osaka 530-8552 Japan ("SANTEN"), and **Clearside Biomedical, Inc.**, a corporation organized under the laws of Delaware, with offices at 1220 Old Alpharetta Rd., Suite 300, Alpharetta, GA 30005 ("Clearside"). SANTEN and Clearside are herein sometimes referred to collectively as the "Parties" and individually as "Party."

Background

SANTEN and Clearside are parties to a Collaboration Agreement (the "Original Agreement") dated January 31, 2013 (the "Effective Date"), as amended by Amendment No. 1 dated April 29, 2014 (as amended, the "Collaboration Agreement").

Pursuant to the Collaboration Agreement, the Parties have conducted preliminary studies involving the use of Clearside Technology with certain SANTEN Compounds.

The Parties have determined that the results of preliminary studies warrant additional research and development and, accordingly, the Parties desire to amend the Collaboration Agreement in order to facilitate such additional work.

Now, therefore, in consideration of the premises and mutual covenants herein contained, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Parties agree to amend the Collaboration Agreement as follows:

A. The parties agree to use commercially reasonable efforts to conduct the Feasibility Study Work Plan attached as Appendix A hereto and hereby agree that for purposes of this Agreement, the glaucoma program active pharmaceutical ingredient supplied by SANTEN for use in such work plan shall constitute a SANTEN Compound. The parties further acknowledge that the budget update set forth in Appendix A reflects the status of Program Costs paid and committed through April 24, 2015. Santen acknowledges that research involving external costs, including identified rodent studies for [***], would result in Program Costs exceeding $[***] and would, therefore, be borne by Santen as provided for in Section 2 of the Agreement.

B. The Parties shall issue the initial press release set forth on Appendix B hereto promptly following the Second Amendment Date.

C. Section 5.3(b) shall be amended to read as follows:

"(b) SANTEN may exercise the Product Option with respect to a SANTEN Compound until six (6) months after delivery by Clearside of the applicable Study Results, provided, however, that such six (6) months period shall be extended by up to three (3) months in the event that SANTEN reasonably determines within such six (6) month period that it is necessary to conduct additional tests, including but not limited to toxicity test. All Product Options shall expire no later than March 31, 2016. Notwithstanding the foregoing, should the delivery of Study Results to SANTEN be delayed due to no fault of SANTEN, then the expiration date of such Product Option shall be extended by the duration of such delay."

D. Except as expressly set forth in this Second Amendment, the Collaboration Agreement shall remain in full force and effect. All capitalized terms used and not defined in this Amendment shall have the meaning given in the Collaboration Agreement. This Second Amendment may be executed in any number of counterparts with the same effect as if the Parties hereto had signed the same document. All of these counterparts will for all purposes constitute one agreement, binding on the Parties hereto, notwithstanding that the Parties hereto are not signatories to the same counterpart. A fax transcribed copy, pdf (or similar format) or photocopy of this Amendment executed by a Party hereto in counterpart will constitute a properly executed, delivered and binding agreement or counterpart of the executing Party.

IN WITNESS WHEREOF, the Parties have executed this Amendment No. 2 to Collaboration Agreement by their duly authorized representatives as of the date and year first written above.

CLEARSIDE BIOMEDICAL, INC.

By: /s/ Daniel H. White

Name: Daniel H. White

Title: President & CEO

SANTEN PHARMACEUTICAL CO., LTD.

By: /s/ Naveed Shams

Name: Naveed Shams

Title: Senior Corporate Officer
Chief Scientific Officer
Head of Global R&D

CONFIDENTIAL TREATMENT HAS BEEN REQUESTED FOR PORTIONS OF THIS EXHIBIT. THE COPY FILED HEREWITH OMITS THE INFORMATION SUBJECT TO A CONFIDENTIALITY REQUEST. OMISSIONS ARE DESIGNATED [***]. A COMPLETE VERSION OF THIS EXHIBIT HAS BEEN FILED SEPARATELY WITH THE SECURITIES AND EXCHANGE COMMISSION.

Appendix A
Feasibility Study Work Plan

Background

1. This collaboration started to evaluate our two compounds ([***]) two years ago (put the date for the agreement).
2. Major findings are following:
    a. [***] clinical formulation (probably PEG) was not tolerable following SCS injection.
    b. Suspensions of [***] were tolerable, but not pharmacologically active in a rabbit hyperpermeability model.
    c. Suspensions of a [***] were tolerable and pharmacologically active in a pig uveitis model.
    d. Several sustained release platform (placebo) formulations were tested and three potential formulations have been identified.

Objectives for further collaboration

To explore further possibilities to develop new formulations for suprachoroidal injections of [***] and to extend our collaborations to a new field like glaucoma, we will extend the current collaborations to achieve the followings:

1. To identify a potential candidate formulation for clinical development by determining tolerability, pharmacokinetic profiles and biological activities of a sustained release formulation for suprachoroidal injection instead of [***]
2. To explore a possibility of collaborative co-development of a [***] by determining tolerability, pharmacokinetic profiles and biological activities of a sustained release formulation for suprachoroidal injection of [***]
3. To explore a possibility to create sustained release formulations for suprachoroidal injection of anti-glaucoma agents such as Prostaglandins by determining their tolerability, pharmacokinetic profiles and biological activities.

Candidate Compounds

Santen Compounds identified as of the Effective Date:

[***]

Santen Compounds identified as of the Effective Date:

[***]

Santen Compounds to be identified during the Term of the Agreement:

Anti-glaucoma compounds are the class of prostaglandins

Work Plan

1. [***]

Target Product Profile (TPP)

- Target disease: wet Age-related Macular Degeneration (wAMD)
- Every three-month injection into suprachoroidal space or longer
- Superior efficacy to that for [***] intravitreal injection
- Non-inferior safety or superior to that for [***] intravitreal injection

Planned studies

- Formulation study with sustained release formulations
- Ocular tolerability study in rabbits
- Ocular pharmacokinetic study in rabbits
- Ocular pharmacological study in laser-induced rat Choroidal Neovascularization (CNV) model
- Ocular pharmacological study in laser-induced monkey Choroidal Neovascularization model

Status Update:

- A rabbit ocular tolerability study with two formulations for sustained release through the SCS following suprachoroidal injection is currently ongoing and is being conducted by Covance. The objective is to choose an appropriate sustained release formulation
- The study is expected to be completed in May 2015
- Results are anticipated in June 2015
- A rat laser CNV model study will be conducted with one or both of these formulations, or a modified formulation once an appropriate time outcome is achieved

2. [***]

Target Product Profile (TPP): To be discussed during the term of the agreement

- Target disease: Non-infectious uveitis
- Every two-month or longer injection into suprachoroidal space
- Superior efficacy to that for triamcinolone intravitreal injection
- Non-inferior safety or superior to that of Triamcinolone acetonide intravitreal injection

Planned studies

- Formulation study with suspension or sustained release formulations
- Ocular tolerability study in rabbits

- Ocular pharmacokinetic study in rabbits
- Ocular pharmacological study in a pig EIU model

Status Update:

- An ocular tolerability study in rabbits has been completed
- An ocular pharmacodynamic study in a pig inflammatory model is ongoing
  - The study is expected to be complete in April
  - Preliminary results were shared with the joint team March 2015; final results will be shared with the joint team in May 2015
- A pharmacology study following determining a new formulation or a pharmacological study with a suspension in the same EIU model in pigs is being considered
  - The study is anticipated to start in June 2015
  - Study results anticipated in August 2015
  - Estimated cost for the study is ~ $40,000

3. Anti-glaucoma compounds [***]

Target Product Profile (TPP): To be discussed during the term of the agreement

- Target disease: Glaucoma
- Every three-month injection into suprachoroidal space or longer
- Non-inferior efficacy compared to Xalatan® eye drop
- Non-inferior efficacy compared to Xalatan® eye drop or Santen compounds

Planned studies

- Formulation study with sustained release formulations
- Ocular tolerability study in rabbits
- Ocular pharmacokinetic study in rabbits
- Ocular pharmacological study in a dog or monkey model

Status Update:

- A rabbit ocular tolerability study evaluating latanoprost in an emulsion formulation is ongoing at Covance.
  - The study is expected to be completed May 2015
  - Results are expected in June 2015
- A pharmacodynamics dog model study is being planned comparing daily Xalatan eye drops to a single suprachoroidal injection of latanoprost.
  - The study is expected to start in June 2015
  - The results are anticipated to be available in September 2015

Appendix B
Press Release

Clearside Biomedical, Inc. and Santen, Inc. Announce
Research Collaboration in Glaucoma

Expands Previous Research Collaboration to Include 2nd Largest Ophthalmic Market

Alpharetta, GA and Emeryville, CA (April XX, 2015) – Clearside Biomedical, Inc., a clinical-stage biopharmaceutical company developing first-in-class drug therapies to treat blinding diseases of the eye, and Santen Inc., a wholly owned subsidiary of Santen Pharmaceuticals Co., Ltd., today announced the expansion of its research collaboration to include the field of glaucoma. The two companies have been working together since January 2013 to develop drugs to treat diseases afflicting the retina and choroid that can eventually lead to blindness. The expanded collaboration will now study the use of Clearside's proprietary microinjector to deliver sustained intraocular pressure-lowering medications.

"We are very pleased with our current retinal disease research collaboration focusing on select Santen sustained-release formulations administered via suprachoroidal (SCS)

CONFIDENTIAL TREATMENT HAS BEEN REQUESTED FOR PORTIONS OF THIS EXHIBIT. THE COPY FILED HEREWITH OMITS THE INFORMATION SUBJECT TO A CONFIDENTIALITY REQUEST. OMISSIONS ARE DESIGNATED [***]. A COMPLETE VERSION OF THIS EXHIBIT HAS BEEN FILED SEPARATELY WITH THE SECURITIES AND EXCHANGE COMMISSION.

administration using Clearside's proprietary microinjector," said Yusuf Ali, PhD, Vice President, Research and Development at Santen. "We look forward to expanding our relationship with Clearside to investigate Clearside's proprietary methods of accessing the SCS for the treatment of additional blinding diseases such as glaucoma."

"Santen has been an excellent collaborator in exploring the emerging field of SCS administration. Their access to new compounds and formulation technology has helped us understand the possibilities of SCS administration," stated Daniel White, Clearside's president and CEO. "Our collaborative goal is to provide effective and safe long-term drug therapy via SCS administration that may eliminate the daily requirement of eye drop therapy to treat causes leading to glaucoma."

About Glaucoma

Glaucoma is a group of eye diseases that, in most cases, produce increased intraocular pressure (IOP) within the eye. This elevated IOP is caused by a backup of fluid in the eye that, if left untreated, causes damage to the optic nerve leading to decreased visual acuity and potentially blindness. According to the World Health Organization, glaucoma is the second leading cause of blindness in the world and it is estimated that more than 2.7 million Americans have this disease. The treatment for glaucoma depends on the nature and severity of each case. In general, glaucoma cannot be cured but it can be controlled. Eye drops, laser procedures and surgical procedures are most commonly used to prevent or slow further damage from occurring.

About Clearside Biomedical, Inc.

Clearside Biomedical, Inc., headquartered in Alpharetta, GA, is a clinical-stage biopharmaceutical company developing first-in-class drug therapies to treat chronic, blinding diseases of the eye. Clearside's product candidates focus on diseases affecting the retina and the choroid, especially diseases associated with macular edema. Visit www.clearsidebio.com for more information.

About Santen, Inc.

Santen Inc., based in Emeryville, CA is the U.S. subsidiary of Santen Pharmaceuticals Co., Ltd., a specialty company dedicated to the ophthalmic and anti-rheumatic fields that carries out the research, development, sales, and marketing of pharmaceuticals. The company has 15 bases in 12 countries and delivers products to consumers in more than 70 countries. In

Japan, Santen holds the No. 1 share in the prescription ophthalmic pharmaceutical market. As a leading company in the field of ophthalmology, Santen aims to contribute to society by supplying valuable products and services to satisfy unmet medical needs. Additional corporate information is available online at www.santen.com.

Contact

Clearside Biomedical, Inc.
Charles Deignan, 678-270-4005
charlie.deignan@clearsidebio.com

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Exhibit 10.13

AMENDED AND RESTATED EXECUTIVE EMPLOYMENT AGREEMENT

THIS AMENDED AND RESTATED EXECUTIVE EMPLOYMENT AGREEMENT (the "**Agreement**"), is entered into effective as of January 1, 2015, (the "**Effective Date**"), by and between Clearside Biomedical, Inc., a Delaware corporation (the "**Company**"), and Daniel H. White (the "**Executive**"), an individual residing in Georgia.

W I T N E S S E T H:

WHEREAS, the Company and Executive are parties to an Executive Employment Agreement dated September 1, 2012 (the "**Original Agreement**");

WHEREAS, the Company and Executive desire to amend and restated the Original Agreement upon the terms and conditions of this Agreement to set forth the terms and conditions of the Executive's continued employment from and after the Effective Date.

NOW, THEREFORE, in consideration of the foregoing, of the mutual promises herein, and of other good and valuable consideration, including the continued employment of the Executive by the Company and the compensation to be received by the Executive from the Company from time to time, and specifically the compensation to be received by the Executive pursuant to Section 4 hereof, the receipt and sufficiency of which are hereby acknowledged, the parties hereto, intending legally to be bound, hereby agree as follows:

1. Employment. The Company hereby employs the Executive and the Executive hereby accepts employment as the President and Chief Executive Officer of the Company upon the terms and conditions of this Agreement.

2. Duties. The Executive shall faithfully perform all duties of the Company related to the position or positions held by the Executive, including but not limited to all duties set forth in this Agreement and/or in the Bylaws of the Company related to the position or positions held by the Executive and all additional duties that are prescribed from time to time by the Board of Directors of the Company (the "**Board**") of the Company. The Executive shall devote the Executive's full time and attention to the performance of the Executive's duties and responsibilities on behalf of the Company and in furtherance of its best interests; provided, however, that the Executive, subject to the Executive's obligations hereunder, shall also be permitted to make personal investments, perform reasonable volunteer services and, with the prior consent of the Company, serve on outside boards of directors for non-profit corporations. The Executive shall comply with all Company policies, standards, rules and regulations (the "**Company Policies**") and all applicable government laws, rules and regulations that are now or hereafter in effect. The Executive acknowledges receipt of copies of all written Company Policies that are in effect as of the date of this Agreement.

3. Term. Unless earlier terminated as provided herein, the initial term of this Agreement shall commence on the Effective Date and shall continue until December 31, 2015. Thereafter, this Agreement shall automatically renew on a year-to-year basis on the same terms and conditions set forth herein unless: (a) earlier terminated or amended as provided herein or (b) either party gives written notice of non-renewal at least sixty (60) days prior to the end of the initial term or any renewal term of this Agreement. The initial term of this Agreement and all renewals thereof are referred to herein as the "**Term**."

4. Compensation. During the Term, as compensation for the services rendered by the Executive under this Agreement, the Executive shall be entitled to receive the following (all payments are subject to applicable withholdings)

(a) Base Salary. The Executive shall receive a monthly salary at a rate of $27,083.33 (equal to an annual salary rate of $325,000) payable in accordance with the then-current payroll schedule of the Company (the "**Base Salary**"). The Executive's salary may be increased from time to time by the Board.

(b) Bonuses. The Executive shall be eligible to participate in all bonus or similar incentive plans adopted by the Board. The amount awarded, if any, to the Executive under any bonus or incentive plan shall be in the discretion of the Board or any committee administering such plan, based on its assessment of the Executive's and the Company's performance during the relevant period, but it is the expectation of the Company that any such bonus would be up to 50% of the Executive's then-current annual Base Salary. If a bonus is awarded, unless otherwise specifically provided by the Board or committee administering such plan, it shall be paid between January 1 and March 15 of the year following the year in which such bonus was earned.

(c) Options. In connection with the Executive's employment, the Company has issued to the Executive options to purchase shares of the common stock of the Company (the "**Options**"). The Options have vested or shall vest in accordance with the terms of the stock option Agreements. During the Term of the Agreement, Executive will be eligible to receive additional stock options, restricted stock grants, or other equity incentive awards under or outside of any current or successor equity incentive plans of the Company, as the Board in its sole discretion determines to be appropriate (any such awards, collectively with the Options, "**Equity Awards**").

(d) Benefits. The Executive shall be entitled to receive those benefits provided from time to time to other executive employees of the Company, in accordance with the terms and conditions of the applicable plan documents; provided that the Executive meets the eligibility requirements thereof. All such benefits are subject to amendment or termination from time to time by the Company without the consent of the Executive or any other employee of the Company.

(e) Vacation. The Executive shall be entitled to four (4) weeks paid vacation per calendar year (with the vacation for any partial year being prorated) and shall be entitled to carry over one-half of the total Vacation days earned in one calendar year to the subsequent calendar year; *provided, however,* that in no event may the Executive carry over more than two (2) weeks of paid vacation into a subsequent year. Upon the termination of the Executive's employment with the Company, no cash shall be paid in lieu of accrued but unused vacation.

(f) Annual Physical Exam. The Company shall bear the cost of one comprehensive physical examination per calendar year.

(g) Business Expenses. The Company shall pay, or reimburse the Executive for, all reasonable expenses incurred by the Executive directly related to conduct of the business of the Company; provided that, the Executive complies with the Company's policies for the reimbursement or advancement of business expenses that are now or hereafter in effect.

5. Termination. This Agreement and the Executive's employment by the Company shall or may be terminated, as the case may be, as follows:

(a) Termination upon Expiration of the Term. This Agreement and the Executive's employment by the Company shall terminate upon the expiration of the Term, unless renewed.

(b) Termination by the Executive. The Executive may terminate this Agreement and Executive's employment by the Company:

(i) for "Good Reason" (as defined herein). For purposes of this Agreement, "**Good Reason**" shall mean, the existence, without the consent of the Executive, of any of the following events: (A) the Executive's duties and responsibilities or salary are substantially reduced or diminished; (B) the Company materially breaches its obligations under this Agreement; or (C) the Executive's place of employment is relocated by more than fifty (50) miles. In addition to any requirements set forth above, in order for any of the above events to constitute "Good Reason", the Executive must (X) inform the Company of the existence of the event within ninety (90) days of the initial existence of the event, after which date the Company shall have no less than thirty (30) days to cure the event which otherwise would constitute "Good Reason" hereunder and (Y) the Executive must terminate Executive's employment with the Company for such "Good Reason" no later than two (2) years after the initial existence of the event which prompted the Executive's termination.

(ii) Other than for Good Reason thirty (30) days after notice to the Company.

(c) Termination by the Company. The Company may terminate this Agreement and the Executive's employment by the Company upon notice to the Executive (or Executive's personal representative):

(i) at any time and for any reason;

(ii) upon the death of the Executive, in which case this Agreement shall terminate immediately; provided that, such termination shall not prejudice any benefits payable to the Executive's spouse or beneficiaries which are fully vested as of the date of death;

(iii) if the Executive is "permanently disabled" (as defined herein), in which case this Agreement shall terminate immediately; provided that, such termination shall not prejudice any benefits payable to the Executive, the Executive's spouse or beneficiaries which are fully vested as of the date of the termination of this Agreement. For purposes of this Agreement, the Executive shall be considered "**permanently disabled**" when a qualified medical doctor

mutually acceptable to the Company and the Executive or the Executive's personal representative shall have certified in writing that: (A) the Executive is unable, because of a medically determinable physical or mental disability, to perform substantially all of the Executive's duties, with or without a reasonable accommodation, for more than one hundred and eighty (180) calendar days measured from the last full day of work; or (B) by reason of mental or physical disability, it is unlikely that the Executive will be able, within one hundred and eighty (180) calendar days, to resume substantially all business duties and responsibilities in which the Executive was previously engaged and otherwise discharge the Executive's duties under this Agreement;

(iv) upon the liquidation, dissolution or discontinuance of business by the Company in any manner or the filing of any petition by or against the Company under any federal or state bankruptcy or insolvency laws, which petition shall not be dismissed within sixty (60) days after filing; provided that, such termination shall not prejudice the Executive's rights as a stockholder or a creditor of the Company; or

(v) "for cause" (as defined herein). "**For cause**" shall be determined by the Board by a majority vote without the participation of the Executive in such vote and shall mean:

(A) Any material breach of the terms of this Agreement by the Executive, or the failure of the Executive to diligently and properly perform the Executive's duties for the Company or the Executive's failure to achieve the objectives specified by the Board , which breach or failure is not cured within thirty (30) days after written notice thereof;

(B) The Executive's misappropriation or unauthorized use of the Company's tangible or intangible property, or breach of the Proprietary Information Agreement (as defined herein) or any other similar agreement regarding confidentiality, intellectual property rights, non-competition or non-solicitation;

(C) Any material failure to comply with the Company Policies or any other policies and/or directives of the Board, which failure is not cured within thirty (30) days after written notice thereof; *provided, however*, in the case of failure to comply with Company Policies related to harassment, unlawful discrimination, retaliation or workplace violence a thirty (30) day cure period and written notice thereof is not required;

(D) The Executive's use of illegal drugs or any illegal substance, or the Executive's use of alcohol in any manner that materially interferes with the performance of the Executive's duties under this Agreement;

(E) Any dishonest or illegal action (including, without limitation, embezzlement) or any other action whether or not dishonest or illegal by the Executive which is materially detrimental to the interest and well-being of the Company, including, without limitation, harm to its reputation;

(F) The Executive's failure to fully disclose any material conflict of interest that the Executive may have with the Company in a transaction between the Company and any third party which is materially detrimental to the interest and well-being of the Company; or

(G) Any adverse action or omission by the Executive which would be required to be disclosed pursuant to public securities laws or which would limit the ability of the Company or any entity affiliated with the Company to sell securities under any Federal or state law or which would disqualify the Company or any affiliated entity from any exemption otherwise available to it.

(d) Obligations of the Company Upon Termination.

(i) Upon the termination of this Agreement: (A) pursuant to the expiration of the Term upon notice of non-renewal of the Term given by the Executive; (B) by the Executive pursuant to paragraph 5(b)(ii); or (C) by the Company pursuant to paragraph 5(c)(ii), (iii), (iv), or (v), the Company shall have no further obligations hereunder other than the payment of all compensation and other benefits payable to the Executive through the date of such termination which shall be paid on or before the Company's next regularly scheduled payday unless such amount is not then-calculable, in which case payment shall be made on the first regularly scheduled payday after the amount is calculable.

(ii) Upon termination of this Agreement: (A) by the Executive pursuant to paragraph 5(b)(i), or (B) by the Company pursuant to paragraph 5(c)(i) or upon notice of non-renewal of the Term given by the Company and, in any such case, provided that the Executive first executes and does not revoke a release and settlement agreement in the form acceptable to the Company within the time period then-specified by the Company but in any event no later than sixty (60) days after the date of termination (the "**Release**"):

(1) the Company shall pay the Executive an amount equal to eighteen (18) months of Executive's then-current Base Salary (less all applicable deductions) payable in installments in accordance with the then-current generally applicable payroll schedule of the Company commencing on the first regularly scheduled pay date of the Company processed after Executive has executed, delivered to the Company and not revoked the Release;

(2) provided that the Executive properly elects and maintains continued health insurance coverage under the Company sponsored plan and provided further that such benefits continue to be offered under the Company sponsored plan, the Company shall reimburse the Executive in an amount equal to the cost of the premium for such continued health insurance coverage at the same average level and on the same terms and conditions which applied immediately prior to the date of the Executive's termination for the shorter of (a) eighteen (18) months from the date of termination or (b) until the Executive obtains reasonably comparable coverage; and

(3) each Equity Award held by Executive shall immediately vest and be exercisable to the extent such Equity Award would have vested had Executive remained employed by the Company for a period of eighteen (18) months from the date of termination of this Agreement. The Company and the Executive hereby agree that the Equity Awards shall be deemed amended to the extent necessary to give effect to this provision.

(iii) Upon termination of this Agreement within twelve months following a Change in Control or Corporate Transaction: (A) by the Executive pursuant to paragraph 5(b)(i), or (B) by the Company pursuant to paragraph 5(c)(i) or upon notice of non-renewal of the Term given by the Company in any such case, Executive shall be entitled to the following severance benefits in addition to the compensation set forth in the preceding clause (ii), subject to execution of the Release:

(1) the Company shall pay the Executive an amount equal to 100% of the performance bonus earned by the Executive in the most recently completed calendar year; and

(2) each Equity Award held by Executive at the time of termination shall immediately vest and be exercisable until the earlier to occur of the final exercise date set forth in the Equity Award or the end of the severance period. The Company and the Executive hereby agree that the Equity Awards shall be deemed amended to the extent necessary to give effect to this provision.

(e) Resignation as Officer and Director. Upon termination of this Agreement and the Executive's employment hereunder for any reason by either party, the Executive shall be deemed to have resigned from all offices and positions the Executive may hold with the Company at such time including without limitation Board membership and/or positions as an officer of the Company.

(f) Payment in Lieu of Notice Period. Upon the termination of this Agreement: (A) pursuant to the expiration of the Term based on a non-renewal notice given by either party in accordance with paragraph 3(b); or (B) by the Executive pursuant to paragraph 5(b)(i) or 5(b)(ii), the Company may, at its sole election, pay the Executive an amount equal to Executive's then-current Base Salary for all or any portion of the applicable notice period required by paragraph 3(b) or paragraph 5(b)(i) or 5(b)(ii) in lieu of all or any portion of such notice period; provided, however, any such election by the Company shall not be deemed to be a termination by the Company that invokes the obligations set forth in Section 5(d)(ii) of this Agreement. Notwithstanding the above, if the Executive requests that Executive's final day of employment occur prior to the expiration of any applicable notice period and the Company consents, pay in lieu of notice shall not be required.

6. Parachute Payment upon Corporate Transaction.

(a) For the period of two (2) years following the Effective Date, in the event of a Corporate Transaction which results in a change (i) in the ownership of effective control of the Company, or (ii) in the ownership of a substantial portion of the assets of the corporation (within the meaning of Section 280G of the Code and the regulations thereunder ("**Section 280G**")) (a "**280G Change in Control**") payments and benefits under this Agreement, together with other payments and benefits provided to Executive by the Company (including, without limitation, any accelerated vesting of stock options) (the "**Total Payments**") shall be made without regard to whether the deductibility of the Total Payments would be limited or precluded by Section 280G and without regard to whether the Total Payments would subject Executive to the federal excise tax levied on certain "excess parachute payments" under Section 4999 of the Code (the "**Excise Tax**"). If any portion of the Total Payments constitutes an "excess parachute payment" within the meaning of Section 280G (the aggregate of such payments (or portions thereof) being hereinafter referred to

as the "**Excess Parachute Payments**"), the Company shall within 60 days of the date of the 280G Change in Control pay to Executive an additional amount equal to thirty six months of the monthly base salary of the Executive as set forth in Section 4(a) of the Agreement (the "**Gross-up Payment**") to compensate the Executive for the additional tax burden imposed, including but not limited to, the Excise Tax plus the additional taxes due on the amount of the payment of such taxes, with respect to the Excess Parachute Payments.

(b) In the event of the consummation of a 280G Change in Control of the Company occurring more two (2) years after the Effective Date, the provisions of this Section 6(b) shall apply in lieu of the provisions of Section 6(a) above. If all or a portion of the Total Payments would constitute Excess Parachute Payments, Executive will be entitled to receive: (i) an amount limited so that no portion thereof shall fail to be tax deductible under Section 280G of the Code (the "**Limited Amount**"), or (ii) if the amount otherwise payable hereunder or otherwise (without regarding to clause (i)) reduced by all taxes applicable thereto (including, for the avoidance of doubt, the Excise Tax) would be greater than the Limited Amount reduced by all taxes applicable thereto, the amount otherwise payable hereunder.

(c) The determination as to whether the Total Payments include Excess Parachute Payments and, if so, the amount of such Excess Parachute Payments, the amount of any Excise Tax with respect thereto, the amount of any Gross-up Payment, if applicable, and the amount of any reduction in Total Payments shall be made at the Company's expense by the independent public accounting firm most recently serving as the Company's outside auditors or such other accounting or benefits consulting group or firm as the Company may designate (the "**Accountants**"). In the event that any payments under this Agreement or otherwise are required to be reduced as described in Section 6(b), the adjustment will be made, first, by reducing the amount of base salary and bonus payable pursuant to **Section 5(d)(iii)(1),** as applicable; second, if additional reductions are necessary, by reducing the payment of health insurance premium due to Executive pursuant to **Section 5(d)(iii)(2)**, as applicable; and third, if additional reductions are still necessary, by eliminating the accelerated vesting of time-based equity-based awards under **Section 5(d)(iii)(3)**, if any, starting with those awards for which the amount required to be taken into account under Section 280G is the greatest.

(d) In the event that there has been an underpayment or overpayment under this Agreement or otherwise as determined by the Accountants, the amount of such underpayment or overpayment shall forthwith be paid to Executive or refunded to the Company, as the case may be, with interest at the applicable federal rate provided for in Section 7872(f)(2) of the Code.

7. Proprietary Information Agreement. The terms of the Proprietary Information and Inventions Agreement by and between the Company and the Executive with effective date of August 31, 2011 (the "**Proprietary Information Agreement**") and any other similar agreement regarding confidentiality, intellectual property rights, non-competition or non-solicitation between the Company and the Executive, are hereby incorporated by reference and are a material part of this Agreement.

8. Representations and Warranties.

(a) The Executive represents and warrants to the Company that the Executive's performance of this Agreement and as an employee of the Company does not and will not breach any noncompetition agreement or any agreement to keep in confidence proprietary information acquired by the Executive in confidence or in trust prior to the Executive's employment by the Company. The Executive represents and warrants to the Company that the Executive has not entered into, and agrees not to enter into, any agreement that conflicts with or violates this Agreement.

(b) The Executive represents and warrants to the Company that the Executive has not brought and shall not bring with the Executive to the Company, or use in the performance of the Executive's responsibilities for the Company, any materials or documents of a former employer which are not generally available to the public or which did not belong to the Executive prior to the Executive's employment with the Company, unless the Executive has obtained written authorization from the former employer or other owner for their possession and use and provided the Company with a copy thereof.

9. Indemnification by the Executive. The Executive shall indemnify and hold harmless the Company, its directors, officers, stockholders, agents, and employees against all claims, costs, expenses, liabilities, and lost profits, including amounts paid in settlement, incurred by any of them as a result of the material breach by the Executive of any provision of Section 2, 6 and/or 7 of this Agreement.

10. Notices. All notices, requests, consents, approvals, and other communications to, upon, and between the parties shall be in writing and shall be deemed to have been given, delivered, made, and received when: (a) personally delivered; (b) deposited for next day delivery by Federal Express, or other similar overnight courier services; (c) transmitted via telefacsimile or other similar device to the attention of the Board of Directors of the Company with receipt acknowledged; or (d) three (3) days after being sent or mailed by certified mail, postage prepaid and return receipt requested, addressed to the Company at 1220 Old Alpharetta Road, Alpharetta, GA 30005 and to the Executive at the Executive's last listed address in the payroll records of the Company.

11. Effect. This Agreement shall be binding on and inure to the respective benefit of the Company and its successors and assigns and the Executive and Executive's personal representatives.

12. Entire Agreement. This Agreement, the RSPA and the Proprietary Information Agreement and any other similar agreement regarding confidentiality, intellectual property rights, non-competition or non-solicitation constitute the entire agreement between the parties with respect to the matters set forth herein and supersede all prior agreements and understandings between the parties with respect to the same, including the Original Agreement.

13. Severability. The invalidity or unenforceability of any provision of this Agreement shall not affect the validity or enforceability of any other provision.

14. Amendment and Waiver. No provision of this Agreement, including the provisions of this Section, may be amended, modified, deleted, or waived in any manner except by a written agreement executed by the parties.

15. Section 409A Matters. This Agreement is intended to comply with the requirements of Section 409A of the Internal Revenue Code of 1986, as amended and the Treasury Regulations and other applicable guidance thereunder ("**Section 409A**"). To the extent that there is any ambiguity as to whether this Agreement (or any of its provisions) contravenes one or more requirements of Section 409A, such provision shall be interpreted and applied in a matter that does not result in a Section 409A violation. Without limiting the generality of the above:

(a) For clarity, the severance benefits specified in this Agreement (the "**Severance Benefits**") are only payable upon a "separation from service" as defined in Section 409A. The Severance Benefits shall be deemed to be series of separate payments, with each installment being treated as a separate payment. The time and form of payment of any compensation may not be deferred or accelerated to the extent it would result in an impermissible acceleration or deferral under Section 409A.

(b) To the extent this Agreement contains payments which are subject to Section 409A (as opposed to exempt from Section 409A), the Executive's rights to such payments are not subject to anticipation, alienation, sale, transfer, pledge, encumbrance, attachment or garnishment and, where applicable, may only be transferred by will or the laws of descent and distribution.

(c) To the extent the Severance Benefits are intended to be exempt from Section 409A as a result of an "involuntary separation from service" under Section 409A, if all conditions necessary to establish the Executive's entitlement to such Severance Benefits have been satisfied, all Severance Benefits shall be paid or provided in full no later than December 31st of the second calendar year following the calendar year in which the Executive's employment terminated unless another time period is applicable.

(d) If the Employee is a "specified employee" (as defined in Section 409A) on the termination date and a delayed payment is required by Section 409A to avoid a prohibited distribution under Section 409A, then no Severance Benefits that constitute "non-qualified deferred compensation" under Section 409A shall be paid until the earlier of (i) the first day of the 7th month following the date of the Executive's "separation from service" as defined in Section 409A, or (ii) the date of the Executive's death. Upon the expiration of the applicable deferral period, all payments deferred under this clause shall be paid in a lump sum and any remaining severance benefits shall be paid per the schedule specified in this Agreement.

(e) The Company makes no representation that this Agreement will be exempt from or compliant with Section 409A and makes no affirmative undertaking to preclude Section 409A from applying, but does reserve the right to unilaterally amend this Agreement as may be necessary or advisable to permit the Agreement to be in documentary and operational compliance with Section 409A which determination will be made in the sole discretion of the Company.

16. Governing Law. This Agreement will be governed by and construed according to the laws of the Georgia as such laws are applied to agreements entered into and to be performed entirely within Georgia between Georgia residents.

17. Consent to Jurisdiction and Venue. Each of the parties agrees that any suit, action, or proceeding arising out of this Agreement may be instituted against it in the state or federal courts located in Georgia. Each of the parties hereby waives any objection that it may have to the venue of any such suit, action, or proceeding, and each of the parties hereby irrevocably consents to the personal jurisdiction of any such court in any such suit, action, or proceeding.

18. Counterparts. This Agreement may be executed in more than one counterpart, each of which shall be deemed an original, and all of which shall be deemed a single agreement.

19. Headings. The headings herein are for convenience only and shall not affect the interpretation of this Agreement.

[The remainder of this page is intentionally left blank.]

IN WITNESS WHEREOF, the parties have executed this Agreement as of the day and year first above written.

COMPANY:

Clearside Biomedical, Inc.

By: /s/ Charles A. Deignan
Printed Name: Charles A. Deignan
Title: CFO and Secretary

EXECUTIVE:

/s/ Daniel H. White
Daniel H. White

Exhibit 10.14

EXECUTIVE EMPLOYMENT AGREEMENT

THIS EXECUTIVE EMPLOYMENT AGREEMENT (the "**Agreement**"), is entered into effective as of January 1, 2015, (the "**Effective Date**"), by and between Clearside Biomedical, Inc., a Delaware corporation (the "**Company**"), and Charles Deignan (the "**Executive**"), an individual residing in Georgia.

W I T N E S S E T H:

WHEREAS, the Company and Executive are parties to that certain Offer Letter dated August 30, 2012 (the "**Original Agreement**");

WHEREAS, the Company and Executive desire to amend and restated the Original Agreement upon the terms and conditions of this Agreement to set forth the terms and conditions of the Executive's continued employment from and after the Effective Date.

NOW, THEREFORE, in consideration of the foregoing, of the mutual promises herein, and of other good and valuable consideration, including the continued employment of the Executive by the Company and the compensation to be received by the Executive from the Company from time to time, and specifically the compensation to be received by the Executive pursuant to Section 4 hereof, the receipt and sufficiency of which are hereby acknowledged, the parties hereto, intending legally to be bound, hereby agree as follows:

1. Employment. The Company hereby employs the Executive and the Executive hereby accepts employment as the Chief Financial Officer of the Company upon the terms and conditions of this Agreement.

2. Duties. The Executive shall faithfully perform all duties of the Company related to the position or positions held by the Executive, including but not limited to all duties set forth in this Agreement and/or in the Bylaws of the Company related to the position or positions held by the Executive and all additional duties that are prescribed from time to time by the Chief Executive Officer of the Company. The Executive shall devote the Executive's full time and attention to the performance of the Executive's duties and responsibilities on behalf of the Company and in furtherance of its best interests; provided, however, that the Executive, subject to the Executive's obligations hereunder, shall also be permitted to make personal investments, perform reasonable volunteer services and, with the prior consent of the Company, serve on outside boards of directors for non-profit corporations. The Executive shall comply with all Company policies, standards, rules and regulations (the "**Company Policies**") and all applicable government laws, rules and regulations that are now or hereafter in effect. The Executive acknowledges receipt of copies of all written Company Policies that are in effect as of the date of this Agreement.

3. Term. Unless earlier terminated as provided herein, the initial term of this Agreement shall commence on the Effective Date and shall continue until December 31, 2015. Thereafter, this Agreement shall automatically renew on a year-to-year basis on the same terms and conditions set forth herein unless: (a) earlier terminated or amended as provided herein or (b) either party gives written notice of non-renewal at least sixty (60) days prior to the end of the initial term or any renewal term of this Agreement. The initial term of this Agreement and all renewals thereof are referred to herein as the "**Term**."

4. Compensation. During the Term, as compensation for the services rendered by the Executive under this Agreement, the Executive shall be entitled to receive the following (all payments are subject to applicable withholdings)

(a) Base Salary. The Executive shall receive a monthly salary at a rate of $20,833.33 (equal to an annual salary rate of $250,000) payable in accordance with the then-current payroll schedule of the Company (the "**Base Salary**"). The Executive's salary may be increased from time to time by the Board of Directors (the "**Board**").

(b) Bonuses. The Executive shall be eligible to participate in all bonus or similar incentive plans adopted by the Board. The amount awarded, if any, to the Executive under any bonus or incentive plan shall be in the discretion of the Board or any committee administering such plan, based on its assessment of the Executive's and the Company's performance during the relevant period, but it is the expectation of the Company that any such bonus would be up to 35% of the Executive's then-current annual Base Salary. If a bonus is awarded, unless otherwise specifically provided by the Board or committee administering such plan, it shall be paid between January 1 and March 15 of the year following the year in which such bonus was earned.

(c) Options. In connection with the Executive's employment, the Company has issued to the Executive options to purchase shares of the common stock of the Company (the "**Options**"). The Options have vested or shall vest in accordance with the terms of the stock option Agreements. During the Term of the Agreement, Executive will be eligible to receive additional stock options, restricted stock grants, or other equity incentive awards under or outside of any current or successor equity incentive plans of the Company, as the Board in its sole discretion determines to be appropriate (any such awards, collectively with the Options, "**Equity Awards**").

(d) Benefits. The Executive shall be entitled to receive those benefits provided from time to time to other executive employees of the Company, in accordance with the terms and conditions of the applicable plan documents; provided that the Executive meets the eligibility requirements thereof. All such benefits are subject to amendment or termination from time to time by the Company without the consent of the Executive or any other employee of the Company.

(e) Vacation. The Executive shall be entitled to four (4) weeks paid vacation per calendar year (with the vacation for any partial year being prorated) and shall be entitled to carry over one-half of the total Vacation days earned in one calendar year to the subsequent calendar year; *provided, however,* that in no event may the Executive carry over more than two (2) weeks of paid vacation into a subsequent year. Upon the termination of the Executive's employment with the Company, no cash shall be paid in lieu of accrued but unused vacation.

(f) Annual Physical Exam. The Company shall bear the cost of one comprehensive physical examination per calendar year.

(g) Business Expenses. The Company shall pay, or reimburse the Executive for, all reasonable expenses incurred by the Executive directly related to conduct of the business of the Company; provided that, the Executive complies with the Company's policies for the reimbursement or advancement of business expenses that are now or hereafter in effect.

5. Termination. This Agreement and the Executive's employment by the Company shall or may be terminated, as the case may be, as follows:

(a) Termination upon Expiration of the Term. This Agreement and the Executive's employment by the Company shall terminate upon the expiration of the Term, unless renewed.

(b) Termination by the Executive. The Executive may terminate this Agreement and Executive's employment by the Company:

(i) for "Good Reason" (as defined herein). For purposes of this Agreement, "**Good Reason**" shall mean, the existence, without the consent of the Executive, of any of the following events: (A) the Executive's duties and responsibilities or salary are substantially reduced or diminished; (B) the Company materially breaches its obligations under this Agreement; or (C) the Executive's place of employment is relocated by more than fifty (50) miles. In addition to any requirements set forth above, in order for any of the above events to constitute "Good Reason", the Executive must (X) inform the Company of the existence of the event within ninety (90) days of the initial existence of the event, after which date the Company shall have no less than thirty (30) days to cure the event which otherwise would constitute "Good Reason" hereunder and (Y) the Executive must terminate Executive's employment with the Company for such "Good Reason" no later than two (2) years after the initial existence of the event which prompted the Executive's termination.

(ii) Other than for Good Reason thirty (30) days after notice to the Company.

(c) Termination by the Company. The Company may terminate this Agreement and the Executive's employment by the Company upon notice to the Executive (or Executive's personal representative):

(i) at any time and for any reason;

(ii) upon the death of the Executive, in which case this Agreement shall terminate immediately; provided that, such termination shall not prejudice any benefits payable to the Executive's spouse or beneficiaries which are fully vested as of the date of death;

(iii) if the Executive is "permanently disabled" (as defined herein), in which case this Agreement shall terminate immediately; provided that, such termination shall not prejudice any benefits payable to the Executive, the Executive's spouse or beneficiaries which are fully vested as of the date of the termination of this Agreement. For purposes of this Agreement, the Executive shall be considered "**permanently disabled**" when a qualified medical doctor mutually acceptable to the Company and the Executive or the Executive's personal representative

shall have certified in writing that: (A) the Executive is unable, because of a medically determinable physical or mental disability, to perform substantially all of the Executive's duties, with or without a reasonable accommodation, for more than one hundred and eighty (180) calendar days measured from the last full day of work; or (B) by reason of mental or physical disability, it is unlikely that the Executive will be able, within one hundred and eighty (180) calendar days, to resume substantially all business duties and responsibilities in which the Executive was previously engaged and otherwise discharge the Executive's duties under this Agreement;

(iv) upon the liquidation, dissolution or discontinuance of business by the Company in any manner or the filing of any petition by or against the Company under any federal or state bankruptcy or insolvency laws, which petition shall not be dismissed within sixty (60) days after filing; provided that, such termination shall not prejudice the Executive's rights as a stockholder or a creditor of the Company; or

(v) "for cause" (as defined herein). "**For cause**" shall be determined by the Board by a majority vote without the participation of the Executive in such vote and shall mean:

(A) Any material breach of the terms of this Agreement by the Executive, or the failure of the Executive to diligently and properly perform the Executive's duties for the Company or the Executive's failure to achieve the objectives specified by the Board , which breach or failure is not cured within thirty (30) days after written notice thereof;

(B) The Executive's misappropriation or unauthorized use of the Company's tangible or intangible property, or breach of the Proprietary Information Agreement (as defined herein) or any other similar agreement regarding confidentiality, intellectual property rights, non-competition or non-solicitation;

(C) Any material failure to comply with the Company Policies or any other policies and/or directives of the Board, which failure is not cured within thirty (30) days after written notice thereof; *provided, however*, in the case of failure to comply with Company Policies related to harassment, unlawful discrimination, retaliation or workplace violence a thirty (30) day cure period and written notice thereof is not required;

(D) The Executive's use of illegal drugs or any illegal substance, or the Executive's use of alcohol in any manner that materially interferes with the performance of the Executive's duties under this Agreement;

(E) Any dishonest or illegal action (including, without limitation, embezzlement) or any other action whether or not dishonest or illegal by the Executive which is materially detrimental to the interest and well-being of the Company, including, without limitation, harm to its reputation;

(F) The Executive's failure to fully disclose any material conflict of interest that the Executive may have with the Company in a transaction between the Company and any third party which is materially detrimental to the interest and well-being of the Company; or

(G) Any adverse action or omission by the Executive which would be required to be disclosed pursuant to public securities laws or which would limit the ability of the Company or any entity affiliated with the Company to sell securities under any Federal or state law or which would disqualify the Company or any affiliated entity from any exemption otherwise available to it.

(d) Obligations of the Company Upon Termination.

(i) Upon the termination of this Agreement: (A) pursuant to the expiration of the Term upon notice of non-renewal of the Term given by the Executive; (B) by the Executive pursuant to paragraph 5(b)(ii); or (C) by the Company pursuant to paragraph 5(c)(ii), (iii), (iv), or (v), the Company shall have no further obligations hereunder other than the payment of all compensation and other benefits payable to the Executive through the date of such termination which shall be paid on or before the Company's next regularly scheduled payday unless such amount is not then-calculable, in which case payment shall be made on the first regularly scheduled payday after the amount is calculable.

(ii) Upon termination of this Agreement: (A) by the Executive pursuant to paragraph 5(b)(i), or (B) by the Company pursuant to paragraph 5(c)(i) or upon notice of non-renewal of the Term given by the Company and, in any such case, provided that the Executive first executes and does not revoke a release and settlement agreement in the form acceptable to the Company within the time period then-specified by the Company but in any event no later than sixty (60) days after the date of termination (the "**Release**"):

(1) the Company shall pay the Executive an amount equal to 12 months of Executive's then-current Base Salary (less all applicable deductions) payable in installments in accordance with the then-current generally applicable payroll schedule of the Company commencing on the first regularly scheduled pay date of the Company processed after Executive has executed, delivered to the Company and not revoked the Release;

(2) provided that the Executive properly elects and maintains continued health insurance coverage under the Company sponsored plan and provided further that such benefits continue to be offered under the Company sponsored plan, the Company shall reimburse the Executive in an amount equal to the cost of the premium for such continued health insurance coverage at the same average level and on the same terms and conditions which applied immediately prior to the date of the Executive's termination for the shorter of (a) 12 months from the date of termination or (b) until the Executive obtains reasonably comparable coverage; and

(3) each Equity Award held by Executive shall immediately vest and be exercisable to the extent such Equity Award would have vested had Executive remained employed by the Company for a period of 12 months from the date of termination of this Agreement. The Company and the Executive hereby agree that the Equity Awards shall be deemed amended to the extent necessary to give effect to this provision.

(iii) Upon termination of this Agreement within twelve months following a Change in Control or Corporate Transaction: (A) by the Executive pursuant to paragraph 5(b)(i), or (B) by the Company pursuant to paragraph 5(c)(i) or upon notice of non-renewal of the Term given by the Company in any such case, Executive shall be entitled to the following severance benefits in addition to the compensation set forth in the preceding clause (ii), subject to execution of the Release:

(1) the Company shall pay the Executive an amount equal to 67% of the performance bonus earned by the Executive in the most recently completed calendar year; and

(2) each Equity Award held by Executive at the time of termination shall immediately vest and be exercisable until the earlier to occur of the final exercise date set forth in the Equity Award or the end of the severance period. The Company and the Executive hereby agree that the Equity Awards shall be deemed amended to the extent necessary to give effect to this provision.

(e) Resignation as Officer and Director. Upon termination of this Agreement and the Executive's employment hereunder for any reason by either party, the Executive shall be deemed to have resigned from all offices and positions the Executive may hold with the Company at such time including without limitation Board membership and/or positions as an officer of the Company.

(f) Payment in Lieu of Notice Period. Upon the termination of this Agreement: (A) pursuant to the expiration of the Term based on a non-renewal notice given by either party in accordance with paragraph 3(b); or (B) by the Executive pursuant to paragraph 5(b)(i) or 5(b)(ii), the Company may, at its sole election, pay the Executive an amount equal to Executive's then-current Base Salary for all or any portion of the applicable notice period required by paragraph 3(b) or paragraph 5(b)(i) or 5(b)(ii) in lieu of all or any portion of such notice period; provided, however, any such election by the Company shall not be deemed to be a termination by the Company that invokes the obligations set forth in Section 5(d)(ii) of this Agreement. Notwithstanding the above, if the Executive requests that Executive's final day of employment occur prior to the expiration of any applicable notice period and the Company consents, pay in lieu of notice shall not be required.

6. Parachute Payment upon Corporate Transaction.

(a) For the period of two (2) years following the Effective Date, in the event of a Corporate Transaction which results in a change (i) in the ownership of effective control of the Company, or (ii) in the ownership of a substantial portion of the assets of the corporation (within the meaning of Section 280G of the Code and the regulations thereunder ("**Section 280G**")) (a "**280G Change in Control**") payments and benefits under this Agreement, together with other payments and benefits provided to Executive by the Company (including, without limitation, any accelerated vesting of stock options) (the "**Total Payments**") shall be made without regard to whether the deductibility of the Total Payments would be limited or precluded by Section 280G and without regard to whether the Total Payments would subject Executive to the federal excise tax levied on certain "excess parachute payments" under Section 4999 of the Code (the "**Excise Tax**"). If any portion of the Total Payments constitutes an "excess parachute payment" within the meaning of Section 280G (the aggregate of such payments (or portions thereof) being hereinafter referred to as the "**Excess Parachute Payments**"), the Company shall within 60 days of the date of the 280G Change in Control pay to Executive an additional amount equal to eighteen months of the monthly

base salary of the Executive as set forth in Section 4(a) of the Agreement (the "**Gross-up Payment**") to compensate the Executive for the additional tax burden imposed, including but not limited to, the Excise Tax plus the additional taxes due on the amount of the payment of such taxes, with respect to the Excess Parachute Payments.

(b) In the event of the consummation of a 280G Change in Control of the Company occurring more two (2) years after the Effective Date, the provisions of this Section 6(b) shall apply in lieu of the provisions of Section 6(a) above. If all or a portion of the Total Payments would constitute Excess Parachute Payments, Executive will be entitled to receive: (i) an amount limited so that no portion thereof shall fail to be tax deductible under Section 280G of the Code (the "**Limited Amount**"), or (ii) if the amount otherwise payable hereunder or otherwise (without regarding to clause (i)) reduced by all taxes applicable thereto (including, for the avoidance of doubt, the Excise Tax) would be greater than the Limited Amount reduced by all taxes applicable thereto, the amount otherwise payable hereunder.

(c) The determination as to whether the Total Payments include Excess Parachute Payments and, if so, the amount of such Excess Parachute Payments, the amount of any Excise Tax with respect thereto, the amount of any Gross-up Payment, if applicable, and the amount of any reduction in Total Payments shall be made at the Company's expense by the independent public accounting firm most recently serving as the Company's outside auditors or such other accounting or benefits consulting group or firm as the Company may designate (the "**Accountants**"). In the event that any payments under this Agreement or otherwise are required to be reduced as described in Section 6(b), the adjustment will be made, first, by reducing the amount of base salary and bonus payable pursuant to **Section 5(d)(iii)(1),** as applicable; second, if additional reductions are necessary, by reducing the payment of health insurance premium due to Executive pursuant to **Section 5(d)(iii)(2)**, as applicable; and third, if additional reductions are still necessary, by eliminating the accelerated vesting of time-based equity-based awards under **Section 5(d)(iii)(3)**, if any, starting with those awards for which the amount required to be taken into account under Section 280G is the greatest.

(d) In the event that there has been an underpayment or overpayment under this Agreement or otherwise as determined by the Accountants, the amount of such underpayment or overpayment shall forthwith be paid to Executive or refunded to the Company, as the case may be, with interest at the applicable federal rate provided for in Section 7872(f)(2) of the Code.

7. Proprietary Information Agreement. The terms of the Proprietary Information and Inventions Agreement by and between the Company and the Executive dated August 31, 2012, (the "**Proprietary Information Agreement**") and any other similar agreement regarding confidentiality, intellectual property rights, non-competition or non-solicitation between the Company and the Executive, are hereby incorporated by reference and are a material part of this Agreement.

8. Representations and Warranties.

(a) The Executive represents and warrants to the Company that the Executive's performance of this Agreement and as an employee of the Company does not and will not breach any noncompetition agreement or any agreement to keep in confidence proprietary information acquired by the Executive in confidence or in trust prior to the Executive's employment by the Company. The Executive represents and warrants to the Company that the Executive has not entered into, and agrees not to enter into, any agreement that conflicts with or violates this Agreement.

(b) The Executive represents and warrants to the Company that the Executive has not brought and shall not bring with the Executive to the Company, or use in the performance of the Executive's responsibilities for the Company, any materials or documents of a former employer which are not generally available to the public or which did not belong to the Executive prior to the Executive's employment with the Company, unless the Executive has obtained written authorization from the former employer or other owner for their possession and use and provided the Company with a copy thereof.

9. Indemnification by the Executive. The Executive shall indemnify and hold harmless the Company, its directors, officers, stockholders, agents, and employees against all claims, costs, expenses, liabilities, and lost profits, including amounts paid in settlement, incurred by any of them as a result of the material breach by the Executive of any provision of Section 2, 6 and/or 7 of this Agreement.

10. Notices. All notices, requests, consents, approvals, and other communications to, upon, and between the parties shall be in writing and shall be deemed to have been given, delivered, made, and received when: (a) personally delivered; (b) deposited for next day delivery by Federal Express, or other similar overnight courier services; (c) transmitted via telefacsimile or other similar device to the attention of the Board of Directors of the Company with receipt acknowledged; or (d) three (3) days after being sent or mailed by certified mail, postage prepaid and return receipt requested, addressed to the Company at 1220 Old Alpharetta Road, Alpharetta, GA 30005 and to the Executive at the Executive's last listed address in the payroll records of the Company.

11. Effect. This Agreement shall be binding on and inure to the respective benefit of the Company and its successors and assigns and the Executive and Executive's personal representatives.

12. Entire Agreement. This Agreement, the RSPA and the Proprietary Information Agreement and any other similar agreement regarding confidentiality, intellectual property rights, non-competition or non-solicitation constitute the entire agreement between the parties with respect to the matters set forth herein and supersede all prior agreements and understandings between the parties with respect to the same, including the Original Agreement.

13. Severability. The invalidity or unenforceability of any provision of this Agreement shall not affect the validity or enforceability of any other provision.

14. Amendment and Waiver. No provision of this Agreement, including the provisions of this Section, may be amended, modified, deleted, or waived in any manner except by a written agreement executed by the parties.

15. Section 409A Matters. This Agreement is intended to comply with the requirements of Section 409A of the Internal Revenue Code of 1986, as amended and the Treasury Regulations and other applicable guidance thereunder ("**Section 409A**"). To the extent that there is any ambiguity as to whether this Agreement (or any of its provisions) contravenes one or more requirements of Section 409A, such provision shall be interpreted and applied in a matter that does not result in a Section 409A violation. Without limiting the generality of the above:

(a) For clarity, the severance benefits specified in this Agreement (the "**Severance Benefits**") are only payable upon a "separation from service" as defined in Section 409A. The Severance Benefits shall be deemed to be series of separate payments, with each installment being treated as a separate payment. The time and form of payment of any compensation may not be deferred or accelerated to the extent it would result in an impermissible acceleration or deferral under Section 409A.

(b) To the extent this Agreement contains payments which are subject to Section 409A (as opposed to exempt from Section 409A), the Executive's rights to such payments are not subject to anticipation, alienation, sale, transfer, pledge, encumbrance, attachment or garnishment and, where applicable, may only be transferred by will or the laws of descent and distribution.

(c) To the extent the Severance Benefits are intended to be exempt from Section 409A as a result of an "involuntary separation from service" under Section 409A, if all conditions necessary to establish the Executive's entitlement to such Severance Benefits have been satisfied, all Severance Benefits shall be paid or provided in full no later than December 31st of the second calendar year following the calendar year in which the Executive's employment terminated unless another time period is applicable.

(d) If the Employee is a "specified employee" (as defined in Section 409A) on the termination date and a delayed payment is required by Section 409A to avoid a prohibited distribution under Section 409A, then no Severance Benefits that constitute "non-qualified deferred compensation" under Section 409A shall be paid until the earlier of (i) the first day of the 7th month following the date of the Executive's "separation from service" as defined in Section 409A, or (ii) the date of the Executive's death. Upon the expiration of the applicable deferral period, all payments deferred under this clause shall be paid in a lump sum and any remaining severance benefits shall be paid per the schedule specified in this Agreement.

(e) The Company makes no representation that this Agreement will be exempt from or compliant with Section 409A and makes no affirmative undertaking to preclude Section 409A from applying, but does reserve the right to unilaterally amend this Agreement as may be necessary or advisable to permit the Agreement to be in documentary and operational compliance with Section 409A which determination will be made in the sole discretion of the Company.

16. Governing Law. This Agreement will be governed by and construed according to the laws of the Georgia as such laws are applied to agreements entered into and to be performed entirely within Georgia between Georgia residents.

17. Consent to Jurisdiction and Venue. Each of the parties agrees that any suit, action, or proceeding arising out of this Agreement may be instituted against it in the state or federal courts located in Georgia. Each of the parties hereby waives any objection that it may have to the venue of any such suit, action, or proceeding, and each of the parties hereby irrevocably consents to the personal jurisdiction of any such court in any such suit, action, or proceeding.

18. Counterparts. This Agreement may be executed in more than one counterpart, each of which shall be deemed an original, and all of which shall be deemed a single agreement.

19. Headings. The headings herein are for convenience only and shall not affect the interpretation of this Agreement.

[The remainder of this page is intentionally left blank.]

IN WITNESS WHEREOF, the parties have executed this Agreement as of the day and year first above written.

COMPANY:

Clearside Biomedical, Inc.

By: /s/ Daniel H. White
Printed Name: Daniel H. White
Title: President and CEO

EXECUTIVE:

/s/ Charles Deignan
Charles Deignan

Exhibit 10.15

EXECUTIVE EMPLOYMENT AGREEMENT

THIS EXECUTIVE EMPLOYMENT AGREEMENT (the "**Agreement**"), is entered into effective as of January 1, 2015, (the "**Effective Date**"), by and between Clearside Biomedical, Inc., a Delaware corporation (the "**Company**"), and Glenn Noronha (the "**Executive**"), an individual residing in Georgia.

W I T N E S S E T H:

WHEREAS, the Company and Executive are parties to that certain Offer Letter dated July 11, 2013 (the "**Original Agreement**");

WHEREAS, the Company and Executive desire to amend and restated the Original Agreement upon the terms and conditions of this Agreement to set forth the terms and conditions of the Executive's continued employment from and after the Effective Date.

NOW, THEREFORE, in consideration of the foregoing, of the mutual promises herein, and of other good and valuable consideration, including the continued employment of the Executive by the Company and the compensation to be received by the Executive from the Company from time to time, and specifically the compensation to be received by the Executive pursuant to Section 4 hereof, the receipt and sufficiency of which are hereby acknowledged, the parties hereto, intending legally to be bound, hereby agree as follows:

1. Employment. The Company hereby employs the Executive and the Executive hereby accepts employment as the Executive Vice President of Research & Development of the Company upon the terms and conditions of this Agreement.

2. Duties. The Executive shall faithfully perform all duties of the Company related to the position or positions held by the Executive, including but not limited to all duties set forth in this Agreement and/or in the Bylaws of the Company related to the position or positions held by the Executive and all additional duties that are prescribed from time to time by the Chief Executive Officer of the Company. The Executive shall devote the Executive's full time and attention to the performance of the Executive's duties and responsibilities on behalf of the Company and in furtherance of its best interests; provided, however, that the Executive, subject to the Executive's obligations hereunder, shall also be permitted to make personal investments, perform reasonable volunteer services and, with the prior consent of the Company, serve on outside boards of directors for non-profit corporations. The Executive shall comply with all Company policies, standards, rules and regulations (the "**Company Policies**") and all applicable government laws, rules and regulations that are now or hereafter in effect. The Executive acknowledges receipt of copies of all written Company Policies that are in effect as of the date of this Agreement.

3. Term. Unless earlier terminated as provided herein, the initial term of this Agreement shall commence on the Effective Date and shall continue until December 31, 2015. Thereafter, this Agreement shall automatically renew on a year-to-year basis on the same terms and conditions set forth herein unless: (a) earlier terminated or amended as provided herein or (b) either party gives written notice of non-renewal at least sixty (60) days prior to the end of the initial term or any renewal term of this Agreement. The initial term of this Agreement and all renewals thereof are referred to herein as the "**Term**."

4. Compensation. During the Term, as compensation for the services rendered by the Executive under this Agreement, the Executive shall be entitled to receive the following (all payments are subject to applicable withholdings)

(a) Base Salary. The Executive shall receive a monthly salary at a rate of $22,874.58 (equal to an annual salary of $274,495) payable in accordance with the then-current payroll schedule of the Company (the "**Base Salary**"). The Executive's salary may be increased from time to time by the Board of Directors (the "**Board**") of the Company.

(b) Bonuses. The Executive shall be eligible to participate in all bonus or similar incentive plans adopted by the Board. The amount awarded, if any, to the Executive under any bonus or incentive plan shall be in the discretion of the Board or any committee administering such plan, based on its assessment of the Executive's and the Company's performance during the relevant period, but it is the expectation of the Company that any such bonus would be up to 35% of the Executive's then-current annual Base Salary. If a bonus is awarded, unless otherwise specifically provided by the Board or committee administering such plan, it shall be paid between January 1 and March 15 of the year following the year in which such bonus was earned.

(c) Options. In connection with the Executive's employment, the Company has issued to the Executive options to purchase shares of the common stock of the Company (the "**Options**"). The Options have vested or shall vest in accordance with the terms of the stock option Agreements. During the Term of the Agreement, Executive will be eligible to receive additional stock options, restricted stock grants, or other equity incentive awards under or outside of any current or successor equity incentive plans of the Company, as the Board in its sole discretion determines to be appropriate (any such awards, collectively with the Options, "**Equity Awards**").

(d) Benefits. The Executive shall be entitled to receive those benefits provided from time to time to other executive employees of the Company, in accordance with the terms and conditions of the applicable plan documents; provided that the Executive meets the eligibility requirements thereof. All such benefits are subject to amendment or termination from time to time by the Company without the consent of the Executive or any other employee of the Company.

(e) Vacation. The Executive shall be entitled to four (4) weeks paid vacation per calendar year (with the vacation for any partial year being prorated) and shall be entitled to carry over one-half of the total Vacation days earned in one calendar year to the subsequent calendar year; *provided, however,* that in no event may the Executive carry over more than two (2) weeks of paid vacation into a subsequent year. Upon the termination of the Executive's employment with the Company, no cash shall be paid in lieu of accrued but unused vacation.

(f) Annual Physical Exam. The Company shall bear the cost of one comprehensive physical examination per calendar year.

(g) Business Expenses. The Company shall pay, or reimburse the Executive for, all reasonable expenses incurred by the Executive directly related to conduct of the business of the Company; provided that, the Executive complies with the Company's policies for the reimbursement or advancement of business expenses that are now or hereafter in effect.

5. Termination. This Agreement and the Executive's employment by the Company shall or may be terminated, as the case may be, as follows:

(a) Termination upon Expiration of the Term. This Agreement and the Executive's employment by the Company shall terminate upon the expiration of the Term, unless renewed.

(b) Termination by the Executive. The Executive may terminate this Agreement and Executive's employment by the Company:

(i) for "Good Reason" (as defined herein). For purposes of this Agreement, "**Good Reason**" shall mean, the existence, without the consent of the Executive, of any of the following events: (A) the Executive's duties and responsibilities or salary are substantially reduced or diminished; (B) the Company materially breaches its obligations under this Agreement; or (C) the Executive's place of employment is relocated by more than fifty (50) miles. In addition to any requirements set forth above, in order for any of the above events to constitute "Good Reason", the Executive must (X) inform the Company of the existence of the event within ninety (90) days of the initial existence of the event, after which date the Company shall have no less than thirty (30) days to cure the event which otherwise would constitute "Good Reason" hereunder and (Y) the Executive must terminate Executive's employment with the Company for such "Good Reason" no later than two (2) years after the initial existence of the event which prompted the Executive's termination.

(ii) Other than for Good Reason thirty (30) days after notice to the Company.

(c) Termination by the Company. The Company may terminate this Agreement and the Executive's employment by the Company upon notice to the Executive (or Executive's personal representative):

(i) at any time and for any reason;

(ii) upon the death of the Executive, in which case this Agreement shall terminate immediately; provided that, such termination shall not prejudice any benefits payable to the Executive's spouse or beneficiaries which are fully vested as of the date of death;

(iii) if the Executive is "permanently disabled" (as defined herein), in which case this Agreement shall terminate immediately; provided that, such termination shall not prejudice any benefits payable to the Executive, the Executive's spouse or beneficiaries which are fully vested as of the date of the termination of this Agreement. For purposes of this Agreement, the Executive shall be considered "**permanently disabled**" when a qualified medical doctor

mutually acceptable to the Company and the Executive or the Executive's personal representative shall have certified in writing that: (A) the Executive is unable, because of a medically determinable physical or mental disability, to perform substantially all of the Executive's duties, with or without a reasonable accommodation, for more than one hundred and eighty (180) calendar days measured from the last full day of work; or (B) by reason of mental or physical disability, it is unlikely that the Executive will be able, within one hundred and eighty (180) calendar days, to resume substantially all business duties and responsibilities in which the Executive was previously engaged and otherwise discharge the Executive's duties under this Agreement;

(iv) upon the liquidation, dissolution or discontinuance of business by the Company in any manner or the filing of any petition by or against the Company under any federal or state bankruptcy or insolvency laws, which petition shall not be dismissed within sixty (60) days after filing; provided that, such termination shall not prejudice the Executive's rights as a stockholder or a creditor of the Company; or

(v) "for cause" (as defined herein). "**For cause**" shall be determined by the Board by a majority vote without the participation of the Executive in such vote and shall mean:

(A) Any material breach of the terms of this Agreement by the Executive, or the failure of the Executive to diligently and properly perform the Executive's duties for the Company or the Executive's failure to achieve the objectives specified by the Board , which breach or failure is not cured within thirty (30) days after written notice thereof;

(B) The Executive's misappropriation or unauthorized use of the Company's tangible or intangible property, or breach of the Proprietary Information Agreement (as defined herein) or any other similar agreement regarding confidentiality, intellectual property rights, non-competition or non-solicitation;

(C) Any material failure to comply with the Company Policies or any other policies and/or directives of the Board, which failure is not cured within thirty (30) days after written notice thereof; *provided, however*, in the case of failure to comply with Company Policies related to harassment, unlawful discrimination, retaliation or workplace violence a thirty (30) day cure period and written notice thereof is not required;

(D) The Executive's use of illegal drugs or any illegal substance, or the Executive's use of alcohol in any manner that materially interferes with the performance of the Executive's duties under this Agreement;

(E) Any dishonest or illegal action (including, without limitation, embezzlement) or any other action whether or not dishonest or illegal by the Executive which is materially detrimental to the interest and well-being of the Company, including, without limitation, harm to its reputation;

(F) The Executive's failure to fully disclose any material conflict of interest that the Executive may have with the Company in a transaction between the Company and any third party which is materially detrimental to the interest and well-being of the Company; or

(G) Any adverse action or omission by the Executive which would be required to be disclosed pursuant to public securities laws or which would limit the ability of the Company or any entity affiliated with the Company to sell securities under any Federal or state law or which would disqualify the Company or any affiliated entity from any exemption otherwise available to it.

(d) Obligations of the Company Upon Termination.

(i) Upon the termination of this Agreement: (A) pursuant to the expiration of the Term upon notice of non-renewal of the Term given by the Executive; (B) by the Executive pursuant to paragraph 5(b)(ii); or (C) by the Company pursuant to paragraph 5(c)(ii), (iii), (iv), or (v), the Company shall have no further obligations hereunder other than the payment of all compensation and other benefits payable to the Executive through the date of such termination which shall be paid on or before the Company's next regularly scheduled payday unless such amount is not then-calculable, in which case payment shall be made on the first regularly scheduled payday after the amount is calculable.

(ii) Upon termination of this Agreement: (A) by the Executive pursuant to paragraph 5(b)(i), or (B) by the Company pursuant to paragraph 5(c)(i) or upon notice of non-renewal of the Term given by the Company and, in any such case, provided that the Executive first executes and does not revoke a release and settlement agreement in the form acceptable to the Company within the time period then-specified by the Company but in any event no later than sixty (60) days after the date of termination (the "**Release**"):

(1) the Company shall pay the Executive an amount equal to 12 months of Executive's then-current Base Salary (less all applicable deductions) payable in installments in accordance with the then-current generally applicable payroll schedule of the Company commencing on the first regularly scheduled pay date of the Company processed after Executive has executed, delivered to the Company and not revoked the Release;

(2) provided that the Executive properly elects and maintains continued health insurance coverage under the Company sponsored plan and provided further that such benefits continue to be offered under the Company sponsored plan, the Company shall reimburse the Executive in an amount equal to the cost of the premium for such continued health insurance coverage at the same average level and on the same terms and conditions which applied immediately prior to the date of the Executive's termination for the shorter of (a) 12 months from the date of termination or (b) until the Executive obtains reasonably comparable coverage; and

(3) each Equity Award held by Executive shall immediately vest and be exercisable to the extent such Equity Award would have vested had Executive remained employed by the Company for a period of 12 months from the date of termination of this Agreement. The Company and the Executive hereby agree that the Equity Awards shall be deemed amended to the extent necessary to give effect to this provision.

(iii) Upon termination of this Agreement within twelve months following a Change in Control or Corporate Transaction: (A) by the Executive pursuant to paragraph 5(b)(i), or (B) by the Company pursuant to paragraph 5(c)(i) or upon notice of non-renewal of the Term given by the Company in any such case, Executive shall be entitled to the following severance benefits in addition to the compensation set forth in the preceding clause (ii), subject to execution of the Release:

(1) the Company shall pay the Executive an amount equal to 67% of the performance bonus earned by the Executive in the most recently completed calendar year; and

(2) each Equity Award held by Executive at the time of termination shall immediately vest and be exercisable until the earlier to occur of the final exercise date set forth in the Equity Award or the end of the severance period. The Company and the Executive hereby agree that the Equity Awards shall be deemed amended to the extent necessary to give effect to this provision.

(e) Resignation as Officer and Director. Upon termination of this Agreement and the Executive's employment hereunder for any reason by either party, the Executive shall be deemed to have resigned from all offices and positions the Executive may hold with the Company at such time including without limitation Board membership and/or positions as an officer of the Company.

(f) Payment in Lieu of Notice Period. Upon the termination of this Agreement: (A) pursuant to the expiration of the Term based on a non-renewal notice given by either party in accordance with paragraph 3(b); or (B) by the Executive pursuant to paragraph 5(b)(i) or 5(b)(ii), the Company may, at its sole election, pay the Executive an amount equal to Executive's then-current Base Salary for all or any portion of the applicable notice period required by paragraph 3(b) or paragraph 5(b)(i) or 5(b)(ii) in lieu of all or any portion of such notice period; provided, however, any such election by the Company shall not be deemed to be a termination by the Company that invokes the obligations set forth in Section 5(d)(ii) of this Agreement. Notwithstanding the above, if the Executive requests that Executive's final day of employment occur prior to the expiration of any applicable notice period and the Company consents, pay in lieu of notice shall not be required.

6. Parachute Payment upon Corporate Transaction.

(a) For the period of two (2) years following the Effective Date, in the event of a Corporate Transaction which results in a change (i) in the ownership of effective control of the Company, or (ii) in the ownership of a substantial portion of the assets of the corporation (within the meaning of Section 280G of the Code and the regulations thereunder ("**Section 280G**")) (a "**280G Change in Control**") payments and benefits under this Agreement, together with other payments and benefits provided to Executive by the Company (including, without limitation, any accelerated vesting of stock options) (the "**Total Payments**") shall be made without regard to whether the deductibility of the Total Payments would be limited or precluded by Section 280G and without regard to whether the Total Payments would subject Executive to the federal excise tax levied on certain "excess parachute payments" under Section 4999 of the Code (the "**Excise Tax**"). If any portion of the Total Payments constitutes an "excess parachute payment" within the meaning of Section 280G (the aggregate of such payments (or portions thereof) being hereinafter referred to as the "**Excess Parachute Payments**"), the Company shall within 60 days of the date of the 280G

Change in Control pay to Executive an additional amount equal to eighteen months of the monthly base salary of the Executive as set forth in Section 4(a) of the Agreement (the "**Gross-up Payment**") to compensate the Executive for the additional tax burden imposed, including but not limited to, the Excise Tax plus the additional taxes due on the amount of the payment of such taxes, with respect to the Excess Parachute Payments.

(b) In the event of the consummation of a 280G Change in Control of the Company occurring more two (2) years after the Effective Date, the provisions of this Section 6(b) shall apply in lieu of the provisions of Section 6(a) above. If all or a portion of the Total Payments would constitute Excess Parachute Payments, Executive will be entitled to receive: (i) an amount limited so that no portion thereof shall fail to be tax deductible under Section 280G of the Code (the "**Limited Amount**"), or (ii) if the amount otherwise payable hereunder or otherwise (without regarding to clause (i)) reduced by all taxes applicable thereto (including, for the avoidance of doubt, the Excise Tax) would be greater than the Limited Amount reduced by all taxes applicable thereto, the amount otherwise payable hereunder.

(c) The determination as to whether the Total Payments include Excess Parachute Payments and, if so, the amount of such Excess Parachute Payments, the amount of any Excise Tax with respect thereto, the amount of any Gross-up Payment, if applicable, and the amount of any reduction in Total Payments shall be made at the Company's expense by the independent public accounting firm most recently serving as the Company's outside auditors or such other accounting or benefits consulting group or firm as the Company may designate (the "**Accountants**"). In the event that any payments under this Agreement or otherwise are required to be reduced as described in Section 6(b), the adjustment will be made, first, by reducing the amount of base salary and bonus payable pursuant to **Section 5(d)(iii)(1),** as applicable; second, if additional reductions are necessary, by reducing the payment of health insurance premium due to Executive pursuant to **Section 5(d)(iii)(2),** as applicable; and third, if additional reductions are still necessary, by eliminating the accelerated vesting of time-based equity-based awards under **Section 5(d)(iii)(3)**, if any, starting with those awards for which the amount required to be taken into account under Section 280G is the greatest.

(d) In the event that there has been an underpayment or overpayment under this Agreement or otherwise as determined by the Accountants, the amount of such underpayment or overpayment shall forthwith be paid to Executive or refunded to the Company, as the case may be, with interest at the applicable federal rate provided for in Section 7872(f)(2) of the Code.

7. Proprietary Information Agreement. The terms of the Proprietary Information and Inventions Agreement by and between the Company and the Executive, dated July 26, 2013, (the "**Proprietary Information Agreement**") and any other similar agreement regarding confidentiality, intellectual property rights, non-competition or non-solicitation between the Company and the Executive, are hereby incorporated by reference and are a material part of this Agreement.

8. Representations and Warranties.

(a) The Executive represents and warrants to the Company that the Executive's performance of this Agreement and as an employee of the Company does not and will not breach any noncompetition agreement or any agreement to keep in confidence proprietary information acquired by the Executive in confidence or in trust prior to the Executive's employment by the Company. The Executive represents and warrants to the Company that the Executive has not entered into, and agrees not to enter into, any agreement that conflicts with or violates this Agreement.

(b) The Executive represents and warrants to the Company that the Executive has not brought and shall not bring with the Executive to the Company, or use in the performance of the Executive's responsibilities for the Company, any materials or documents of a former employer which are not generally available to the public or which did not belong to the Executive prior to the Executive's employment with the Company, unless the Executive has obtained written authorization from the former employer or other owner for their possession and use and provided the Company with a copy thereof.

9. Indemnification by the Executive. The Executive shall indemnify and hold harmless the Company, its directors, officers, stockholders, agents, and employees against all claims, costs, expenses, liabilities, and lost profits, including amounts paid in settlement, incurred by any of them as a result of the material breach by the Executive of any provision of Section 2, 6 and/or 7 of this Agreement.

10. Notices. All notices, requests, consents, approvals, and other communications to, upon, and between the parties shall be in writing and shall be deemed to have been given, delivered, made, and received when: (a) personally delivered; (b) deposited for next day delivery by Federal Express, or other similar overnight courier services; (c) transmitted via telefacsimile or other similar device to the attention of the Board of Directors of the Company with receipt acknowledged; or (d) three (3) days after being sent or mailed by certified mail, postage prepaid and return receipt requested, addressed to the Company at 1220 Old Alpharetta Road, Alpharetta, GA 30005 and to the Executive at the Executive's last listed address in the payroll records of the Company.

11. Effect. This Agreement shall be binding on and inure to the respective benefit of the Company and its successors and assigns and the Executive and Executive's personal representatives.

12. Entire Agreement. This Agreement, the RSPA and the Proprietary Information Agreement and any other similar agreement regarding confidentiality, intellectual property rights, non-competition or non-solicitation constitute the entire agreement between the parties with respect to the matters set forth herein and supersede all prior agreements and understandings between the parties with respect to the same, including the Original Agreement.

13. Severability. The invalidity or unenforceability of any provision of this Agreement shall not affect the validity or enforceability of any other provision.

14. Amendment and Waiver. No provision of this Agreement, including the provisions of this Section, may be amended, modified, deleted, or waived in any manner except by a written agreement executed by the parties.

15. Section 409A Matters. This Agreement is intended to comply with the requirements of Section 409A of the Internal Revenue Code of 1986, as amended and the Treasury Regulations and other applicable guidance thereunder ("**Section 409A**"). To the extent that there is any ambiguity as to whether this Agreement (or any of its provisions) contravenes one or more requirements of Section 409A, such provision shall be interpreted and applied in a matter that does not result in a Section 409A violation. Without limiting the generality of the above:

(a) For clarity, the severance benefits specified in this Agreement (the "**Severance Benefits**") are only payable upon a "separation from service" as defined in Section 409A. The Severance Benefits shall be deemed to be series of separate payments, with each installment being treated as a separate payment. The time and form of payment of any compensation may not be deferred or accelerated to the extent it would result in an impermissible acceleration or deferral under Section 409A.

(b) To the extent this Agreement contains payments which are subject to Section 409A (as opposed to exempt from Section 409A), the Executive's rights to such payments are not subject to anticipation, alienation, sale, transfer, pledge, encumbrance, attachment or garnishment and, where applicable, may only be transferred by will or the laws of descent and distribution.

(c) To the extent the Severance Benefits are intended to be exempt from Section 409A as a result of an "involuntary separation from service" under Section 409A, if all conditions necessary to establish the Executive's entitlement to such Severance Benefits have been satisfied, all Severance Benefits shall be paid or provided in full no later than December 31st of the second calendar year following the calendar year in which the Executive's employment terminated unless another time period is applicable.

(d) If the Employee is a "specified employee" (as defined in Section 409A) on the termination date and a delayed payment is required by Section 409A to avoid a prohibited distribution under Section 409A, then no Severance Benefits that constitute "non-qualified deferred compensation" under Section 409A shall be paid until the earlier of (i) the first day of the 7th month following the date of the Executive's "separation from service" as defined in Section 409A, or (ii) the date of the Executive's death. Upon the expiration of the applicable deferral period, all payments deferred under this clause shall be paid in a lump sum and any remaining severance benefits shall be paid per the schedule specified in this Agreement.

(e) The Company makes no representation that this Agreement will be exempt from or compliant with Section 409A and makes no affirmative undertaking to preclude Section 409A from applying, but does reserve the right to unilaterally amend this Agreement as may be necessary or advisable to permit the Agreement to be in documentary and operational compliance with Section 409A which determination will be made in the sole discretion of the Company.

16. Governing Law. This Agreement will be governed by and construed according to the laws of the Georgia as such laws are applied to agreements entered into and to be performed entirely within Georgia between Georgia residents.

17. Consent to Jurisdiction and Venue. Each of the parties agrees that any suit, action, or proceeding arising out of this Agreement may be instituted against it in the state or federal courts located in Georgia. Each of the parties hereby waives any objection that it may have to the venue of any such suit, action, or proceeding, and each of the parties hereby irrevocably consents to the personal jurisdiction of any such court in any such suit, action, or proceeding.

18. Counterparts. This Agreement may be executed in more than one counterpart, each of which shall be deemed an original, and all of which shall be deemed a single agreement.

19. Headings. The headings herein are for convenience only and shall not affect the interpretation of this Agreement.

[The remainder of this page is intentionally left blank.]

IN WITNESS WHEREOF, the parties have executed this Agreement as of the day and year first above written.

COMPANY:

Clearside Biomedical, Inc.

By: /s/ Daniel H. White
Printed Name: Daniel H. White
Title: President and CEO

EXECUTIVE:

/s/ Glenn Noronha
Glenn Noronha

RESEARCH, OPTION AND LICENSE AGREEMENT

This Research, Option and License Agreement (hereinafter "**Agreement**"), effective as of April 27, 2015 (the "**Effective Date**"), is made by and between Spark Therapeutics, Inc., a Delaware corporation with corporate offices at 3737 Market Street, Suite 1300, Philadelphia, PA 19104 ("**Spark**") and Clearside Biomedical, Inc., a Delaware corporation with corporate offices at 1220 Old Alpharetta Rd., Suite 300, Alpharetta, GA 30005 ("**Clearside**") (each, a "**Party**" and collectively, the "**Parties**").

Whereas, Spark is a biopharmaceutical company specializing in the development of gene therapies.

Whereas, Clearside is a biopharmaceutical company with proprietary technology designed to administer drugs to the targeted tissue of the eye using a microneedle injection into the suprachoroidal space and related formulation technology (the "**Clearside Technology**").

Whereas, Spark desires to collaborate with Clearside on researching the use of Clearside Technology for the delivery of gene therapies, and, if such efforts are successful, Spark desires to have the right to further develop and commercialize gene therapy products delivered using the Clearside Technology.

Now, therefore, in consideration of the mutual covenants and agreements provided herein below and other consideration, the receipt and sufficiency of which are hereby acknowledged, the Parties hereby agree as follows:

ARTICLE 1
DEFINITIONS AND INTERPRETATION

1.1 Definitions. Unless the context otherwise requires, the terms in this Agreement, when used with initial capital letters, shall have the meanings set forth below or at their first use in this Agreement:

"**Affiliate**" means, with respect to a Party, any person, corporation, firm, joint venture or other entity which, directly or indirectly through one or more intermediaries, controls, is controlled by or is under common control with such Party. As used in this definition, "control" means the possession of the majority of the ownership, or the power to direct or cause the direction of the management and policies, of an entity, whether through the ownership of the outstanding voting securities thereof, by contract or otherwise. Notwithstanding the foregoing, CHOP shall be deemed to not be an Affiliate of Spark.

"**Annual Net Sales**" means, with respect to a particular calendar year, all Net Sales of a Licensed Product or multiple Licensed Products in the Field in the Territory during such calendar year.

"**Bankruptcy Laws**" is defined in Section 3.6.

"**CHOP**" means The Children's Hospital of Philadelphia.

"**Clearside Background IP**" means all Patents and Know-How relating to the Clearside Technology (a) that are Controlled by Clearside or its Affiliates as of the Effective Date, including the Patents set forth on Exhibit B or (b) that become Controlled by Clearside or its Affiliates on or after the Effective Date independent of the activities undertaken hereunder and that claim or embody Clearside Technology or improvements thereto. In no event shall the term "Clearside Background IP" include Patents or Know-How of any Person that becomes an Affiliate of Clearside after the Effective Date, provided that such excluded Patents and Know-How of such future Affiliate of Clearside claim and embody only technology that is conceived and reduced to practice independently from the Clearside Technology and do not comprise improvements thereto.

"**Clearside Collaboration IP**" is defined in Section 8.1(b)(i).

"**Clearside IP**" means Clearside Background IP, Clearside Collaboration IP, and Clearside's interest in Joint Collaboration IP.

"**Clearside Technology**" is defined in the Preamble.

"**Clinical Trial**" means any study of a product in human subjects.

"**Collaboration IP**" means the Clearside Collaboration IP, the Spark Collaboration IP and the Joint Collaboration IP.

"**Commercialization**" means activities directed to marketing, promoting, distributing or selling a Licensed Product, including all activities directed to obtaining pricing approval in the Territory; and excluding Development, Manufacturing and supply of such product. "**Commercialize**" and "**Commercializing**" shall have their correlative meanings.

"**Commercially Reasonable Efforts**" means (a) with respect to the efforts to be expended by a Party with respect to an agreed objective, except as otherwise provided in clause (b), such reasonable, diligent and good faith efforts as such Party would normally use to accomplish a similar objective under similar circumstances, and (b) with respect to Spark's obligations relating to the Development or Commercialization of Licensed Product(s) pursuant to Section 4.1 or Section 5.1, the efforts and resources normally used by a company in the biopharmaceutical industry for a product that is of similar market potential at a similar stage in its Development or product life, taking into account all relevant factors, including the potential profitability of the product, the costs and risks of Developing, Manufacturing and Commercializing the product, scientific, safety and regulatory concerns, product profile, the competitiveness of the marketplace and the proprietary position of the product. Commercially Reasonable Efforts under the foregoing clause (b) shall be determined on a country-by-country or market-by-market basis (as most applicable) for a Licensed Product, and it is anticipated that the level of effort will change over time, including to reflect changes in the status of the Licensed Product and the countries (or markets) involved.

"**Confidential Information**" means any confidential information disclosed in any form whatsoever by one Party to the other Party, including the content of the transactions contemplated herein, all technology belonging to the disclosing Party and any improvements thereto, any information relating to a Party's interests, business, finances, products, operations, sales, marketing, customers, suppliers and suppliers' bills of materials, trade secrets, Know-How, data, processes, methods, techniques, formulas, test data, presentations, analyses, studies, patent applications (as long as unpublished and/or undisclosed), financial data, product development, assays, strategic and market research information, other relevant marketing information, clinical data and any other information, whether developed in connection with this Agreement or not.

"**Control**" means with respect to any Know-How, Patent or other tangible or intangible intellectual property right, the possession (whether by ownership or license, other than licenses granted pursuant to this Agreement) by a Party or its Affiliate of the ability to grant to the other Party access to, ownership of, or a license or sublicense under, such Know-How, Patent, or other intellectual property, in each case as provided under this Agreement, without violating the terms of any agreement or other arrangement with any Third Party.

"**Development**" means, with respect to a product, research (other than Research) and any and all processes and activities conducted to obtain and maintain Marketing Authorization for a product, including pre- and post-marketing approval clinical studies and activities relating to development or preparation of such product for Commercialization. Development includes performance of Clinical Trials. "**Develop**" and "**Developing**" shall have their correlative meanings.

"**Dollar**" or "**$**" means the legal currency of the United States.

"**Early Stage Sublicense**" means a sublicense under Clearside Background IP that includes the right to Commercialize in the Field a Licensed Product as to which Spark has not, prior to the grant of such sublicense, dosed an aggregate of ten (10) or more subjects in one or more clinical study(-ies) with the applicable Gene Therapeutic (i.e., the applicable combination of Vector and nucleic acid(s)).

"**Early Stage Sublicense Revenue**" shall mean, with respect to any Licensed Product that is the subject of an Early Stage Sublicense, the aggregate consideration received by Spark or its Affiliates in consideration for granting the Early Stage Sublicense with respect to such Licensed Product, including license fees, sales and other milestone fees and minimum royalties (in excess of earned royalties), but excluding (i) royalties on Net Sales, (ii) proceeds from the issuance of debt or equity securities of Spark or its Affiliates up to the fair market value of such securities at the time of their issuance to the Early Stage Sublicensee (with any excess proceeds over such fair market value to be included

in Early Stage Sublicense Revenue) and (iii) payments received by Spark or its Affiliates to fund or reimburse the actual costs of its research, development and similar services (including such amounts calculated on a commercially reasonable full-time equivalent, or FTE, rate basis, which FTE rates may include normal and customary allocations of overhead) for such Licensed Product performed for such Early Stage Sublicensee during the term of the Early Stage Sublicense.

"**Early Stage Sublicensee**" means any Third Party that is a sublicensee under an Early Stage Sublicense granted in accordance with Section 3.4(b).

"**Emory License Agreement**" means the License Agreement between Emory University, the Georgia Tech Research Corporation and Clearside, executed on July 4, 2012, as amended as of April 2, 2014, and otherwise from time to time.

"**Field**" means delivery of any ocular Gene Therapeutic for all ophthalmic therapeutic, diagnostic, prophylactic, palliative and veterinary purposes.

"**First Commercial Sale**" means, with respect to a Licensed Product and a country, the first sale of such Licensed Product in such country for use or consumption in commerce made by Spark, its Affiliates or sublicensees after all required Marketing Authorizations have been received from the applicable Regulatory Authority for such country. Sales for Clinical Trial purposes or compassionate, named patient or similar use shall not constitute a First Commercial Sale.

"**Gene Therapeutic**" means any product incorporating a Vector and a nucleic acid that confers a therapeutic benefit.

"**Government Authority**" means any multi-national, federal, state, local, municipal or other government authority of any nature (including any governmental division, subdivision, department, agency, bureau, branch, office, commission, council, court or other tribunal).

"**IND**" means an Investigational New Drug application as defined in the U.S. Federal Food, Drug, and Cosmetic Act, as amended, and applicable regulations promulgated thereunder by the U.S Food and Drug Administration ("**FDA**"), or an equivalent application submitted to an equivalent Regulatory Authority in any other country or jurisdiction in the Territory, the filing of which is necessary to initiate Clinical Trials in such country or jurisdiction, including a clinical trial application.

"**Invention**" means any discovery, development, innovation, modification, update, enhancement, improvement or invention (whether or not patentable) that is conceived, made, developed or reduced to practice in activities undertaken under this Agreement.

"**Joint Collaboration IP**" is defined in Section 8.1(b)(iii).

"**Joint Data**" is defined in Section 8.1(b)(iii).

"**Know-How**" means any tangible and intangible information, data, results (including pharmacological, research and development data, reports and batch records), and materials, discoveries, improvements, inventions, compositions of matter, cell lines, assays, sequences, processes, methods, knowledge, protocols, formulas, utility, formulations, inventions (whether patentable or not), strategy, know-how and trade secrets, and all other scientific, pre-clinical, clinical, regulatory, manufacturing, marketing, financial and commercial information or data, in each case that either Party has treated as confidential or proprietary information.

"**Law**" means the applicable laws, rules and regulations, including any rules, regulations, guidelines or other requirements of any Government Authorities (including any Regulatory Authorities) that may be in effect from time to time in any country or jurisdiction of the Territory.

"**Licensed Product**" means any product that incorporates a Gene Therapeutic delivered with the use of a Microinjector.

"**Major EU Country**" means France, Germany, Italy, Spain or the United Kingdom.

"**Manufacture**" means activities directed to the manufacture, receipt, incoming inspections, storage and handling of raw materials and the manufacture, processing, formulation, packaging, labeling, warehousing, quality control testing (including in-process release and stability testing), supplying, shipping and release of a product, as the case may be and to the extent applicable, including manufacturing process development, scale-up and validation. "**Manufacturing**" shall have the correlative meaning.

"**Marketing Authorization**" means the technical, medical and scientific licenses, registrations, authorizations and approvals (including supplements and amendments, pre- and post-approvals, pricing approvals, and labeling approvals) of any Regulatory Authority necessary for the Commercialization of a product in the Field in such Regulatory Authority's jurisdiction in the Territory.

"**Microinjector**" means any device containing a microneedle for injecting material into the suprachoroidal space that comprises Clearside Technology.

"**Net Sales**" of a Licensed Product in a particular period means the amount calculated by deducting from invoiced sales of such Licensed Product made by or on behalf of Spark or its Affiliates or sublicensees (other than Early Stage Sublicensees) (a "**Selling Party**") to Third Parties for such period: (a) normal, customary trade discounts (including volume discounts), credits, chargebacks, reductions and rebates; (b) allowances and adjustments for rejections, recalls, outdated products or returns (in each event whether voluntary or required); (c) freight, shipping, insurance, sales, use, excise, value-added, consumption and similar tariffs, taxes or duties imposed on such sale; (d) credits actually given or allowances actually made for wastage replacement, Medicare/Medicaid or other governmental rebates, indigent patient, compassionate use and similar programs to

provide Licensed Product on at-cost (or lower) basis, to the extent actually deducted from the gross amount invoiced and either not required to be paid by or refunded to the customer or other payor; (e) annual fees due under Section 9008 of the United States Patient Protection and Affordable Care Act of 2010 (Pub. L. No. 111-48) allocable to sales of such Licensed Product; (f) compensation paid to Third Party distributors and wholesalers for maintaining agreed inventory levels; and (g) uncollectible amounts included in Net Sales on previously sold Licensed Products. Each of the foregoing deductions shall be determined on a basis consistent with the Selling Party's audited consolidated financial statements and consistently applied across all products of the Selling Party. Even if there is overlap between any of deductions described in (a) through (g), each individual item shall only be deducted once in the overall Net Sales calculation.

Licensed Products transferred between Selling Parties and Early Stage Sublicensees shall not count toward Net Sales unless the Early Stage Sublicensee is an end-user of such Licensed Product.

In the event that a Licensed Product under this Agreement is sold in combination (a "**Combination Product**") with active ingredient(s) other than Gene Therapeutics delivered via Microinjector ("**Supplemental Ingredient(s)**"), then "Net Sales" of the Combination Product shall be calculated using one of the following methods:

(x) By multiplying the Net Sales of the Combination Product (calculated prior to the application of this formula) by the fraction A/A+B, where A is the average gross selling price, during the applicable quarter in the country concerned, of the Licensed Product when sold separately, and B is the average gross selling price, during the applicable quarter in the country concerned, of the Supplemental Ingredient(s) when sold separately; or

(y) In the event that no such separate sales are made of the Licensed Product or any of Supplemental Ingredients in such Combination Product during the applicable quarter in the country concerned, Net Sales shall be calculated using the above formula where A is the reasonably estimated commercial value of the Licensed Product sold separately and B is the reasonably estimated commercial value of the Supplemental Ingredient(s) sold separately. Any such estimates shall be determined using criteria to be mutually agreed upon by the Parties. Such estimates shall be reported to Clearside in the reports to be provided pursuant to Section 7.7(b). If the Parties are unable to agree on the criteria for determining such estimates, either Party may submit such dispute for resolution pursuant to the provisions of Article 13.

For the avoidance of doubt, active ingredients that are Gene Therapeutics delivered via Microinjectors do not constitute Supplemental Ingredients, and no license is granted to Spark hereunder with respect to the use of Microinjectors to deliver active ingredients other than Gene Therapeutics.

"**New Microinjector**" means a New Spark Microinjector, a New Clearside Microinjector or a Third Party-Funded New Microinjector, each as defined or described in Section 4.6.

"**Option**" is defined in Section 3.1.

"**Option Exercise Date**" is defined in Section 3.1.

"**Option Exercise Period**" means the Option Period #1 Exercise Period or the Option Period #2 Exercise Period, as applicable.

"**Option Period #1**" shall, unless otherwise mutually agreed by the Parties, be a period of six (6) months from the Effective Date, and is subject to extension pursuant to Section 2.4.

"**Option Period #1 Exercise Period**" means the period commencing upon the Effective Date and ending thirty (30) days after the later to occur of (i) Spark's receipt of all data from the Research conducted pursuant to the Option Period #1 Workplan or (ii) the expiration of Option Period #1.

"**Option Period #1 Workplan**" means the initial Option Period #1 Workplan attached hereto as Exhibit A-1, as such workplan may be modified by the Parties in accordance with Section 2.2.

"**Option Period #2**" shall, unless otherwise mutually agreed by the Parties, be a period of twelve (12) months commencing upon Spark's election to initiate Option Period #2 in accordance with Section 2.3, and is subject to extension pursuant to Section 2.4.

"**Option Period #2 Exercise Period**" means the period commencing upon Spark's election to commence Option Period #2 in accordance with Section 2.3 and ending ninety (90) days after the later of (i) Spark's receipt of all data from the Research conducted pursuant to the Option Period #2 Workplan or (ii) the expiration of Option Period #2 .

"**Option Period #2 Workplan**" means the initial Option Period #2 Workplan attached hereto as Exhibit A-2, as such workplan may be modified by the Parties in accordance with Section 2.3.

"**Option Periods**" means Option Period #1 and Option Period #2.

"**Patent**" means (a) any patent, re-examination, reissue, renewal, extension, supplementary protection certificate and term restoration, any confirmation patent or registration patent or patent of addition based on any such patent, (b) any pending application for patents, including provisional, converted provisional, continuations, continuations-in-part, divisional and substitute applications, and inventors' certificates, (c) all foreign counterparts of any of the foregoing, and (d) all applications claiming priority to any of the foregoing.

"**Person**" means any individual, incorporated or unincorporated organization or association, Government Authority, or other entity.

"**Pivotal Clinical Study**" means a well-controlled, randomized pivotal study in the Field in human patients of a Licensed Product designed to ascertain efficacy and safety of such Licensed Product for the purposes of enabling the preparation and submission of applications for Marketing Authorization to the competent Regulatory Authorities in a country of the Territory and that is adequate to satisfy the requirements of 21 C.F.R. § 312.21(c) or its equivalent in that country.

"**Prosecution and Maintenance**" means, with respect to a Patent, the preparing, filing, prosecuting and maintenance of such Patent, as well as re-examinations, reissues, requests for Patent term extensions and the like (including Supplementary Protection Certificates and other ex-US equivalents) with respect to such Patent, together with the conduct of interferences, the defense of oppositions and other similar post-grant proceedings with respect to the particular Patent; and "**Prosecute and Maintain**" shall have the correlative meaning.

"**Regulatory Authority**" means, in a particular country or jurisdiction in the Territory, any applicable Governmental Authority involved in granting (a) approval to initiate or conduct clinical testing in humans, (b) the authorizations, approvals, licenses, permits, consents, registrations and filings necessary for the Commercialization of a product in a country in the Territory including Marketing Authorizations and manufacturing licenses, or (c) to the extent required in such country or jurisdiction, pricing approval for a product in such country or jurisdiction.

"**Regulatory Exclusivity**" means, with respect to a Licensed Product and a country in the Territory, any exclusive marketing rights or data exclusivity rights conferred by a Regulatory Authority or other applicable Government Authority in such country, other than a Patent, including biological reference product exclusivity, orphan drug exclusivity, pediatric exclusivity and other relevant exclusivity rights, including those conferred in the European Union under Directive 2001/EC/83 and rights similar thereto in any country in the Territory.

"**Regulatory Materials**" means regulatory applications, submissions, notifications, registrations, Marketing Authorizations or other submissions made to or with a Regulatory Authority that are necessary or reasonably desirable in order to Develop, Manufacture or Commercialize the Licensed Products in the Field in a particular country.

"**Research**" means the activities to be performed by the Parties pursuant to the Workplans.

"**Royalty Term**" means, as to a Licensed Product and a country, the period commencing on the First Commercial Sale of such Licensed Product in such country and terminating upon the expiration of the last-to-expire Valid Claim included in the Clearside IP that

covers the manufacture, use, offer for sale or sale of the Microinjector contained in such Licensed Product in such country (including as such Microinjector is incorporated into such Licensed Product).

"**Spark Background IP**" means all Patents and Know-How relating to Gene Therapeutics that are Controlled by Spark or its Affiliates as of the Effective Date or become Controlled by Spark or its Affiliates on or after the Effective Date independent of the activities undertaken hereunder.

"**Spark Collaboration IP**" is defined in Section 8.1(b)(ii).

"**Spark IP**" means the Spark Background IP, the Spark Collaboration IP and Spark's interest in the Joint Collaboration IP.

"**Standard Microinjector**" means a Microinjector meeting the technical specifications set forth on Exhibit D.

"**Territory**" means worldwide.

"**Third Party**" means any Person other than Clearside, Spark or any Affiliate of either Party.

"**Valid Claim**" means (a) an issued and unexpired claim of a Patent that has not been revoked or held unenforceable, unpatentable or invalid by a decision of a court or other governmental agency of competent jurisdiction, which is not appealable or has not been appealed within the time allowed for appeal, and which has not been abandoned, disclaimed, denied or admitted to be invalid or unenforceable through reissue, re-examination or disclaimer or otherwise, or (b) pending claim of a Patent that has been pending for less than five (5) years from the filing of the earliest patent application from which such pending claim derives priority and that has not been cancelled, withdrawn or abandoned or finally rejected.

"**Vector**" means a DNA molecule used to deliver foreign genetic material to a cell.

"**Workplans**" mean the Option Period #1 Workplan and, if applicable, the Option Period #2 Workplan.

1.2 Interpretation. The captions and headings to this Agreement are for convenience only, and are to be of no force or effect in construing or interpreting any of the provisions of this Agreement. Unless specified to the contrary, references to Sections or Exhibits shall refer to the particular Sections or Exhibits of or to this Agreement and references to this Agreement include all Exhibits hereto. Unless context otherwise clearly requires, whenever used in this Agreement:

(a) the words "include" or "including" shall be construed as incorporating, also, "but not limited to" or "without limitation;"

(b) the word “day,” “quarter” or “year” (and derivatives thereof, e.g., “quarterly”) shall mean a calendar day, calendar quarter or calendar year unless otherwise specified (and “annual” or “annually” refer to a calendar year);

(c) the word “notice” shall mean notice in writing (whether or not specifically stated) and shall include notices, consents, approvals and other written communications contemplated under this Agreement;

(d) the word “hereof,” “herein,” “hereby” and derivative or similar word refers to this Agreement (including any Exhibits);

(e) the word “or” shall have its inclusive meaning identified with the phrase “and/or;”

(f) the words “will” and “shall” shall have the same obligatory meaning;

(g) provisions that require that a party or the parties hereunder “agree,” “consent” or “approve” or the like shall require that such agreement, consent or approval be specific and in writing, whether by written agreement, letter, approved minutes or otherwise;

(h) words of any gender include the other gender; and

(i) words using the singular or plural number also include the plural or singular number, respectively.

ARTICLE 2
RESEARCH COLLABORATION

2.1 Scope of Collaboration. Clearside and Spark shall, in accordance with the terms and conditions of this Agreement, collaborate during Option Period #1 and, if Spark elects to initiate Option Period #2 pursuant to Section 2.3 in Spark’s sole discretion, during Option Period #2, on research relating to the application of Clearside Technology to gene therapy, as further set forth in this Article 2. During Option Period #1 and, if Spark elects to initiate Option Period #2 pursuant to Section 2.3 in Spark’s sole discretion, during Option Period #2, Clearside shall not participate in any human clinical study, primate study or GLP safety study conducted hereunder associated with Gene Therapeutics beyond providing Standard Microinjectors for such studies.

2.2 Option Period #1. Clearside shall collaborate exclusively with Spark during Option Period #1 to conduct initial proof-of-principle experiments, including *in vivo* studies of Clearside Technology and its application to gene therapy, in accordance with the Option Period #1 Workplan. Following the conduct of initial experiments under the Option Period #1 Workplan, the Parties will agree in good faith on appropriate modifications, if any, to the Option Period #1 Workplan. Each Party shall use Commercially Reasonable Efforts to carry out the responsibilities under the Option Period #1 Workplan assigned to such Party.

2.3 Option Period #2. During Option Period #1, the Parties shall agree on an initial workplan for follow-on studies consistent with Exhibit A-2 including a budget therefor (the "**Option Period #2 Workplan**") that would (if Spark does not exercise the Option during the Option Period #1 Exercise Period and elects to initiate Option Period #2 as set forth below) be undertaken to establish the utility of Clearside Technology and its application to gene therapy. If Spark does not exercise the Option during the Option Period #1 Exercise Period, then, within thirty (30) days thereafter, Spark shall notify Clearside in writing as to whether or not Spark intends to initiate Option Period #2. If Spark elects to initiate Option Period #2, the Parties shall collaborate on the conduct of follow-on studies in accordance with the initial Option Period #2 Workplan and thereafter will agree in good faith on appropriate modifications, if any, to the Option Period #2 Workplan. If Option Period #2 is initiated by Spark as set forth above, each Party shall use Commercially Reasonable Efforts to carry out the responsibilities under the Option Period #2 Workplan assigned to such Party.

2.4 Option Period Extensions. Clearside will not unreasonably withhold its agreement to extensions of Option Period #1 or Option Period #2 to the extent such extensions are necessary to complete the scope of work contemplated in the Option Period #1 Workplan or the Option Period #2 Workplan, respectively.

2.5. Research Supplies; Costs. Spark shall provide Gene Therapeutics at no charge, and Clearside shall provide the Standard Microinjectors at no charge, in each case as needed for Research conducted as part of Option Period #1 and, if applicable, Option Period #2. All other expenses incurred in the conduct of the Research shall be borne by the Parties as set forth in Section 7.2.

ARTICLE 3
OPTION AND LICENSES

3.1 Option. Spark shall have the right to exercise an option to obtain the exclusive license set forth in Section 3.3(b) (the "**Option**") at any time during the Option #1 Period Exercise Period or, if Spark initiates Option Period #2, during the Option #2 Period Exercise Period, in either case by providing written notice of exercise to Clearside within the applicable Option Exercise Period (the date of such notice, the "**Option Exercise Date**"). If Spark does not exercise the Option within the Option #1 Period Exercise Period and does not elect to initiate Option Period #2 in accordance with Section 2.3, or if Spark elects to initiate Option Period #2 in accordance with Section 2.3 and does not exercise the Option within the Option #2 Period Exercise Period, then this Agreement shall terminate at the end of the applicable Option Exercise Period in accordance with Section 10.1.

3.2 Grants to Spark.

(a) Research License. Subject to the terms and conditions of this Agreement and, in the case of intellectual property rights licensed to Clearside pursuant to the Emory

License Agreement, the applicable terms of the Emory License Agreement set forth in Exhibit C, Clearside hereby grants Spark a royalty-free, non-exclusive license, without any right to grant sublicenses, under the Clearside IP solely to the extent necessary for Spark to perform activities allocated to Spark under the Workplans.

(b) Commercialization License. Subject to the terms and conditions of this Agreement and, in the case of intellectual property rights licensed to Clearside pursuant to the Emory License Agreement, the applicable terms of the Emory License Agreement set forth in Exhibit C, effective upon timely payment of the option exercise fee provided for in Section 7.3, Clearside hereby grants to Spark an exclusive license, with the right to grant sublicenses in accordance with Section 3.4, under the Clearside IP to Research, Develop, have Developed, Manufacture, have Manufactured, Commercialize and have Commercialized Licensed Products in the Field in the Territory, provided that Clearside shall retain the exclusive right to manufacture and supply to Spark the Microinjector component of Licensed Products subject to and in accordance with Article 6.

3.3 Grant to Clearside. Subject to the terms and conditions of this Agreement, Spark hereby grants Clearside (i) a royalty-free, non-exclusive license, without any right to grant sublicenses, under the Spark IP solely to the extent necessary for Clearside to perform activities allocated to Clearside under the Workplans and (ii) a royalty-free, non-exclusive worldwide license outside the Field, with the right to grant sublicenses, under any Spark IP related to improvements to Clearside IP, in each case as necessary or helpful to research, Develop, have Developed, Manufacture, have Manufactured, Commercialize and have Commercialized products that incorporate Microinjectors. If Clearside requests a royalty-bearing, exclusive license outside the Field under Spark IP related to improvements to Clearside IP as described (other than its royalty-bearing and exclusive nature) in clause (ii) above, and Spark is willing in its discretion to grant such license, Clearside and Spark will negotiate a mutually acceptable royalty therefor and document such license and royalty in a separate agreement.

3.4 Sublicenses.

(a) Spark-Developed Products. Spark may grant sublicenses (other than Early Stage Sublicenses) under the rights granted to it in Section 3.2(b); provided that each such sublicense is subject to the applicable terms of the Emory License Agreement set forth in Exhibit C.

(b) Early Stage Sublicenses. Spark shall notify Clearside in writing within thirty (30) days following Spark's grant of any Early Stage Sublicense. Any such Early Stage Sublicense shall be subject to the applicable terms of the Emory License Agreement set forth in Exhibit C. If any Early Stage Sublicensee requires any customization, R&D, training, commercial support or other services to be provided by Clearside related to the Standard Microinjector, such services shall be subject to a separate services agreement with Clearside, which agreement shall include reimbursement of Clearside's actual direct costs plus 50% and shall otherwise be made available by Clearside on reasonable terms.

For clarification, Clearside shall use Commercially Reasonable Efforts to make such services available but shall have no obligation to render services that would require hiring or training additional staff or that would materially interfere with Clearside's other business activities. In addition, any Standard Microinjector supply required by the Early Stage Sublicensee shall be provided pursuant to separate supply agreement between Clearside and the Sublicensee, royalties due Clearside shall be payable as set forth in Section 7.6(a) and Spark shall pay Clearside [***] of any Early Stage Sublicense Revenue received by Spark and its Affiliates from the Early Stage Sublicensee as set forth in greater detail in Section 7.10.

(c) Early Stage Sublicense Opportunities. If Clearside becomes aware that a Third Party desires to obtain an Early Stage Sublicense, Clearside shall provide Spark with written notice. Spark shall consider any such request in good faith and shall keep Clearside apprised of the status of discussions. When negotiations cease, Spark shall notify Clearside and advise Clearside the reason or reasons for the termination of negotiations.

3.5 No Implied Rights. Except as specifically set forth in this Agreement, neither Party shall acquire any license, intellectual property interest or other rights, by implication or otherwise, in any Know-How disclosed to it under this Agreement or under any Patents Controlled by the other Party or its Affiliates.

3.6 Rights Upon Bankruptcy. All rights and licenses granted under or pursuant to this Agreement are, and shall otherwise be deemed to be, for purposes of Section 365(n) of Title 11 of the United States Code and other similar laws in any jurisdiction outside the U.S. (collectively, the "**Bankruptcy Laws**"), licenses of rights to "intellectual property" as defined under the Bankruptcy Laws. If a case is commenced during the term of this Agreement by or against a Party under Bankruptcy Laws then, unless and until this Agreement is rejected as provided in such Bankruptcy Laws, such Party (in any capacity, including debtor-in-possession) and its successors and assigns (including a trustee) shall perform all of the obligations provided in this Agreement to be performed by such Party. If a case is commenced during the term of this Agreement by or against a Party under the Bankruptcy Laws, this Agreement is rejected as provided in the Bankruptcy Laws and the other Party elects to retain its rights hereunder as provided in the Bankruptcy Laws, then the Party subject to such case under the Bankruptcy Laws (in any capacity, including debtor-in-possession) and its successors and assigns (including a Title 11 trustee), shall provide to the other Party copies of all information necessary for such other Party to prosecute, maintain and enjoy its rights under the terms of this Agreement promptly upon such other Party's written request therefor. All rights, powers and remedies of the non-bankrupt Party as provided herein are in addition to and not in substitution for any and all other rights, powers and remedies now or hereafter existing at law or in equity (including the Bankruptcy Laws) in the event of the commencement of a case by or against a Party under the Bankruptcy Laws.

3.7 Information Rights. During the Option Period, Clearside shall notify Spark within five (5) business days following each time that the cash Clearside has on hand falls below [***].

3.8 Exclusivity. Notwithstanding that Clearside's obligation to supply Microinjectors and related services to Spark, its Affiliates and sublicensees is limited to Standard Microinjectors and related services, Clearside and its Affiliates shall not, and shall not grant any license to or otherwise assist any Third Party, directly or indirectly, to research, develop, manufacture or commercialize any Microinjector in or for use in the Field.

ARTICLE 4
DEVELOPMENT

4.1 Development.

(a) Diligence by Spark. At Spark's sole discretion, Spark may Develop Licensed Products and shall be solely responsible to undertake Development of Licensed Products in the Field in the Territory; provided that Spark shall use Commercially Reasonable Efforts to (a) Develop a Licensed Product in the Field, and (b) seek Marketing Authorization in the United States and Europe for a Licensed Product in the Field. In addition, Spark shall conduct preclinical research with respect to Licensed Products directed to at least two (2) biological targets in the sixty (60) months following the Option Exercise Date. Clearside may provide Spark with written notice if Spark fails to conduct such preclinical research on [***] during such sixty (60) month period, in which event, if Spark does not commence such preclinical research within one hundred eighty (180) days after receipt of such notice, as Spark's sole and exclusive liability and Clearside's sole and exclusive remedy for such failure, Spark's license under Section 3.2(b) shall thereafter be limited to Licensed Products directed to the biological target, if any, as to which Spark has conducted preclinical research as of the end of such one hundred eighty (180) day period. The foregoing due diligence obligations may be modified as provided for in Section 14.3(b).

4.2 Regulatory Activities.

(a) By Clearside. Clearside shall use all reasonable efforts to secure from Regulatory Authorities or other Government Authorities and maintain all licenses, waivers and approvals solely related to Standard Microinjectors (and any New Microinjectors supplied to Spark by Clearside) that are required under Law for Spark to fully exercise its rights hereunder to Develop, Manufacture or Commercialize Licensed Products in the Field in the United States and Europe and for Clearside to perform its manufacturing and supply obligations pursuant to Article 6. Without limiting the foregoing, as between Spark and Clearside, Clearside shall be solely responsible for obtaining and shall use all reasonable efforts to secure from all national, state and local Regulatory Authorities and other Government Authorities all approvals required for the Development, Manufacture and Commercialization of Standard Microinjectors (and any New Microinjectors

supplied to Spark by Clearside) for use with Gene Therapeutics, including such approvals from (i) institutional review boards, (ii) hospital formularies, (iii) pharmacy and therapeutics committees and (iv) other hospital governing bodies.

(b) By Spark. Except as otherwise set forth in Section 4.2(a), Spark shall prepare and file all INDs and applications and otherwise obtain and maintain approvals from Regulatory Authorities (including Marketing Authorizations) that are necessary for Development and Commercialization of the Licensed Products in the Field in the Territory, and otherwise interact with Regulatory Authorities as appropriate with respect to the Licensed Products. Spark will own all such INDs, applications and other Regulatory Materials for Licensed Products.

(c) Safety Information Regarding Microinjectors. Clearside shall promptly, and in all cases within timeframes that enable Spark to meet its safety reporting obligations to Regulatory Authorities, provide Spark with all adverse event and other material safety information relating to Standard Microinjectors (and any New Microinjectors supplied to Spark by Clearside) that is or becomes known to Clearside. Spark shall promptly, and in all cases within timeframes that enable Clearside to meet its safety reporting obligations to Regulatory Authorities, provide Clearside with all adverse event and other material safety information relating to Microinjectors using Clearside Technology that is or becomes known to Spark.

4.3 Assistance by Clearside. Clearside shall assist Spark (including by taking actions or providing data, documents and other information in accordance with Spark's reasonable request) as required by any of the following: (a) a Regulatory Authority, (b) an investigational review board, (c) a hospital formulary, (d) a pharmacy and therapeutics committee, or (e) other hospital governing authority, in each case for the use of the Clearside Technology for the conduct of Clinical Trials or Commercialization of Licensed Products in the Field. Clearside shall also provide any support reasonably requested by Spark in any FDA and EMA meetings and correspondence conducted pursuant to Section 4.2(b).

4.4 Progress Reports. Within sixty (60) days after the end of each June and December of each year prior to the First Commercial Sale of a Licensed Product in the Field in the United States or Europe, Spark shall provide to Clearside a reasonably detailed written report describing the progress made with respect to the Development of Licensed Products in the Field in the Territory and, if requested by Clearside, shall participate in a telephone conference with Clearside to discuss the contents of the report. Unless otherwise agreed, each such telephone conference shall include an officer with appropriate decision-making authority (e.g., the CEO or another officer who reports directly to the CEO) from each Party.

4.5 Development Costs.

(a) Except as otherwise set forth in Sections 2.5, 4.5(b) and 7.2(b), Spark shall bear all costs and expenses relating to its Development of Licensed Products in the Field.

(b) Except as otherwise set forth in Sections 2.5, 4.6(b) and 7.2(b), Clearside shall bear all costs and expenses relating to Development of Standard Microinjectors (and any New Microinjectors supplied to Spark by Clearside) for use in Licensed Products and obtaining necessary approvals from Regulatory Authorities to support the use, Manufacture and Commercialization of Standard Microinjectors (and any New Microinjectors supplied to Spark by Clearside) in connection with the Development and Commercialization of Licensed Products as set forth in Section 4.2(a).

4.6 Reservation of Rights; New Microinjectors.

(a) Clearside expressly reserves the right to research, Develop, and Commercialize Microinjectors for all purposes outside the Field.

(b) Spark shall not seek to develop a Microinjector incorporating any proprietary Clearside Technology without first presenting the proposed modification to Clearside for development as provided in this section. Any Microinjector incorporating any proprietary Clearside Technology developed based on Spark's proposed modifications is referred to as a "New Spark Microinjector". During the term of this Agreement, the Parties shall discuss in good faith whether the Parties wish to collaborate on the New Spark Microinjector and, if so, how to allocate development responsibilities and costs between the Parties and a supply price for the New Spark Microinjector. Such allocation shall be reflected in an agreed-upon written Workplan. Neither Party shall be bound to go forward with any new Workplan unless the new Workplan has been signed by an authorized signatory of each Party.

(c) If Clearside independently develops a Microinjector which is not a Standard Microinjector, a New Spark Microinjector or a Third Party-Funded New Microinjector (as described in the next paragraph) (such independently developed Microinjector, a "New Clearside Microinjector"), the license granted pursuant to Section 3.2(b) shall extend to the right to practice Clearside Technology incorporated into such New Clearside Microinjector.

(d) If Clearside develops any New Microinjector in a program funded by or otherwise the subject of a *bona fide* collaboration with one or more Third Parties, the resulting Microinjector shall be referred to as a "Third Party-Funded New Microinjector". Clearside shall use Commercially Reasonable Efforts to acquire "Control" over any Patents or Know-How developed in such collaboration sufficient to enable Clearside to grant a license in the Field to Spark to practice such inventions. Clearside shall not, without Spark's prior written consent, grant any sublicense to any Third Party under, use, incorporate or permit any Third Party to do any of the foregoing, any Joint Collaboration IP for use in or in connection with any Third Party-Funded New Microinjector if such Third Party does not grant Clearside rights sufficient to enable Clearside to permit Spark to Commercialize the Third Party-Funded New Microinjector in the Field in accordance with the terms of this Agreement.

ARTICLE 5
COMMERCIALIZATION

5.1 Licensed Products. Spark shall in its sole discretion determine whether or not to Commercialize any Licensed Product, and which, if any, Licensed Products to Commercialize; provided that, following receipt of Marketing Authorization for a Licensed Product in the Field in the United States or Europe, Spark shall use Commercially Reasonable Efforts to Commercialize such Licensed Product in the Field in the United States or Europe, respectively.

5.2 Pricing. Spark shall be solely responsible for determining the pricing of each Licensed Product in the Field in the Territory.

ARTICLE 6
MANUFACTURE

6.1 General. Spark shall retain all rights to Manufacture Licensed Products and Clearside shall retain all rights to Manufacture clinical and commercial supplies of Microinjectors that use Clearside Technology to be included in Licensed Products, subject to Section 6.3, and shall supply Spark's clinical and commercial requirements of Standard Microinjectors. Clearside shall supply at its own expense all Standard Microinjectors required to perform the Research in accordance with the Workplans. In consideration of clinical and commercial supplies of Standard Microinjectors that are Manufactured by or on behalf of Clearside (after an initial 250 Standard Microinjectors to be provided by Clearside at no charge with respect to each Licensed Product during the post-Research Development period) and supplied to Spark, Spark shall pay Clearside [***] per Standard Microinjector, which price shall be included as term of the Supply Agreement described in Section 6.2 below.

6.2 Supply. All Manufacturing and supply by Clearside of Microinjectors using Clearside Technology for the clinical Development and Commercialization by Spark of Licensed Products shall be covered by a mutually acceptable supply agreement to include the terms set forth on Exhibit E and such other terms and conditions as are reasonable and customary for an agreement governing the Manufacturing and supply of a product similar to a Standard Microinjector to be entered into by the Parties concurrent with exercise by Spark of the Option or at such later date as may be agreed by Clearside and Spark, pursuant to which Clearside shall supply exclusively to Spark Spark's requirements for clinical and commercial supply of the Standard Microinjector solely for inclusion in Licensed Products (the "**Supply Agreement**"). The Supply Agreement shall provide for authorization by Clearside, including any rights and licenses necessary, for Spark to

obtain supply of Standard Microinjectors directly from Clearside's Third Party contract manufacturer in the event that Clearside fails to supply as required thereunder and shall also include provisions that permit Spark to qualify another Third Party contract manufacturer designated by Spark and that is reasonably acceptable to Clearside as a second source manufacturer for Standard Microinjectors. Concurrently with the Supply Agreement, the Parties shall negotiate and enter into a quality agreement (the "**Quality Agreement**").

6.3 Manufacturing Transfer. If the Parties fail to agree upon and execute the Supply Agreement within the time period therefor set forth in Section 6.2, or if a "Failure to Supply" occurs under the Supply Agreement (as defined therein), then Spark shall have the option of obtaining the right to have Manufactured clinical and commercial supplies of Standard Microinjectors (or any New Microinjectors supplied to Spark by Clearside prior to such Failure to Supply) solely for inclusion in Licensed Products upon written notice to Clearside. If Spark exercises such option, the Parties will promptly enter into a technology transfer agreement pursuant to which Clearside shall transfer to a Third Party contract manufacturer designated by Spark and reasonably acceptable to Clearside Clearside's Know-How concerning the Manufacture of such Standard Microinjectors (or any New Microinjectors supplied to Spark by Clearside prior to such Failure to Supply), grant Spark an exclusive (in the Field), worldwide license under Clearside IP to have Manufactured such Microinjectors for inclusion in Licensed Products in the Field, and provide Spark with reasonable assistance in Spark's preparations to have Manufactured such Microinjectors. Spark acknowledges that Manufacture of Licensed Product for sale in the United States may be required to take place in the United States to the extent required by the Emory License Agreement. Such technology transfer agreement shall include provisions under which Spark shall reimburse Clearside for its reasonable costs and expenses in conducting such technology transfer and assistance, which shall be Spark's only payment obligations thereunder. In addition, such technology transfer agreement shall include reasonable provisions necessary for the protection of Clearside's rights in the transferred Know-How.

ARTICLE 7
PAYMENTS

7.1 Initial Payments.

(a) In consideration of the rights granted hereunder with respect to Option Period #1 , Spark shall reimburse Clearside for costs incurred in the development of Licensed Products by making an upfront option payment of Five Hundred Thousand Dollars ($500,000), which payment shall be payable by Spark within five (5) days after the Effective Date.

(b) If Spark elects to initiate Option Period #2 pursuant to Section 2.3, Spark shall pay Clearside an additional option payment of One Million Dollars ($1,000,000), which payment shall be payable by Spark within thirty (30) days after Spark's notice that it is initiating Option Period #2.

7.2 Research and Development Expenses and Payments.

(a) Each Party shall bear the expense of its own human resources necessary for the conduct of the Research during each Option Period.

(b) Subject to Sections 2.5 and 7.2(a), each Party shall share equally in the out-of-pocket cost of the studies conducted hereunder during each Option Period in accordance with the applicable Workplan and budget set forth therein, excluding the cost of Gene Therapeutics and Standard Microinjectors. Notwithstanding the foregoing, Clearside's cost-sharing obligations (i) for vendors shall be limited to agreed-upon vendors associated with maximizing gene expression using suprachoroidal dosing, and (ii) for studies shall be limited to studies other than human clinical studies, primate studies and GLP safety studies associated with Gene Therapeutics. Following the Option Exercise Date, Clearside shall use Commercially Reasonable Efforts to make trained personnel available to assist with training professionals on the use of Standard Microinjectors as reasonably requested by Spark, subject to reimbursement of direct personnel costs plus 50% for personnel time following the training of the first five (5) retinal surgeons designated by Spark and out of pocket expenses. Clearside shall not invoice Spark for personnel time for (a) the training (at an ophthalmic medical conference or other location reasonably acceptable to Clearside) of the first five (5) retinal surgeons designated by Spark or (b) incidental calls and correspondence which calls and correspondence, in aggregate, do not exceed eight hours per month.

(c) All other costs relating to Development of Microinjectors and Licensed Products hereunder shall be borne by the Parties as set forth in Section 4.5.

7.3 Option Exercise Payments.

(a) If Spark exercises the Option during the Option Period #1 Exercise Period, Spark shall pay Clearside an option exercise payment of Two Million Dollars ($2,000,000), which payment is payable by Spark thirty (30) days after Spark's notice that it is so exercising the Option. For clarity, if Spark exercises the Option during the Option Period #1 Exercise Period, Spark shall not be obligated to pay Clearside the additional option payment under Section 7.1(b).

(b) If Spark exercises the Option during the Option Period #2 Exercise Period, Spark shall pay Clearside an option exercise payment of Three Million Dollars ($3,000,000), which payment is payable by Spark thirty (30) days after Spark's notice that it is so exercising the Option.

(c) For clarity, if Spark exercises the Option, only one of the two option exercise payments set forth in Sections 7.3(a) and 7.3(b) above shall become payable.

7.4 Development and Launch Milestones. Spark shall pay Clearside a milestone payment upon the first achievement with a Licensed Product by Spark, its Affiliate or a sublicensee (other than an Early Stage Sublicensee) of the applicable milestone event set forth in the table below. Each such milestone payment shall be paid no more than once and the maximum aggregate amount that can become payable under this Section 7.4 is $13,500,000.

Milestone Event (for a Licensed Product)	Milestone Payment
[***]	[***]
[***]	[***]
[***]	[***]
[***]	[***]

7.5 Annual Net Sales Milestones. Spark shall pay Clearside the corresponding one-time milestone payment upon the first occurrence in a calendar year of Annual Net Sales for a Licensed Product or multiple Licensed Products achieving an Annual Net Sales milestone set forth in the table below. Each such milestone payment shall be paid no more than once and the maximum aggregate amount that can become payable under this Section 7.5 is $12,000,000.

Annual Net Sales Milestone	Milestone Payment
[***]	[***]
[***]	[***]
[***]	[***]

7.6 Royalties.

(a) Base Rates. Subject to Section 7.7, Spark shall pay to Clearside royalties on a Licensed Product-by-Licensed Product basis and country-by-country basis, in respect of Net Sales of Licensed Products in the Field in the Territory during the applicable Royalty Term, at a royalty rate of (a) [***] of Net Sales of the first Licensed Product to obtain Marketing Authorization in such country and (b) [***] of Net Sales of each subsequent Licensed Product to obtain Marketing Authorization in such country.

(b) Bonus Royalty. In addition to the royalty under Section 7.6(a), subject to Section 7.7(b), Spark shall pay Clearside a bonus royalty of [***] of Net Sales of a Licensed Product in a country during any portion of the Royalty Term when, at the time of sale, the only Valid Claim(s) covering the manufacture, use, offer for sale or sale of such Licensed Product in such country are Valid Claim(s) in the Clearside Background IP, and such Licensed Product is not covered in such country by any Regulatory Exclusivity at the time of sale.

(c) Expiration of Royalty Term. Upon expiration (but not following earlier termination) of the Royalty Term for a Licensed Product in a country, all licenses granted to Spark hereunder with respect to such Licensed Product in such country shall become royalty-free, fully paid-up, perpetual, irrevocable and will survive any termination or expiration of this Agreement.

7.7 Royalty Reductions.

(a) Cost of Microinjectors. Spark may deduct from royalties payable to Clearside under Section 7.6 amounts paid to Clearside pursuant to Article 6 for Microinjectors included in the Licensed Products the Net Sales of which were used to calculate such royalties. For example, if Net Sales of the first Licensed Product in a given period during the applicable Royalty Term are $100,000 and the cost to Spark of the Microinjectors incorporated into such Licensed Product sold during such period is [***], Spark would pay Clearside royalties on such Net Sales equal to ($100,000 [***] minus the [***] paid for the Microinjector supply x the number of units sold), assuming Section 7.6(b) and the other reductions under this Section 7.7 are not applicable.

(b) Competitive Products. In the event a Third Party Gene Therapeutic product that uses a non-surgical delivery to the suprachoroidal space receives Marketing Authorization from the applicable Regulatory Authority in a country to treat the same indication as a Licensed Product, and such product competes with a Licensed Product in such country, then the additional royalty bonus of [***] described in Section 7.6(b), if otherwise applicable, shall cease to apply to Net Sales of such Licensed Product in such country and the royalty rate for Net Sales of such Licensed Product in such country shall thereafter be reduced by [***] from the applicable base royalty rate set forth in Section 7.6(a) *(i.e.*, shall be reduced from [***] or from [***], as applicable).

(c) If Clearside elects not to take an Enforcement Action with respect to Competitive Infringement pursuant to Section 8.4(b), Spark's obligation to pay royalties on Net Sales of the affected Licensed Product in such country shall be limited to that amount that Clearside owes to its upstream licensor(s) and which is attributable to such Net Sales as documented by Clearside to Spark's reasonable satisfaction, not to exceed an aggregate of [***] of Net Sales.

7.8 Reports and Payments.

(a) Research Expenses. Spark shall enter into services agreements and purchase orders with, and pay invoices from, Third Party contractors engaged to perform Research in accordance with the Workplans. Within thirty (30) days after the end of each quarter in which Spark has incurred out-of-pocket costs in connection with the Research that the Parties are required to share pursuant to Section 7.2(b), Spark shall submit to Clearside a statement detailing such costs and will prepare and provide to Clearside an invoice for Clearside's share of such costs as contemplated under Section 7.2(b). Clearside shall pay such amount to Spark within thirty (30) days after the provision of such invoice, provided that in no event shall Clearside be obligated to pay more than the amount allocated to Clearside in a mutually agreed budget that is consistent with the Workplans and Section 7.2(b).

(b) Milestones. Spark shall promptly notify Clearside of the achievement of any milestone event for a Licensed Product in the Field achieved in accordance with Sections 7.4 and 7.5. Each milestone payment pursuant to Section 7.4 shall be due within thirty (30) days after achievement of the applicable milestone event, and each milestone payment under Section 7.5 shall be paid pursuant to Section 7.8(b) below concurrently with royalties for the quarter during which such milestone was achieved.

(c) Royalties. Within forty-five (45) days after the end of each quarter, Spark shall deliver to Clearside a report setting forth for such quarter the following information: (i) the Net Sales for Licensed Products, and the basis for the calculation of Net Sales; (ii) the applicable royalty rate; (iii) the royalty amount due hereunder for the sale of Licensed Products; and (iv) any Annual Net Sales milestone achieved during such quarter pursuant to Section 7.5. No such reports shall be due for any Licensed Product before the First Commercial Sale of a Licensed Product in the Territory. The total royalty and any Annual Net Sales milestone payment(s) due for the sale of Licensed Products and/or the achievement of Annual Net Sales milestone(s) during such quarter shall be remitted no later than forty-five (45) days after the end of each such quarter.

7.9 Third Party Licenses for Microinjectors.

(a) Clearside shall be responsible for all upfront payments, milestone payments, royalties or other payments due to the licensors under the Emory License Agreement and to any other licensor of any Clearside IP for rights to use the Standard Microinjector (and, subject to Section 7.9(c), any New Microinjector supplied to Spark by Clearside) in Licensed Products, whether the agreements with such licensors are entered into before or after the Option Exercise Date. For clarification, Clearside's responsibility under this Section 7.9(a) shall not extend to rights held by any Third Party which rights are not necessary for the Commercialization of the Standard Microinjector (or any New Microinjector supplied to Spark by Clearside) contained in Licensed Products (including as such Microinjector is incorporated into Licensed Products, but excluding rights of any Third Party that are necessary based on specific Gene Therapeutics included in Licensed Products).

(b) If Spark believes that any intellectual property rights of a Third Party are necessary for the Commercialization of a Licensed Product incorporating a Standard Microinjector, then Spark shall promptly notify Clearside of such belief and the Parties shall discuss in good faith whether a license to such Third Party intellectual property is needed or advisable. If (a) Spark determines that a license from a Third Party is needed or advisable for the Commercialization of a Licensed Product incorporating a Standard Microinjector in the Territory, (b) Clearside does not enter into an appropriate license agreement for such technology within a reasonably period not to exceed one hundred eighty (180) days after Spark's written request, (c) Spark enters into such a license agreement, and (d) upfront payments, milestone payments, royalties or other payments are owed to such Third Party for rights to incorporate a Standard Microinjector into a Licensed Product pursuant to the Third Party license, then Spark may deduct, on a country-by-country basis from royalties owed to Clearside under this Agreement one hundred percent (100%) of any such payment not made by Clearside to such Third Party licensor, provided that in no event shall the amount payable to Clearside for any calendar quarter be reduced by more than [***] by operation of this Section 7.9(b). For clarification, Clearside's responsibility under this Section 7.9(b) shall not extend to rights held by any Third Party which rights are not necessary for the Commercialization of the Standard Microinjector contained in such Licensed Product (including as such Microinjector is incorporated into such Licensed Product, but excluding rights of any Third Party that are necessary based on the specific Gene Therapeutic included in such Licensed Product).

(c) If, during the Term, Clearside obtains Control in the Field over Third Party intellectual property rights that are necessary for the Commercialization of a New Microinjector supplied by Clearside to Spark, then Clearside shall notify Spark in writing and include in such notification a summary of such Third Party intellectual property rights, the commercial and sublicensing terms of the license and other relevant information. Spark will have ninety (90) days thereafter to notify Clearside of its desire to obtain a sublicense to such Third Party intellectual property rights. Upon receipt of such written notice from Spark, Clearside shall grant to Spark a sublicense of such Third Party property rights, which shall include terms that require payment by Spark of [***] of the royalties due to the Third Party attributable to the manufacture, use or sale of Licensed Products incorporating the New Microinjector by Spark, its sublicensees and their respective Affiliates as well as any terms that Clearside is required to impose on its sublicensees pursuant to the relevant in-license. If Spark believes that any intellectual property rights of a Third Party are necessary for the Commercialization of a Licensed Product incorporating a New Microinjector supplied by Clearside to Spark, then Spark shall promptly notify Clearside of such belief and the Parties shall discuss in good faith whether a license to such Third Party intellectual property is needed or advisable. If (a) Spark determines that a license from a Third Party is needed or advisable for the Commercialization of a Licensed Product incorporating the New Microinjector in the

Territory, (b) Clearside does not enter into an appropriate license agreement for such technology within a reasonably period not to exceed one hundred eighty (180) days after Spark's written request, (c) Spark enters into such a license agreement, and (d) upfront payments, milestone payments, royalties or other payments are owed to such Third Party for rights to incorporate the New Microinjector into a Licensed Product pursuant to the Third Party license, then Spark may deduct, on a country-by-country basis from royalties owed to Clearside under this Agreement [***] of any such payment not made by Clearside to such Third Party licensor, provided that in no event shall the amount payable to Clearside for any calendar quarter be reduced by more than [***] by operation of this Section 7.9(c). For clarification, Clearside's responsibility under this Section 7.9(c) shall not extend to rights held by any Third Party which rights are not necessary for the Commercialization of the New Microinjector contained in such Licensed Product (including as such Microinjector is incorporated into such Licensed Product, but excluding rights of any Third Party that are necessary based on the specific Gene Therapeutic included in such Licensed Product).

7.10 Early Stage Sublicense Revenue. When Spark receives Early Stage Sublicense Revenue with respect to an Early Stage Sublicense, Spark will pay [***] of Early Stage Sublicense Revenue to Clearside; provided that in the event any such Sublicensee is the first to achieve any development or launch-based milestone event set forth in Section 7.4 above, Spark shall pay Clearside the greater of (i) [***] of Early Stage Sublicense Revenue received from such Sublicensee upon the occurrence of such milestone or (ii) the milestone payment set forth in Section 7.4; provided further that with regard to sales-based milestones received from such Sublicensee, Spark shall pay Clearside the greater of (i) [***] of such sales-based milestone fees received from Sublicensees or (ii) the aggregate sales-based milestone payments as set forth in Section 7.5 above for all sales-based milestone events achieved (based on the combined sales of Spark and all Sublicensees).

7.11 Payment Method; Late Payments. Payments hereunder shall be paid by wire transfer, or electronic funds transfer (EFT) in immediately available funds to a bank account designated by the receiving Party at least ten (10) days in advance of such payment. Royalties and other payments, including patent expense reimbursements, required to be paid by Spark pursuant to this Agreement shall, if overdue, bear interest until payment at a rate equal to the London Interbank Offered Rate plus two hundred basis points. The interest payment shall be due from the day the original payment was due until the day that the payment was received by Clearside. The payment of such interest shall not restrict Clearside from exercising any other rights it may have because any payment is overdue.

7.12 Currency. All amounts payable and calculations hereunder shall be in Dollars. Conversion of sales recorded in local currencies to Dollars will first be determined in the foreign currency of the country in which such Licensed Products are sold and then converted to Dollars at a ninety (90)-day trailing average published by the *Wall Street Journal* (U.S. editions) for conversion of the foreign currency into dollars on the last day of the quarter for which such payment is due.

7.13 Taxes and Withholding. All payments due under this Agreement will be made without any deduction or withholding for or on account of any tax unless such deduction or withholding is required by Law to be assessed against the receiving Party. If the paying Party is so required to deduct or withhold, the paying Party will (a) promptly notify the receiving Party of such requirement, (b) pay to the relevant authorities the full amount required to be deducted or withheld promptly upon the earlier of determining that such deduction or withholding is required or receiving notice that such amount has been assessed against the receiving Party, and (c) promptly forward to the receiving Party an official receipt (or certified copy) or other documentation reasonably acceptable to the receiving Party, to the extent available, evidencing such payment to such authorities. Spark shall reasonably cooperate with Clearside in any lawful action to claim exemption from such deductions or withholdings and otherwise to minimize the amount required to be so withheld or deducted.

7.14 Maintenance of Records. Each Party shall keep accurate books and accounts of record in connection with the calculation of payments to be made by such Party under this Agreement in sufficient detail to permit accurate determination of all figures necessary for verification of payments to be paid under this Agreement. Each Party shall maintain such records for a period of at least five (5) years after the end of the year in which they were generated or longer if and to the extent required by applicable law or regulation

7.15 Audits. Each Party shall have the right, at its own expense and no more than once per year, to have an independent, certified public accountant of national standing, selected by such Party and reasonably acceptable to the other Party, review all records maintained in accordance with Section 7.14 upon reasonable notice and during regular business hours and under obligations of strict confidence, for the sole purpose of verifying the basis and accuracy of payments required and made under this Agreement within the prior thirty six (36) month period. No quarter may be audited more than one time. The audited Party shall receive a copy of each audit report promptly from the auditing Party. Should the inspection lead to the discovery of a discrepancy to the auditing Party's detriment, the audited Party shall pay the amount of the discrepancy in the audited Party's favor within thirty (30) days after being notified thereof. The auditing Party shall pay the full cost of the inspection unless the discrepancy is greater than ten percent (10%) of the amount paid for the applicable year that is the subject of such inspection, in which case the audited Party shall pay to the auditing Party the reasonable and documented cost charged by such accountant for such inspection. If such audit shows a discrepancy in the auditing Party's favor, then the auditing Party shall pay the audited Party the amount of the discrepancy within thirty (30) days after being notified thereof.

ARTICLE 8
INTELLECTUAL PROPERTY

8.1 Ownership.

(a) Background IP. As between the Parties, Clearside shall solely own the Clearside Background IP, and Spark shall solely own the Spark Background IP.

(b) Inventions.

(i) Any Invention arising from the Research that is solely invented by or on behalf of Clearside or its Affiliates ("**Clearside Collaboration IP**") shall be solely owned by Clearside. Spark shall assign and transfer, and hereby assigns and transfers, to Clearside, without further consideration, Spark's entire right title and interest in and to any such Clearside Collaboration IP.

(ii) Any Invention arising from the Research that is solely invented by or on behalf of Spark or its Affiliates and all data arising from the Research whether generated by or on behalf of Clearside or its Affiliates or by or on behalf of Spark or its Affiliates and all data arising from the Research other than Joint Data (as defined in Section 8.1(b)(iii)) (such inventions and data, the "**Spark Collaboration IP**") shall be owned by Spark. Clearside shall assign and transfer, and hereby assigns and transfers, to Spark, without further consideration, Clearside's entire right title and interest in and to any such Spark Collaboration IP.

(iii) Any (a) Inventions that are jointly invented by or on behalf of Spark or its Affiliates, on the one hand, and by or on behalf of Clearside or its Affiliates, on the other hand and (b) data arising from the portion of the Research that Clearside co-funds pursuant to Section 7.2(b) (such data, the "**Joint Data**") (such Inventions and Joint Data, the "**Joint Collaboration IP**") shall be jointly owned. Each Party shall assign and transfer, and hereby assigns and transfers, to the other Party, without further consideration, sufficient of its right title and interest in and to Joint Collaboration IP such that each Party has one-half of an undivided interest in the whole of such Joint Collaboration IP. Each Party shall have the right to freely exploit and license its interest in Joint Collaboration IP, without any duty to account or obtain consent from the other Party for such exploitation and licensing.

(iv) Each Party shall promptly and fully disclose to the other Party any and all Inventions to the extent related to Licensed Product made by its employees, agents, consultants or sub-contractors. In order to effect the intent of Sections 8.1(b)(i), 8.1(b)(ii) and 8.1(b)(iii), each Party shall ensure and hereby represents and warrants that all Persons performing Research or Development hereunder (1) have in writing assigned to such Party all right, title and interest in and to

Inventions, including all Intellectual Property in Inventions conceived by such persons; and (2) have agreed in writing to assist such Party in the same manner that such Party shall assist the other Party as set forth in this Section 8.1(b)(iv).

(v) Inventorship as to Inventions shall be determined in accordance with applicable United States Law.

8.2 Prosecution and Maintenance of Patents.

(a) Subject to Section 8.2(b), each Party shall have the right, but not the obligation, at its sole expense to Prosecute and Maintain Patents solely owned by such Party in accordance with Section 8.1(a), Section 8.1(b)(i) or Section 8.1(b)(ii), including, except as otherwise set forth in Section 8.2(e), filing and pursuing any valid request for a patent term adjustment or extension.

(b) Clearside shall keep Spark apprised of the status of each Patent application and Patent within the Clearside Collaboration IP and shall seek the advice of Spark with respect to patent strategy and draft patent applications and shall give reasonable consideration to any suggestions or recommendations promptly provided by Spark concerning the preparation, filing, Prosecution and Maintenance thereof. Clearside shall cooperate reasonably in the prosecution of all such Patent applications and Patents within the Clearside Collaboration IP and shall share all material information relating thereto promptly after receipt of such information. If, during the term of this Agreement, Clearside intends to allow any Patent or Patent application within the Clearside Collaboration IP to lapse or become abandoned without having first filed a substitute, (*e.g.*, a continuation, continuation-in-part, or divisional application), Clearside shall notify Spark of such intention at least sixty (60) days prior to the date upon which such Patent application or Patent shall lapse or become abandoned, and Spark shall thereupon have the right, but not the obligation, to assume responsibility for the Prosecution and Maintenance thereof at its own expense.

(c) In the event, as to a Patent solely owned by a Party in accordance with Section 8.1(b)(i) or Section 8.1(b)(ii), such Party is unable for any reason to secure the signature of the relevant other Party's employees to any document required to file, prosecute, register, or memorialize the assignment, the other Party does hereby irrevocably designate and appoint such Party and such Party's duly authorized officers and agents as such other Party's agents and attorneys-in-fact to act for and on such other Party's behalf and instead for such Party to do all lawfully permitted acts to further the Prosecution and Maintenance of Clearside Collaboration IP or Spark Collaboration IP, as applicable, all with the same legal force and effect as if executed by such other Party.

(d) Subject to Sections 8.2(b) and 8.2(e), unless otherwise agreed, Spark shall be responsible for Prosecuting and Maintaining Patents within the Joint Collaboration IP and the Parties shall each pay fifty percent (50%) of Spark's out-of-pocket costs incurred for such Prosecution and Maintenance.

(e) For clarity, Spark shall have the right to file and pursue any valid request for a patent term adjustment or extension as to any Patent within the Spark IP, the Clearside Collaboration IP or the Joint Collaboration IP in connection with any Marketing Authorization of a Licensed Product hereunder.

8.3 Defense of Third Party Infringement Claims. Subject to the Parties' respective indemnification rights and obligations pursuant to Article 12, if a Licensed Product becomes the subject of a Third Party's claim or assertion of infringement of a Patent relating to Development, Manufacture or Commercialization of the Licensed Product in the Field in the Territory (each, an "**Infringement Claim**"), the Party first having notice of the claim or assertion shall promptly notify the other Party, and the Parties shall promptly confer to consider the claim or assertion and the appropriate course of action. Unless the Parties otherwise agree in writing, Spark shall have the right to defend any Infringement Claim, and Clearside shall reasonably assist Spark and cooperate in any such litigation at Spark's request and expense. Spark shall keep Clearside reasonably informed with respect to the progress of any such litigation. Spark shall not enter into any settlement of any claim described in this Section 8.3 that adversely affects Clearside's rights and interests without Clearside's written consent, which consent shall not be unreasonably conditioned, withheld or delayed.

8.4 Enforcement; Patent Challenges.

(a) If a Party reasonably believes that any Patent covering a Licensed Product is being infringed by a Third Party in the Field (including through notification of a Paragraph IV certification) ("**Third Party Infringement**") or is subject to a declaratory judgment action arising from such infringement ("**Declaratory Judgment Action**") or becomes aware of any actual or threatened challenge by a Third Party with respect to the scope, validity or enforceability of any such Patent in the Territory, whether through opposition, *inter partes* dispute or otherwise ("**Third Party Challenge**"), then such Party shall promptly notify the other Party.

(b) If any Patent included in the Clearside Background IP is implicated by Third Party Infringement, a Declaratory Judgment Action or a Third Party Challenge, Clearside shall have the sole right (but not the obligation) to enforce such Patent with respect to such Third Party Infringement and to defend any such Declaratory Judgment Action or Third Party Challenge as to such Patent (each, an "**Enforcement Action**"), at its sole expense. Clearside shall consult with Spark and shall reasonably consider Spark's views regarding the desirability and conduct of any such Enforcement Action. If Clearside does not take an Enforcement Action against any Third Party that is manufacturing or commercializing a Gene Therapeutic product in the Field in a country that competes or is likely to compete with a Licensed Product in the Field in such country ("**Competitive Infringement**") within sixty (60) days after Spark has notified Clearside of the Third Party Infringement, Declaratory Judgment Action or Third Party Challenge and requested that Clearside bring such Enforcement Action, then Spark's obligation to pay royalties thereafter on Net Sales of such Licensed Product shall be limited as set forth in Section 7.7(c).

If Clearside determines not to undertake a proposed Enforcement Action with respect to Competitive Infringement for purely financial reasons (i.e., that anticipated costs do not justify potential returns to Clearside), Clearside shall grant Spark the right to undertake the Enforcement Action. However, Clearside reserves the right in its sole discretion to not pursue or permit any Enforcement Action if such action could, in Clearside's determination, jeopardize Clearside's interests outside the Field.

(c) If any Patent included in the Collaboration IP is implicated by the Third Party Infringement, Declaratory Judgment Action or Third Party Challenge, Spark shall have the sole right (but not the obligation) to take an Enforcement Action as to such Patent, at its sole expense. If Spark determines not to undertake a proposed Enforcement Action with respect to Collaboration IP for purely financial reasons (i.e., that anticipated costs do not justify potential returns to Spark), Spark shall grant Clearside the right to undertake the Enforcement Action. However, Spark reserves the right in its sole discretion to not pursue or permit any Enforcement Action if such action could, in Spark's determination, jeopardize Spark's interests in the Field.

(d) Each Party shall reasonably cooperate, at the other Party's expense, with the Party taking an Enforcement Action including joining as a party to such Enforcement Action as may be necessary or desirable for purposes of standing or establishing damages.

8.5 Recoveries. Any recovery received as a result of any Enforcement Action pursuant to Section 8.4(b) shall be used first to reimburse the Party taking the Enforcement Action for the costs and expenses (including attorneys' and professional fees) incurred in connection with such Enforcement Action, then any amount payable to Clearside's licensor(s) under the Emory License Agreement based on such recovery shall be paid to such licensor(s), and finally [***] of the remainder of the recovery shall be retained by or paid to Spark and the remaining [***] shall be retained by or paid to Clearside. Any recovery received as a result of any Enforcement Action pursuant to Section 8.4(c) shall be used first to reimburse the Party taking the Enforcement Action for the costs and expenses (including attorneys' and professional fees) incurred in connection with such Enforcement Action, and then [***] of the remainder of the recovery shall be retained by or paid to Spark and the remaining [***] shall be retained by or paid to Clearside.

8.6 Hatch-Waxman Act Litigation. Notwithstanding anything herein to the contrary, should a Party receive a certification as to a Licensed Product pursuant to the Drug Price Competition and Patent Term Restoration Act of 1984 (Public Law 98-417), as amended (the "**Hatch-Waxman Act**"), or its equivalent with respect to biologics in the United States or in a country other than the United States, then such Party shall immediately provide the other Party with a copy of such certification. The Party with the right to take an Enforcement Action pursuant to Section 8.4 with respect to the applicable Patent(s) shall, within thirty (30) days from the date on which it receives or provides a copy of such certification provide written notice to the other Party ("**H-W Suit Notice**") stating whether it will bring suit, at its expense, within a forty-five (45) day period from the date of such certification, and if not, whether the applicable step-in right of the other Party pursuant to Section 8.4(b) or 8.4(c) will apply (i.e., whether such Party is exercising its right pursuant to such Section not to permit the other Party to exercise such step-in right).

ARTICLE 9
CONFIDENTIALITY

9.1 Confidentiality; Exceptions. Except to the extent expressly authorized by this Agreement or otherwise agreed by the Parties in writing, during the term of this Agreement and for ten (10) years thereafter, the Parties agree that the receiving Party shall keep confidential and shall not publish or otherwise disclose or use for any purpose other than as provided for in this Agreement any Confidential Information furnished to it by the other Party pursuant to this Agreement. For clarity, Confidential Information of a Party shall include all information and materials disclosed by such Party or its designee that (x) if disclosed in writing or other tangible form, is marked as "Confidential," "Proprietary" or with similar designation at the time of disclosure, (y) if disclosed verbally or in other intangible form, is indicated upon first disclosure as being confidential or (z) by its nature can reasonably be expected to be considered Confidential Information by the recipient. Notwithstanding the foregoing, Confidential Information shall not be deemed to include information or materials to the extent that it can be established by written documentation by the receiving Party that such information or material:

(a) was already known to or possessed by the receiving Party, other than under an obligation of confidentiality (except to the extent such obligation has expired or an exception is applicable under the relevant agreement pursuant to which such obligation established), at the time of disclosure;

(b) was generally available to the public or otherwise part of the public domain at the time of its first disclosure to the receiving Party;

(c) became generally available to the public or otherwise part of the public domain after its disclosure and other than through any act or omission of the receiving Party in breach of this Agreement;

(d) was independently developed by the receiving Party as demonstrated by documented evidence prepared contemporaneously with such independent development; or

(e) was disclosed to the receiving Party, other than under an obligation of confidentiality, by a Third Party who had no obligation to the disclosing Party not to disclose such information to others.

9.2 Authorized Use and Disclosure. Each Party may use and disclose Confidential Information of the other Party as follows:

(a) under appropriate confidentiality provisions substantially equivalent to those in this Agreement, in connection with the performance of its obligations or exercise of rights granted to such Party in this Agreement; and

(b) to the extent such disclosure is reasonably necessary in Prosecuting and Maintaining Patents, copyrights and trademarks (including applications therefor) in accordance with this Agreement, prosecuting or defending litigation, complying with applicable governmental regulations, filing for, conducting Development hereunder, obtaining and maintaining Marketing Authorizations, or otherwise required by Law, the rules of a recognized stock exchange or automated quotation system applicable to such Party; provided, however, that if a Party is required by Law, the rules of a recognized stock exchange or automated quotation system (collectively, "**Securities Laws**") applicable to such Party to make any such disclosure of the other Party's Confidential Information it will, except where prohibited by Law or impracticable for necessary disclosures (for example, in the event of medical emergency), give reasonable advance notice to the other Party of such disclosure requirement and, where practicable, will use its reasonable efforts to secure confidential treatment of such Confidential Information required to be disclosed.

9.3 Injunctive Relief. Given the nature of the Confidential Information and the competitive damage that would result to a Party upon unauthorized disclosure, use or transfer of its Confidential Information to any Third Party, the Parties agree that monetary damages may not be a sufficient remedy for any breach of this Article 9. In addition to all other remedies, a disclosing Party shall be entitled to seek specific performance and injunctive and other equitable relief as a remedy for any breach or threatened breach of this Article 9. The receiving Party waives its right to have bond posted for the injunctive relief in a court of law.

9.4 Terms of Agreement.

(a) The Parties shall treat the existence and material terms of this Agreement as confidential and shall not disclose such information to Third Parties without the prior written consent of the other Parties or except as provided in Section 9.2 or Section 9.4(b) below. With respect to complying with the disclosure requirements of Securities Laws applicable to a Party, the Parties shall consult with each other concerning which terms of this Agreement shall be requested to be redacted in any public disclosure of the Agreement by the agency, and each Party shall seek confidential treatment, to the extent available, from the agency in public disclosure of the Agreement for all sensitive commercial, financial and technical information, including any dollar amounts set forth herein.

(b) Either Party may disclose to *bona fide* potential investors, lenders and acquirors/acquirees, and to such Party's consultants and advisors, the existence and terms of this Agreement to the extent necessary in connection with a proposed equity or debt financing of such Party, or a proposed acquisition or business combination, or to *bona fide* potential sublicensees, so long as such recipients are bound in writing to maintain the confidentiality of such information in accordance with the terms of this Agreement.

(c) Clearside may provide, subject to confidentiality obligations, a copy of this Agreement (and any Sublicense) to the licensors under the Emory License Agreement as required by the terms of such Agreement.

9.5 Publications. During the Option Periods, neither party nor its Affiliates shall publish or publicly disclose the results generated in the course of performing any of the Research without the prior written consent of the other party, which shall not be unreasonably withheld. After Spark's exercise of the Option, Spark and its Affiliates shall have the right to publish or publicly disclose the results generated in the course of performing any of the Research, provided that Spark submits the proposed publication or disclosure to Clearside for its review at least thirty (30) days prior to the scheduled submission of such proposed publication or public disclosure (including, without limitation, to any journal for review). If, during its thirty (30) day review period, Clearside notifies Spark that it desires changes to the publication or public disclosure reasonably necessary to protect proprietary information of Clearside specifically related to Microinjectors or Clearside's Background IP, Spark shall use reasonable efforts to accommodate such request. Following Spark's exercise of the Option, all publications and presentations of the results generated in the course of performing the Research shall be made in a manner and have content consistent with the publication strategy developed by Spark and Clearside shall not publish or publicly disclose the results generated in the course of performing any of the Research without the prior written consent of Spark. If Spark does not exercise the Option, Clearside shall thereafter have the right to publish or publicly disclose the results generated in the course of performing any of the Research, provided that such publications do not disclose the identity of any Gene Therapeutic or information from which the identity of any Gene Therapeutic can be deduced.

9.6 Publicity; Press Releases.

(a) The Parties shall issue the initial press release set forth on Exhibit F hereto following the Effective Date.

(b) Except as otherwise mutually agreed by the Parties or as required by Law or the rules of any stock exchange, no Party shall issue or cause the publication of any other press release or public announcement regarding the terms of this Agreement without the express prior approval of the other Party, which approval shall not be unreasonably withheld or delayed, provided that if any such publication, press release or public announcement is required by Law, the Party obligated to make such publication, press release or public announcement shall, if practicable, notify the other Party in advance thereof and reasonably consider any timely comments from such other Party, including any reasonable request to limit such publication, press release or public announcement. Without limiting the generality of the foregoing, the achievement of an event giving rise to a payment obligation under Section 7.3, 7.4 or 7.5 shall be deemed to be an event required to be disclosed pursuant to Securities Laws if so determined by either Party.

ARTICLE 10
TERM AND TERMINATION

10.1 Term. This Agreement is effective as of the Effective Date and, following the Option Exercise Date, shall continue in full force and effect unless earlier terminated by a Party in accordance with Section 10.2 and shall expire on a Licensed Product-by-Licensed Product and country-by-country basis upon the expiration of the Royalty Term with respect to such Licensed Product in such country. Notwithstanding the foregoing, only the following provisions of this Agreement shall be in effect from and after the Effective Date and prior to the Option Exercise Date: Articles 1, 2, 9, 11, 12, 13 and 14, and Sections 3.2(a), 3.3, 3.5, 7.1, 7.2, 7.8-7.14 (solely as applicable to amounts payable prior to the Option Exercise Date), 8.1, 8.2, 10.1 and 10.2. If Spark does not exercise the Option as provided in Section 2.1, this Agreement shall terminate upon expiration of the last applicable Option Exercise Period.

10.2 Termination.

(a) Convenience. At any time following the Option Exercise Date, Spark may terminate this Agreement in its entirety or with respect to any Licensed Product or country upon written notice to Clearside, for any reason or for no reason, without liability to Clearside.

(b) Material Breach. Subject to Section 4.1, either Party may terminate the Agreement, on a Licensed Product-by-Licensed Product, at any time upon an uncured material breach by the other Party of its obligations hereunder with respect to such Licensed Product by giving written notice to the other Party specifying the nature of the material breach not less than ninety (90) days prior to the date the non-breaching Party intends to terminate the Agreement. If such material breach has been cured by such breaching Party within such ninety (90) day period, no such termination shall occur. If such material breach has not been cured by the breaching Party within such ninety (90) day period, then the non-breaching Party shall be entitled to terminate this Agreement with respect to such Licensed Product with immediate effect upon delivery to the breaching Party of a written notice terminating the Agreement; provided, however, that if the Party accused of materially beaching notifies the accusing Party in writing (i) within such ninety (90) day cure period, that the accused Party disputes that it is in material breach, or (ii) within thirty (30) days after delivery of a termination notice for failure to cure a material breach, that the accused Party contends it cured such material breach, then in either such case no such termination shall become effective until (1) a final, binding determination pursuant to Article 13 that the accused Party was in material breach and failed to cure such material breach during the ninety (90) day cure period, and (2) the accusing Party's delivery to the accused Party, after such determination, of a written notice terminating the Agreement with respect to the applicable Licensed Product(s).

Any breach involving a disputed failure to make a payment when due may be cured by the breaching Party by paying such amount within fifteen (15) days following final resolution of such dispute.

(c) Bankruptcy. Either Party may terminate the Agreement if the other Party makes a voluntary or involuntary general assignment of its assets for the benefit of creditors, a petition in bankruptcy is filed by or against the other Party and is not dismissed in ninety (90) days, or a receiver or trustee is appointed for all or any part of the other Party's property.

10.3 Consequences of Termination.

(a) Accrued Obligations. Expiration or termination of this Agreement for any reason shall not release any Party of any obligation or liability which, at the time of such expiration or termination, has already accrued or which is attributable to a period prior to such expiration or termination. Upon expiration or earlier termination of this Agreement (including due to Spark not exercising the Option). Clearside shall have a royalty-free, fully paid-up, perpetual, irrevocable, transferable and sublicensable license to all of Spark's interest in Collaboration IP to the extent necessary or useful for the commercialization of products incorporating Microinjectors, but excluding any such rights relating to any specific Gene Therapeutic.

(b) Ancillary Agreements. Unless otherwise agreed in writing by the Parties, the termination of this Agreement shall cause the automatic termination of the Supply Agreement and the Quality Agreement, to the extent such agreement(s) are in force as of the termination of this Agreement, with respect to the terminated Licensed Product(s).

(c) Non-Exclusive Remedy. Notwithstanding anything herein to the contrary, but subject to Section 4.1, termination of this Agreement by a Party shall be without prejudice to other remedies such Party may have at law or equity.

(d) Survival. The following provisions shall survive expiration or termination of this Agreement and continue to be enforceable: Section 3.3(ii), Section 7.6(c) (Expiration of Royalty Term), Article 9 (Confidentiality), Section 11.3 (Disclaimer), Article 12 (Indemnification, Insurance and Liability), Article 13 (Dispute Resolution), and Article 14 (Miscellaneous); and Sections 8.1 (Ownership) and 10.3 (Consequences of Termination).

ARTICLE 11
REPRESENTATIONS AND WARRANTIES

11.1 Representations, Warranties and Covenants By Both Parties. Each Party hereby severally represents, warrants and covenants to the other Party as of the Effective Date:

(a) it is duly organized and validly existing under the laws of the jurisdiction of its incorporation or continuance, as the case may be, and has full corporate power and authority to enter into this Agreement and to carry out the provisions hereof;

(b) it is duly authorized to execute and deliver this Agreement and to perform its obligations hereunder, and the individual executing this Agreement on its behalf has been duly authorized to do so by all requisite corporate action;

(c) this Agreement is legally binding upon it and enforceable in accordance with its terms;

(d) the execution, delivery and performance of this Agreement by it does not conflict with any agreement, instrument or understanding, oral or written, to which it is a party or by which it may be bound, nor violate any material Law;

(e) it has not granted, and shall not grant during the Term, any right to any Third Party which would conflict with the rights granted to the other Party hereunder;

(f) it is not aware of any action, suit or inquiry or investigation instituted by any Person which questions or threatens the validity of this Agreement; and

(g) no consent or approval from any Third Party (including any governmental or administrative body or court) is necessary to consummate this Agreement or, to its knowledge, to conduct the activities contemplated hereunder.

11.2 Clearside Representations, Warranties and Covenants. Clearside hereby represents and warrants that as of the Effective Date:

(a) it shall perform the activities allocated to it under the Workplans in a timely and professional manner, with due care and in accordance with industry standards;

(b) it has full legal rights and authority to grant the licenses and rights under the Clearside Background IP granted under this Agreement and has not assigned, transferred, conveyed or licensed its right, title and interest in the Clearside Background IP in any manner inconsistent with such license grant or the other terms of this Agreement;

(c) there is no pending litigation or written threat of litigation that has been received by Clearside (and has not been resolved by taking a license or otherwise), which alleges that Clearside's activities with respect to the Clearside Background IP have infringed or misappropriated any of the intellectual property rights of any Third Party;

(d) the performance by Clearside of the activities allocated to it under the Workplans and its other obligations under this Agreement shall not infringe or otherwise violate the intellectual property rights of any Third Party related to Standard Microinjectors; and

(e) neither Clearside nor any of its Affiliates, nor, to its knowledge, any other Person that will be involved in activities under this Agreement has been debarred or is subject to debarment, and neither Clearside nor any of its Affiliates will knowingly use in any capacity, in connection with this Agreement, any Person who has been debarred pursuant to Section 306 of the United States Federal Food, Drug, and Cosmetic Act, or who is the subject of a conviction described in such section. Clearside agrees to inform Spark in writing immediately if it or any Person who is performing activities hereunder is debarred or is the subject of a conviction described in Section 306, or if any action, suit, claim, investigation or legal or administrative proceeding is pending or, to the best of Clearside's knowledge, is threatened, relating to the debarment or conviction of Clearside or any Person used in any capacity by Clearside or any of its Affiliates in connection with this Agreement.

(f) Clearside covenants that Clearside shall not, without Spark's prior written consent, (i) waive, amend, cancel or terminate any material provision of, or fail to maintain, the Emory License Agreement in any manner that would be materially detrimental to the rights granted to Spark hereunder or that would impose additional or more onerous obligations on Spark, or (ii) take or fail to take any action that would give any counterparty to the Emory License Agreement the right to terminate the Emory License Agreement.

(g) Clearside has been advised by the United States (US) Food and Drug Administration (FDA) that products comprised of a Standard Microinjector used to deliver an active pharmaceutical ingredient to the suprachoroidal space (SCS) will be regulated as a drug subject to a new drug application (NDA) regulatory pathway, without any requirement for 510(k) or premarket approval of the Microinjector, and to Clearside's knowledge, a biologics license application (BLA) regulatory pathway will apply to Licensed Products comprising a Standard Microinjector hereunder.

(h) The Patents set forth on Exhibit B are all of the Patents relating to the Clearside Technology that are Controlled by Clearside or its Affiliates as of the Effective Date. If any Patents relating to the Clearside Technology that are Controlled by Clearside or its Affiliates as of the Effective Date are determined to have been omitted from Exhibit B, Exhibit B shall automatically be updated to include such omitted Patents.

11.3 Spark Representations, Warranties and Covenants. Spark hereby represents and warrants that as of the Effective Date:

(a) it shall perform the activities allocated to it under the Workplans in a timely and professional manner, with due care and in accordance with industry standards;

(b) the performance by Clearside of the activities allocated to it under the Workplans and its other obligations under this Agreement shall not infringe or otherwise violate the intellectual property rights of any Third Party related to Gene Therapeutics; and

(c) neither Spark nor any of its Affiliates, nor, to its knowledge, any other Person that will be involved in activities under this Agreement has been debarred or is subject to debarment, and neither Spark nor any of its Affiliates will knowingly use in any capacity, in connection with this Agreement, any Person who has been debarred pursuant to Section 306 of the United States Federal Food, Drug, and Cosmetic Act, or who is the subject of a conviction described in such section. Spark agrees to inform Clearside in writing immediately if it or any Person who is performing activities hereunder is debarred or is the subject of a conviction described in Section 306, or if any action, suit, claim, investigation or legal or administrative proceeding is pending or, to the best of Spark's knowledge, is threatened, relating to the debarment or conviction of Spark or any Person used in any capacity by Spark or any of its Affiliates in connection with this Agreement.

(d) Spark covenants that Spark shall comply with the terms of the Emory License Agreement set forth in Exhibit C. Spark covenants that any Licensed Products made or sold by or on behalf of Spark, its Affiliates and Sublicensees pursuant to this Agreement shall comply with all applicable federal and state law regulations, including but not limited to regulations of the Federal Drug Administration, the Environmental Protection Agency, and their state equivalents.

11.4 Disclaimer. EXCEPT AS OTHERWISE EXPRESSLY SET FORTH IN SECTIONS 11.1, 11.2 AND- 11.3, THE PARTIES MAKE NO REPRESENTATIONS AND EXTEND NO WARRANTIES OF ANY KIND, EITHER EXPRESS OR IMPLIED, AND PARTICULARLY THAT LICENSED PRODUCTS WILL BE SUCCESSFULLY DEVELOPED OR COMMERCIALIZED HEREUNDER, AND IF LICENSED PRODUCTS ARE DEVELOPED, WITH RESPECT TO SUCH LICENSED PRODUCTS, AND TO THE EXTENT PERMITTED BY LAW, THE PARTIES EXCLUDE ALL IMPLIED WARRANTIES OF TITLE, NON-INFRINGEMENT, MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

ARTICLE 12
INDEMNIFICATION, INSURANCE AND LIABILITY

12.1 Indemnification by Clearside. Clearside shall defend, indemnify and hold harmless Spark and its officers, directors, employees, agents, representatives, successor and assigns ("**Spark Indemnitee**") from and against any liability or expense (including reasonable legal expenses, costs of litigation and attorneys' fees), damages, or judgments, whether for money or equitable relief (collectively, "**Losses**") resulting from suits, proceedings, claims, actions, demands, or threatened claims, actions or demands, in each case brought by a Third Party (each, a "**Claim**") against a Spark Indemnitee arising out of: (a) any negligent act or omission, or willful wrongdoing by Clearside or its Affiliates in the performance of this Agreement, (b) the failure by Clearside to comply with any Law, (c) any breach of any representation or warranty or covenant of Clearside under this Agreement, except, in each case, to the extent any such Losses result from the gross negligence or willful misconduct of a Spark Indemnitee or from the breach of any representation or warranty or obligation under this Agreement by Spark.

12.2 Indemnification by Spark. Spark shall defend, indemnify and hold harmless Clearside and its Affiliates, the "Indemnitees" (under and as such term is defined in the Emory License Agreement), and its and their officers, directors, employees, agents, representatives, successor and assigns ("**Clearside Indemnitee**") from and against any and all Losses resulting from Claims, including, bodily, injury, risk of bodily injury, death, property damage and product liability, against an Clearside Indemnitee arising out of or relating to, directly or indirectly: (a) any negligent act or omission, or willful wrongdoing by Spark in the performance of this Agreement, (b) the failure by Spark to comply with any Law, (c) any alleged personal injuries or death resulting from, arising out of or relating to any Clinical Trials or use of a Licensed Product, or (d) any breach of any representation or warranty or covenant of Spark under this Agreement; except, in each case, to the extent any such Losses result from the gross negligence or willful misconduct of a Clearside Indemnitee or from the breach of any representation or warranty or obligation under this Agreement by Clearside.

12.3 Limitations on Indemnification. The obligations to indemnify, defend, and hold harmless set forth in Sections 12.1 and 12.2 shall be contingent upon the Party seeking indemnification (the "**Indemnitee**"): (a) notifying the indemnifying Party of a claim, demand or suit within ten (10) days of receipt of same; provided, however, that Indemnitee's failure or delay in providing such notice shall not relieve the indemnifying Party of its indemnification obligation except to the extent the indemnifying Party is prejudiced thereby; (b) allowing the indemnifying Party or its insurers the right to assume direction and control of the defense of any such claim, demand or suit; (c) using its best efforts to cooperate with the indemnifying Party or its insurers, at the indemnifying Party's expense, in the defense of such claim, demand or suit; and (d) agreeing not to settle or compromise any claim, demand or suit without prior written authorization of the indemnifying Party. The Indemnitee shall have the right to participate in the defense of any such claim, demand or suit referred to in this Section utilizing attorneys of its choice, at its own expense, provided, however, that the indemnifying Party shall have full authority and control to handle any such claim, demand or suit.

12.4 Limitation on Liability. IN NO EVENT SHALL ANY PARTY BE LIABLE TO THE OTHER PARTY FOR ANY INDIRECT, SPECIAL, INCIDENTAL, EXEMPLARY OR CONSEQUENTIAL DAMAGES OF ANY KIND ARISING OUT OF OR IN CONNECTION WITH THIS AGREEMENT, HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY (WHETHER IN CONTRACT, TORT (INCLUDING NEGLIGENCE), STRICT LIABILITY OR OTHERWISE), EVEN IF SUCH PARTY WAS ADVISED OR OTHERWISE AWARE OF THE LIKELIHOOD OF SUCH DAMAGES. The limitations set forth in this Section 12.4 shall not apply with respect to (a) the Party's indemnification obligations under Sections 12.1 and 12.2, as applicable, (b) breach of Article 9, or (c) intentional misconduct of a Party. Nothing in this Section 12.4 shall exclude a Party's liability for death or injury caused by that Party's negligence, or fraud or fraudulent misrepresentation.

12.5 Insurance. During the term of this Agreement and for a period of five (5) years after termination or expiration, each Party shall obtain or maintain, at its sole cost and expense, insurance policies, including product liability insurance, adequate to cover its obligations hereunder and which are consistent with normal business practices of prudent companies similarly situated (which may include programs of self insurance).

ARTICLE 13
DISPUTE RESOLUTION

13.1 General. Any controversy, claim or dispute arising out of or relating to this Agreement shall be settled, if possible, through good faith negotiations between the Parties. If, however, the Parties are unable to settle such dispute after good faith negotiations, the matter shall be referred to executive officers of the Parties to be resolved by negotiation in good faith as soon as is practicable but in no event later than thirty (30) days after referral.

13.2 Failure of Executive Officers to Resolve Dispute. If the executive officers are unable to settle the dispute after good faith negotiation in the manner set forth above, either Party may submit the matter for resolution by binding arbitration in accordance with Section 13.3.

13.3 Arbitration. A Party submitting a dispute for resolution by binding arbitration pursuant to this Section 13.3 shall provide the other Party with written notice thereof (an "Arbitration Notice"). Any arbitration hereunder shall be conducted under the Commercial Arbitration Rules of the American Arbitration Association, except as modified herein, and the arbitration proceeding shall be governed by the United States Federal Arbitration Act (the "FAA"). Except as specified below, such arbitration shall be conducted by a single arbitrator and the arbitrator shall be either mutually acceptable or, if the parties cannot agree on an arbitrator within fifteen (15) days after the matter is referred to arbitration, the single arbitrator shall be a person selected by the applicable rules. Within ten (10) business days after the arbitrator is selected, each party shall submit to the arbitrator that party's proposed resolution of the dispute and justification therefor. The arbitrator shall, within ten (10) business days after receiving the proposed resolution from each party, select one of the proposals, and such selection shall be deemed to be the arbitrator's conclusive decision and shall be binding on the parties. Notwithstanding the foregoing, in the case of a dispute relating to an alleged material breach, then the arbitration shall be conducted by a panel of three arbitrators, in which case each Party shall select one arbitrator within thirty (30) days after the date of the Arbitration Notice and the two (2) arbitrators so selected shall choose a third arbitrator to resolve the dispute within thirty (30) days after the date the second of the initial two (2) arbitrators is selected. All arbitrators shall be independent of the Parties and shall not have any present or past relationship with either Party. An arbitration decision shall be rendered in writing and shall be binding and not be appealable to any court in any jurisdiction except pursuant to the FAA. The arbitration proceedings shall be conducted in the English language and shall be held in: (a) Philadelphia, PA, if brought by Spark, and (b) Atlanta,

Georgia, if brought by Clearside. The arbitrators shall have the authority to grant specific performance, and to allocate between the Parties the costs and legal fees of arbitration in such equitable manner as they determine. Judgment upon the award so rendered may be entered in any court having jurisdiction and application may be made to such court for judicial acceptance of any award and an order of enforcement, as the case may be.

ARTICLE 14
MISCELLANEOUS

14.1 Governing Law. This Agreement and any non-contractual obligations arising out of or in connection with it shall be governed by and interpreted in accordance with the laws of the State of Delaware without regard to conflict of law principles thereof, and excluding the United National Convention on Contracts for the International Sales of Goods.

14.2 Compliance with Laws. Each Party shall conduct its activities under this Agreement in accordance with Law and good business practices. Furthermore, each Party represents, warrants and agrees that it has been at all times and will continue to be in compliance with all potentially applicable anti-bribery and anti-corruption laws, including the U.S. Foreign Corrupt Practices Act of 1977. Each Party represents, warrants and agrees that no bribes, payments, kickbacks, gifts, hospitality, donations, loans, or anything of value have been or will be made or received, offered, promised, or authorized, directly or indirectly, to improperly influence any act or decision of any person or entity, induce any person or entity to do or omit to do any act in violation of any person's or entities' lawful duties, or secure any improper advantage.

14.3 Assignment of Rights and Obligations.

(a) General Rule. This Agreement and its rights or obligations may not be assigned or otherwise transferred by either Party without the prior written consent of the other Party.

(b) Permitted Assignments to Affiliates and in Case of Sale of Business Transactions. Notwithstanding Section 14.3(a), either Party may, even without the consent of the other Party, assign this Agreement or any of its rights or obligations (i) to any of its Affiliates, or (ii) in connection with a sale or transfer of all or substantially all of such Party's business or assets relating to the subject matter of this Agreement, whether by merger, sale of assets or otherwise; provided, however, that such Party's rights and obligations under this Agreement shall be assumed in writing by its successor in interest in any such transaction. In the event of an assignment of this Agreement by Spark, the successor or assignee shall be obligated, in addition to and without limiting the provisions of Section 4.1(a), if an IND clearance is obtained by Spark (or such successor or assignee) with respect to a second Licensed Product, to use Commercially Reasonable Efforts to Develop a second Licensed Product in the Field if warranted by safety, efficacy,

commercial opportunity and the other considerations included in the definition of "Commercially Reasonable Efforts." In addition, either Party may assign its rights hereunder, subject to any applicable defenses or set offs, as collateral security to its senior secured creditor(s).

14.4 Further Actions. Each Party agrees to execute, acknowledge and deliver such further instruments, and to do all such other acts, as may be necessary or appropriate in order to carry out the purposes and intent of the Agreement.

14.5 Force Majeure. Except with respect to payment of money, no Party shall be liable to the other Party for failure or delay in the performance of any of its obligations under this Agreement for the time and to the extent such failure or delay is caused by earthquake, riot, civil commotion, war, terrorist acts, strike, flood, or governmental acts or restriction, or other cause that is beyond the reasonable control of the respective Party ("**Force Majeure**"). The Party affected by such Force Majeure will provide the other Party with full particulars thereof as soon as it becomes aware of the same (including its best estimate of the likely extent and duration of the interference with its activities), and will use Commercially Reasonable Efforts to overcome the difficulties created thereby and to resume performance of its obligations as soon as practicable. If the performance of any such obligation under this Agreement is delayed owing to an event of Force Majeure for any continuous period of more than ninety (90) days, the Parties will consult with respect to an equitable solution, including the possibility of the termination of this Agreement.

14.6 Representation by Legal Counsel. Each Party hereto represents that it has been represented by legal counsel in connection with this Agreement and acknowledges that it has participated in the drafting hereof. In interpreting and applying the terms and provisions of this Agreement, the Parties agree that no presumption shall exist or be implied against the Party which drafted such terms and provisions.

14.7 Notices. Any notice, request, delivery, approval or consent required or permitted to be given under this Agreement shall be in writing and shall be deemed to have been sufficiently given if delivered in person, transmitted by facsimile (receipt verified) or by express courier service (signature required) or five (5) days after it was sent by registered letter, return receipt requested (or its equivalent), provided that no postal strike or other disruption is then in effect or comes into effect within two (2) days after such mailing, to the Party to which it is directed at its address or facsimile number shown below or such other address or facsimile number as such Party will have last given by notice to the other Party.

If to Spark: Spark Therapeutics, Inc.
3737 Market Street, Suite 1300
Philadelphia, PA 19104
Attention: General Counsel
Facsimile: (215) 790-6248

If to Clearside:	Clearside Biomedical, Inc. 1220 Old Alpharetta Rd., Suite 300 Alpharetta, GA 30005 Attention: Chief Executive Officer
With a copy to:	Hutchison PLLC 3110 Edwards Mill Road, Suite 300 Raleigh, NC 27612 Attn: William N. Wofford

14.8 Entire Agreement. The Parties hereto acknowledge that this Agreement, together with the Exhibits attached hereto, set forth the entire agreement and understanding of the Parties hereto as to the subject matter hereof, and supersedes all prior and contemporaneous discussions, agreements and writings in respect. Except as required by statute, no terms shall be implied (whether by custom, usage or otherwise) into this Agreement.

14.9 Amendment. No amendment, modification or supplement of any provision of this Agreement shall be valid or effective unless made in writing and signed by a duly authorized officer of each Party.

14.10 Waiver. No provision of the Agreement shall be waived by any act, omission or knowledge of a Party or its agents or employees except by an instrument in writing expressly waiving such provision and signed by a duly authorized officer of the waiving Party. The waiver by any of the Parties of any breach of any provision hereof by another Party shall not be construed to be a waiver of any succeeding breach of such provision or a waiver of the provision itself.

14.11 Severability. If any clause or portion thereof in this Agreement is for any reason held to be invalid, illegal or unenforceable, the same shall not affect any other portion of this Agreement, as it is the intent of the Parties that this Agreement shall be construed in such fashion as to maintain its existence, validity and enforceability to the greatest extent possible. In any such event, this Agreement shall be construed as if such clause of portion thereof had never been contained in this Agreement, and there shall be deemed substituted therefor such provision as will most nearly carry out the intent of the Parties as expressed in this Agreement to the fullest extent permitted by Law.

14.12 Relationship of the Parties. The Parties agree that the relationship of Spark and Clearside established by this Agreement is that of independent contractors. Furthermore, the Parties agree that this Agreement does not, is not intended to, and shall not be construed to, establish an employment, agency, partnership or any other relationship. Except as may be specifically provided herein, no Party shall have any right, power or authority, nor shall they represent themselves as having any authority to assume, create or incur any expense, liability or obligation, express or implied, on behalf of any other Party, or otherwise act as an agent for any other Party for any purpose.

14.13 Third Party Beneficiaries. Except for the rights to indemnification provided for a Party's Indemnitees pursuant to Article 12, all rights, benefits and remedies under this Agreement are solely intended for the benefit of the Parties (including any successor in interest or permitted assigns), and except rights to indemnification expressly provided pursuant to Article 12, no Third Party shall have any rights whatsoever to (a) enforce any obligation contained in this Agreement, (b) seek a benefit or remedy for any breach of this Agreement, or (c) take any other action relating to this Agreement under any legal theory, including actions in contract, tort (including negligence, gross negligence and strict liability), or as a defense, setoff or counterclaim to any action or claim brought or made by the Parties.

14.14 Nonsolicitation. During the term of this Agreement and for a period of twelve (12) months thereafter, neither Party shall solicit an employee of the other Party who is or has been involved in the performance or oversight of any of the Research hereunder to terminate his or her employment and accept employment or work as a consultant with the soliciting Party. Notwithstanding the foregoing, nothing herein shall restrict or preclude the Parties' right to make generalized searches for employees by way of a general solicitation for employment placed in a trade journal, newspaper or website.

14.15 Counterparts. This Agreement may be executed in any number of counterparts, each of which need not contain the signature of more than one Party but all such counterparts taken together shall constitute one and the same agreement. Any signature page delivered by facsimile or electronic image transmission shall be binding to the same extent as an original signature page.

[*Signature page follows*]

IN WITNESS WHEREOF, the Parties have executed this Agreement by their duly authorized representatives as of the dates set forth below.

SPARK THERAPEUTICS, INC.		**CLEARSIDE BIOMEDICAL, INC.**	
By:	/s/ Jeffrey D. Marrazzo	By:	/s/ Daniel H. White
Name:	Jeffrey D. Marrazzo	Name:	Daniel H. White
Title:	CEO	Title:	President & CEO
Date:		Date:	4-27-2015

CONFIDENTIAL TREATMENT HAS BEEN REQUESTED FOR PORTIONS OF THIS EXHIBIT. THE COPY FILED HEREWITH OMITS THE INFORMATION SUBJECT TO A CONFIDENTIALITY REQUEST. OMISSIONS ARE DESIGNATED [***]. A COMPLETE VERSION OF THIS EXHIBIT HAS BEEN FILED SEPARATELY WITH THE SECURITIES AND EXCHANGE COMMISSION.

Exhibits:

Exhibit A-1 – Initial Option Period #1 Workplan

Proposal Summary

Study Title	Price (USD)
Ocular Distribution of AAV Vector by Suprachoroidal or Subretinal Injection in Pigmented Rabbits with a Tolerability Phase	$ [***]

Assumptions

In the preparation of this quotation, certain assumptions have been made which are presented below:

The study information presented within this document is based on standard Covance practices and the study outline/assumptions included.

This document is not a contract. A contract will typically be issued at study plan finalization.

Price estimate has been prepared according to the information provided in the study outline/assumptions listed.

Price estimate is subject to change should there be any alteration to the study outline/assumptions.

The final study price will be calculated on the authorized definitive protocol.

Prices are valid for 60 days from the document date.

Where costs of shipping are included in this quotation, these are for convenience only and may vary depending upon the type and volume of material shipped. All shipping is provided by a third party vendor and is not considered part of the services provided by Covance.

One-year archive period included (can be extended if required). After retention has ended, Archives will request disposition decisions and communicate the applicable charges.

Ocular Distribution of AAV Vector by Suprachoroidal or Subretinal Injection in Pigmented Rabbits with a Tolerability Phase

Quote No.: 98777

Quote (USD): **$**[***]

Study Location: Madison, WI, USA

Estimated Study Start: **Late March/Early April 2015** – based on study outline and current capacity. No schedule reserved at this time.

CONFIDENTIAL TREATMENT HAS BEEN REQUESTED FOR PORTIONS OF THIS EXHIBIT. THE COPY FILED HEREWITH OMITS THE INFORMATION SUBJECT TO A CONFIDENTIALITY REQUEST. OMISSIONS ARE DESIGNATED [***]. A COMPLETE VERSION OF THIS EXHIBIT HAS BEEN FILED SEPARATELY WITH THE SECURITIES AND EXCHANGE COMMISSION.

Client Authorization

If Clearside Biomedical, Inc. would like Covance Laboratories Inc. to proceed with the scheduling and initial setup of the following project:

Study Title	Price (USD)
Ocular Distribution of AAV Vector by Suprachoroidal or Subretinal Injection in Pigmented Rabbits with a Tolerability Phase	$ [***]

Please sign below and e-mail as a .pdf to the Client Manager noted on Page 1.

Please issue a Purchase Order Number for the project.

Purchase Order Number (if applicable):

Covance Laboratories Inc. and Clearside Biomedical, Inc. agree that the final contract values of the above-mentioned project will be determined upon completion of the definitive protocol before study start.

Upon receipt of this authorization, the appropriate resources will be reserved for the project, and you will be notified of the scheduled start date. Any subsequent delay or cancellation of the study may be subject to additional charges as noted below.

In the event of a delay or cancellation of a study contracted between the parties, Delay/Cancellation costs will be in accordance with the policy as established and mutually agreed upon under the Master Laboratory Services Agreement or Laboratory Services Agreement.

Signed for and on behalf of Clearside Biomedical, Inc.

_____

(Name & Title)

_____

(Date)

Exhibit A-2
Preliminary Work Plan #2

Following the successful completion of the first rabbit study as evidenced by the expression of GFP from an AAV5 vector in RPE and photoreceptor cells, the additional studies are anticipated. Based on the data from the initial study Clearside and Spark may recommend revision of this proposal.

1. Dose Optimization Study

[***]

2. Efficacy study

[***]

3. Non-human primate study

[***]

Exhibit B – Existing Clearside Background IP

Owned by Emory University and/or Georgia Tech Research Corporation and subject to Emory License Agreement

Patent No.	Issue date	Docket No.
U.S. Patent No. 7,918,814	April 5, 2011	CLRS-004/02US
U.S. Patent No. 8,197,435	June 12, 2012	CLRS-004/03US
U.S. Patent No. 8,636,713	January 28, 2014	CLRS-004/04US
U.S. Patent No. 8,808,225	August 19, 2014	CLRS-004/05US

Application No.	Filing date	Docket No.
International Patent Application No. PCT/US14/71623	December 19, 2014	CLRS-023/01WO
U.S. Provisional Patent Application No. 61/918,992	December 20, 2013	CLRS-023/00US
U.S. Provisional Patent Application No. 60/746,237	May 2, 2006	CLRS-004/00US
U.S. Provisional Patent Application No. 61/172,409	April 24, 2009	CLRS-004/01US
U.S. Provisional Patent Application No. 61/698,254	September 7, 2012	CLRS-005/00US
U.S. Patent Application Serial No. 14/136,657	December 20, 2013	CLRS-004/06US
International Patent Application No. PCT/US2011/033987	April 26, 2011	CLRS-004/03WO
Australia Patent Application No. 2011248624	April 26, 2011	CLRS-004/03AU
Brazil Patent Application No. 11 2012 027416-3	April 26, 2011	CLRS-004/03BR
Canada Patent Application No. 2797258	April 26, 2011	CLRS-004/03CA
Chinese Patent Application No. 201180024176.5	April 26, 2011	CLRS-004/03CN
European Patent Application No. 11777924.9	April 26, 2011	CLRS-004/03EP
India Patent Application No. 10099/DELNP/2012	April 26, 2011	CLRS-004/03IN
Israel Patent Application No. 222638	April 26, 2011	CLRS-004/03IL
Japan Patent Application No. 2013-508168	April 26, 2011	CLRS-004/03JP
Mexico Patent Application No. MX/a/2012/012495	April 26, 2011	CLRS-004/03MX
New Zealand Patent Application No. 603185	April 26, 2011	CLRS-004/03NZ
New Zealand Patent Application No. 623752	April 26, 2011	CLRS-004/04NZ
Russia Patent Application No. 2012147341	April 26, 2011	CLRS-004/03RU
Singapore Patent Application No. 201207910-9	April 26, 2011	CLRS-004/03SG
South Africa Application No. 2012/08069	April 26, 2011	CLRS-004/03ZA
South Africa Application No. 2014/00616	April 26, 2011	CLRS-004/04ZA

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Application No.	Filing date	Docket No.
U.S. Provisional Patent Application No. 61/693,542	August 27, 2012	CLRS-006/00US
U.S. Provisional Patent Application No. 61/754,495	January 18, 2013	CLRS-006/01US
U.S. Provisional Patent Application No. 61/784,817	March 14, 2013	CLRS-006/02US
PCT Patent Application No. PCT/US2013/056863	August 27, 2013	CLRS-006/03WO
U.S. Patent Application No. 14/424,685	August 27, 2013	CLRS-006/03US
EU national phase of PCT Patent Application No. PCT/US2013/056863	August 27, 2013	CLRS-006/00EP
CA national phase of PCT Patent Application No. PCT/US2013/056863	August 27, 2013	CLRS-006/03CA

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Application No.	Filing date	Docket No.
U.S. Provisional Patent Application No. 61/759,771	February 1, 2013	CLRS-011/00US
U.S. Provisional Patent Application No. 61/724,144	November 8, 2012	CLRS-007/00US
U.S. Provisional Patent Application No. 61/734,872	December 7, 2012	CLRS-008/00US
U.S. Provisional Patent Application No.61/745,237	December 21, 2012	CLRS-010/00US
U.S. Provisional Patent Application No. 61/773,124	March 5, 2013	CLRS-012/00US
U.S. Provisional Patent Application No. 61/785,229	March 14, 2013	CLRS-012/01US
U.S. Provisional Patent Application No. 61/819,388	May 3, 2013	CLRS-012/02US
U.S. Provisional Patent Application No. 61/873,660	September 4, 2013	CLRS-017/00US

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Application No.	Filing date	Docket No.
U.S. Provisional Patent Application No. 61/898,926	November 1, 2013	CLRS-017/01US
International Application No. PCT/US2013/069156	November 8, 2013	CLRS-007/01WO
U.S. Provisional Patent Application No. 61/830,324	June 3, 2013	CLRS-013/00US
International Application No. PCT/US2014/040254	May 30, 2014	CLRS-013/01WO
U.S. Provisional Patent Application No. 61/819,048	May 3, 2013	CLRS-014/00US
U.S. Provisional Patent Application No. 61/819,052	May 3, 2013	CLRS-015/00US
U.S. Provisional Patent Application No. 61/827,371	May 24, 2013	CLRS-016/00US
U.S. Provisional Patent Application No. 61/944,214	February 25, 2014	CLRS-014/01US
U.S. Provisional Patent Application No. 61/953,147	March 14, 2014	CLRS-018/00US
International Application No. PCT/US2014/036590	May 2, 2014	CLRS-018/01WO
U.S. Patent Application No. 14/268,687	May 2, 2014	CLRS-018/01US
U.S. Patent Application No. 14/523,243	May 2, 2014	CLRS-018/02US
U.S. Provisional Patent Application No. 62/014,766	June 20, 2014	CLRS-021/00US
U.S. Provisional Patent Application No. 62/035,682	August 11, 2014	CLRS-014/02US
U.S. Design Patent Application No. 29/506,275	October 14, 2014	CLRS-022/00US
U.S. Provisional Patent Application No. 62/063,792	October 14, 2014	CLRS-022/01US

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Case Numbers	Title	Application Information		Status
641-008BR (ISSCP008BR)	Title: APPARATUS AND FORMULATIONS FOR SUPRACHOROIDAL DRUG DELIVERY	Filed: 02/22/2007 App. #: PI0708133-2	[***]	
641-008C (ISSCP008C1US)	Title: APPARATUS AND FORMULATIONS FOR SUPRACHOROIDAL DRUG DELIVERY	Filed: 03/15/2013 App. #: 13/842,288	[***]	

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641-008CN (ISSCP008CN)	Title: APPARATUS AND FORMULATIONS FOR SUPRACHOROIDAL DRUG DELIVERY	Issued: 06/8/2011 Pat. #: ZL200780014501.3 Filed: 2/22/2007 App. #: 200780014501.3	[***]
641-008CN-DV1 (ISSCP008CND1)	Title: APPARATUS AND FORMULATIONS FOR SUPRACHOROIDAL DRUG DELIVERY	Issued: 10/30/2013 Pat. #: ZL2001110093644.6 Filed: 2/22/2007 App. #: 201110093644.6	[***]
641-008DV (ISSCP008D1US)	Title: APPARATUS AND FORMULATIONS FOR SUPRACHOROIDAL DRUG DELIVERY	Filed: 03/15/2013 App. #: 13/842,218	[***]
641-008EP (ISSCP008EP)	Title: APPARATUS AND FORMULATIONS FOR SUPRACHOROIDAL DRUG DELIVERY	Filed: 02/22/2007 App. #: 07751620.1	[***]
641-008US (ISSCP008US)	Title: APPARATUS AND FORMULATIONS FOR SUPRACHOROIDAL DRUG DELIVERY	Filed: 02/21/2007 App. #: 11/709,941	[***]
641-015BR (ISSCP015BR)	Title: DEVICE FOR OCULAR ACCESS	Filed: 04/15/2013 App. #: 1120130092050	[***]
641-015CN (ISSCP015CN)	Title: DEVICE FOR OCULAR ACCESS	Filed: 10/14/2011 App. #: 201180060268.9	[***]
641-015CN-DV	Title: DEVICE FOR OCULAR ACCESS	Filed: Not yet App. #:	[***]
641-015EP (ISSCP015EP)	Title: DEVICE FOR OCULAR ACCESS	Filed: 05/09/2013 App. #: 11776049.6	[***]
641-015JP (ISSCP015JP)	Title: DEVICE FOR OCULAR ACCESS	Filed: 4/12/2012 App. #: 2013-534049	[***]

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641-015US (ISSCP015US)	Title: DEVICE FOR OCULAR ACCESS	Filed: 10/14/2011 App. #: 13/273,775	[***]
	Title: APPARATUS AND FORMULATIONS FOR SUPRACHOROIDAL DRUG DELIVERY	Filed: February 22, 2006 U.S. Provisional Patent Application Serial No.: 60/776,903	
	APPARATUS AND FORMULATIONS FOR SUPRACHOROIDAL DRUG DELIVERY	International Patent Application Serial No.:PCT/US2007/004874	[***]
	DEVICE FOR OCULAR ACCESS	U.S. Provisional Patent Application Serial No.: 61/393,741	[***]
	DEVICE FOR OCULAR ACCESS	International Patent Application Serial No.: PCT/US2011/056433	[***]

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U.S. Provisional Patent Application No. 61/759,771	February 1, 2013	CLRS-011/00US
U.S. Provisional Patent Application No. 61/724,144	November 8, 2012	CLRS-007/00US
U.S. Provisional Patent Application No. 61/734,872	December 7, 2012	CLRS-008/00US
U.S. Provisional Patent Application No. 61/745,237	December 21, 2012	CLRS-010/00US
U.S. Provisional Patent Application No. 61/773,124	March 5, 2013	CLRS-012/00US
U.S. Provisional Patent Application No. 61/785,229	March 14, 2013	CLRS-012/01US
U.S. Provisional Patent Application No. 61/819,388	May 3, 2013	CLRS-012/02US
U.S. Provisional Patent Application No. 61/873,660	September 4, 2013	CLRS-017/00US
U.S. Provisional Patent Application No. 61/898,926	November 1, 2013	CLRS-017/01US
International Application No. PCT/US2013/069156	November 8, 2013	CLRS-007/01WO
U.S. Provisional Patent Application No. 61/830,324	June 3, 2013	CLRS-013/00US
International Application No. PCT/US2014/040254	May 30, 2014	CLRS-013/01WO
U.S. Provisional Patent Application No. 61/819,048	May 3, 2013	CLRS-014/00US
U.S. Provisional Patent Application No. 61/819,052	May 3, 2013	CLRS-015/00US
U.S. Provisional Patent Application No. 61/827,371	May 24, 2013	CLRS-016/00US
U.S. Provisional Patent Application No. 61/944,214	February 25, 2014	CLRS-014/01US
U.S. Provisional Patent Application No. 61/953,147	March 14, 2014	CLRS-018/00US
International Application No. PCT/US2014/036590	May 2, 2014	CLRS-018/01WO
U.S. Patent Application No. 14/268,687	May 2, 2014	CLRS-018/01US
U.S. Patent Application No. 14/523,243	May 2, 2014	CLRS-018/02US
U.S. Provisional Patent Application No. 62/014,766	June 20, 2014	CLRS-021/00US
U.S. Provisional Patent Application No. 62/035,682	August 11, 2014	CLRS-014/02US
U.S. Design Patent Application No. 29/506,275	October 14, 2014	CLRS-022/00US
U.S. Provisional Patent Application No. 62/063,792	October 14, 2014	CLRS-022/01US

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Exhibit C – Provisions of Emory License Agreement

The following provisions of the Emory License Agreement shall be included in any Sublicense:

2.5.1. Spark or Sublicensee shall indemnify Emory/GTRC and maintain liability coverage to the same extent that Clearside is so required pursuant to Section 10.3 of the Emory License Agreement.

2.5.2. Emory/GTRC has the right to audit Spark or the Sublicensee as described below.

2.5.3. Spark shall provide Clearside with copies of all sublicense agreements within thirty (30) days of their execution date, which, if redacted, must include the relevant provisions under this Article 2 and a disclosure of the financial terms of the sublicense;

2.5.4. Sublicense to Spark or to a Sublicensee is subject to automatic termination in the event that Spark, a Sublicensee or distributor challenges, either directly or indirectly, the validity, enforceability or scope of any claim within the patent rights licensed under the Emory License Agreement in a court or other governmental agency of competent jurisdiction, including in a reexamination or opposition proceeding.

2.5.5. If the Emory License Agreement terminates for any reason, Spark or any Sublicensee shall, unless the sublicense agreement also terminates, from the effective date of such termination, automatically become a direct licensee of Emory/GTRC with respect to the rights originally sublicensed to it by Clearside, provided Spark or such Sublicensee did not cause the termination of the Agreement, agrees to comply with all the terms of the Emory License Agreement and assumes the responsibilities of Clearside, to the extent applicable to the sublicense originally granted to it.

2.7 Any Licensed Products used or sold in the United States will be manufactured substantially in the United States unless any waivers required are obtained from the United States Government by COMPANY

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4.3. Right to Audit. Emory/GTRC shall have the right, upon prior notice, not more than once in each calendar year and the calendar year immediately following termination of the Agreement, through an independent certified public accountant selected by Emory/GTRC, to have access during normal business hours as may be reasonably necessary to examine the records of Spark or Sublicensee to include, but not be limited to, sales invoice registers, sales analysis reports, original invoices, inventory records, price lists, sublicense and distributor agreements, accounting general ledgers, and sales tax returns, in order to verify the accuracy of the of the calculation of any payment due under the Emory License Agreement. Such audit shall be limited in scope to the preceding thirty-six (36) months from the date of the notice of audit. If such independent public accountant's report shows any underpayment of royalties by Spark, its Affiliates or Sublicensees, within thirty (30) days after receipt of such report, Spark or Sublicensee shall remit to Emory/GTRC:

i. the amount of such underpayment; and

ii. if such underpayment exceeds five (5%) percent of the total royalties owed for the fiscal year then being reviewed, the reasonably necessary fees and expenses of such independent public accountant performing the audit. Otherwise, Emory/GTRC's accountant's fees and expenses shall be borne by Emory/GTRC's.

9.3 FDA and Other Regulations. Any Sublicensee shall represent and warrant that any Licensed Products made or sold by it or its Affiliates under this license shall comply with all applicable federal and state law regulations, including but not limited to regulations of the Federal Drug Administration, the Environmental Protection Agency, and their state equivalents.

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Exhibit D – Standard Microinjector Technical Specifications

As of the Effective Date, the Standard Microinjector is a single needle, single-use device sterilized with ethylene oxide and designed to be filled at the point of use with a vial adapter tube and used at room temperature. See accompanying image.

Length of microneedle:	[***]
Needle gauge:	[***]
Size of Bevel opening:	[***]
Volume:	[***]
Force:	[***]

For the sake of clarification, improved versions of the Standard Microinjector made after the Effective Date (including improved versions that include changes to the above parameters) shall also constitute Standard Microinjectors, but in no event shall a Microinjector constitute a "Standard Microinjector" if such device incorporates any of the following components or characteristics:

1. Battery power
2. Thermodynamic modulation (i.e., insulation, heating or cooling elements)
3. Glass barrel
4. Multiple chambers
5. Multi-pronged needle(s)
6. Sterilization with autoclave/heat or radiation

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Exhibit E – Supply Agreement Terms

Pricing:	[***] (subject to inflation adjuster 5 years after first commercial sale) If the parties agree for Clearside to supply New Microinjectors, unit pricing would be at the greater of [***].
Delivery:	F.O.B., Clearside's designated manufacturing facility in the US
Product Warrants:	Microinjectors to be manufactured to GMP standards and to meet specifications
Forecast; Lead times:	Firm Period [tbd] Semi-firm Period [tbd] Non-binding forecast [tbd]
"Failure to Supply"	[Failure to meet at least [tbd]% of firm orders in consecutive calendar quarters]
"Most Favored Nation"	Clearside will commit to performance, warranty, indemnification, priority allocation, quality and similar terms no less favorable to Spark than comparable terms offered by Clearside to Third Party customers and no less favorable to Spark than comparable terms obtained by Clearside from its Third Party contract manufacturer. The Parties acknowledge that, due to the relatively modest quantities that Spark anticipates requiring, the Parties will need to cooperate with respect to forecasting and ordering to enable Spark to obtain timely supply, which cooperation may include joint planning to enable Spark's orders to be fulfilled concurrently with larger production runs but without undue delay.
Production Ready Date:	Timeline for commercial scale production readiness to be negotiated.
Payment Terms:	Payment for supplies of commercial Standard Microinjector will be due net thirty (30) days after the later of the date of invoice or the date of delivery of such Microinjectors.
Late Payments:	Overdue amounts will carry an annual interest charge, calculated monthly, at London Interbank Offered Rate plus two hundred basis points.

Exhibit F – Initial Press Release

[To be provided]

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Exhibit 10.19

LOAN AND SECURITY AGREEMENT

THIS LOAN AND SECURITY AGREEMENT (this "**Agreement**") dated as of April , 2015 (the "**Effective Date**") between **SILICON VALLEY BANK**, a California corporation ("**Bank**"), and **CLEARSIDE BIOMEDICAL, INC.**, a Delaware corporation ("**Borrower**"), provides the terms on which Bank shall lend to Borrower and Borrower shall repay Bank. The parties agree as follows:

1 ACCOUNTING AND OTHER TERMS

Accounting terms not defined in this Agreement shall be construed following GAAP. Calculations and determinations must be made following GAAP. Capitalized terms not otherwise defined in this Agreement shall have the meanings set forth in Section 13. All other terms contained in this Agreement, unless otherwise indicated, shall have the meaning provided by the Code to the extent such terms are defined therein.

2 LOAN AND TERMS OF PAYMENT

2.1 Promise to Pay. Borrower hereby unconditionally promises to pay Bank the outstanding principal amount of all Credit Extensions and accrued and unpaid interest thereon as and when due in accordance with this Agreement.

2.1.1 Growth Capital Advances.

(a) Availability. Subject to the terms and conditions of this Agreement, Bank agrees to make up to two (2) Growth Capital Advances to Borrower in two (2) tranches: "Tranche A" and "Tranche B". Provided that (i) Borrower has achieved the Positive Phase I/II Milestone, and (ii) all other conditions precedent to the initial Credit Extension have been satisfied, Bank shall make a Growth Capital Advance under Tranche A to Borrower in an amount equal to Four Million Dollars ($4,000,000) (the "**Tranche A Growth Capital Advance**") on the Effective Date. During the Tranche B Draw Period, Borrower may request a Growth Capital Advance under Tranche B, in an amount not to exceed Two Million Dollars ($2,000,000) (the "**Tranche B Growth Capital Advance**", and together with the Tranche A Growth Capital Advance, each a "**Growth Capital Advance**" and collectively, the "**Growth Capital Advances**"). The aggregate outstanding amount of the Growth Capital Advances shall not exceed the Growth Capital Line.

(b) Repayment. The Growth Capital Advances shall be "interest only" through the Amortization Start Date and shall be payable in accordance with Section 2.3(d) below. Borrower shall repay the Growth Capital Advances in thirty (30) equal installments of principal, plus monthly payments of accrued interest (each, a "**Growth Capital Advance Payment**"). Beginning on the Amortization Start Date, each Growth Capital Advance Payment shall be payable on the first (1st) day of each month. Borrower's final Growth Capital Advance Payment, due on the Growth Capital Maturity Date, shall include all outstanding principal and accrued and unpaid interest under the Growth Capital Advances and the Final Payment. Once repaid, no Growth Capital Advance may be reborrowed.

(c) Prepayment.

(i) Mandatory Prepayment Upon an Acceleration. If the Growth Capital Advances are accelerated following the occurrence and during the continuance of an Event of Default, Borrower shall immediately pay to Bank an amount equal to the sum of (i) all outstanding principal, plus accrued and unpaid interest with respect to Growth Capital Advances, (ii) the Final Payment, (iii) the Termination Fee and (iv) all other sums, if any, that shall have become due and payable hereunder in connection with the Growth Capital Advances.

(ii) Voluntary Prepayment. Borrower shall have the option to prepay all, but not less than all, of the Growth Capital Advances advanced by Bank under this Agreement, provided Borrower (a) delivers written notice to Bank of its election to prepay the Growth Capital Advances at least ten (10) days prior to such prepayment, (b) pays, on the date of such prepayment (i) all outstanding principal, plus accrued and unpaid interest thereon, (ii) the Final Payment, (iii) the Termination Fee and (iv) all other sums, if any, that shall have become due and payable hereunder in connection with the Growth Capital Advances.

2.2 Intentionally Omitted.

2.3 Payment of Interest on the Credit Extensions.

(a) Interest Rate. Subject to Section 2.3(b), the principal amount outstanding under the Growth Capital Line shall accrue interest at a floating per annum rate equal to one half of one percentage point (0.50%) below the Prime Rate, which interest shall be payable monthly in accordance with Section 2.3(d) below.

(b) Default Rate. Immediately upon the occurrence and during the continuance of an Event of Default, Obligations shall bear interest at a rate per annum which is four percentage points (4.0%) above the rate that is otherwise applicable thereto (the "**Default Rate**"). Fees and expenses which are required to be paid by Borrower pursuant to the Loan Documents (including, without limitation, Bank Expenses) but are not paid when due shall bear interest until paid at a rate equal to the highest rate applicable to the Obligations. Payment or acceptance of the increased interest rate provided in this Section 2.3(b) is not a permitted alternative to timely payment and shall not constitute a waiver of any Event of Default or otherwise prejudice or limit any rights or remedies of Bank.

(c) Adjustment to Interest Rate. Changes to the interest rate of any Credit Extension based on changes to the Prime Rate shall be effective on the effective date of any change to the Prime Rate and to the extent of any such change.

(d) Payment; Interest Computation. Interest is payable monthly on the first (1st) calendar day of each month and shall be computed on the basis of a 360-day year for the actual number of days elapsed. In computing interest, (i) all payments received after 12:00 p.m. Eastern time on any day shall be deemed received at the opening of business on the next Business Day, and (ii) the date of the making of any Credit Extension shall be included and the date of payment shall be excluded; provided, however, that if any Credit Extension is repaid on the same day on which it is made, such day shall be included in computing interest on such Credit Extension.

2.4 Fees. Borrower shall pay to Bank:

(a) Final Payment. The Final Payment, when due hereunder;

(b) Termination Fee. Upon termination of this Agreement for any reason prior to the Growth Capital Maturity Date, in addition to the payment of any other amounts then-owing, a termination fee (the "**Termination Fee**") in an amount equal to (i) two percent (2.00%) of the original principal amount of the aggregate Growth Capital Advances made to Borrower if such termination occurs prior to the first anniversary of the Effective Date, (ii) one percent (1.00%) of the original principal amount of the aggregate Growth Capital Advances made to Borrower if such termination occurs on or after the first anniversary of the Effective Date but prior to the second anniversary of the Effective Date or (iii) one half of one percent (0.50%) of the original principal amount of the aggregate Growth Capital Advances made to Borrower if such termination occurs on or after the second anniversary of the Effective Date but prior to the Growth Capital Maturity Date; provided that no termination fee shall be charged if the credit facility hereunder is replaced with a new facility from Bank; and

(c) Bank Expenses. All Bank Expenses (including reasonable attorneys' fees and expenses for documentation and negotiation of this Agreement incurred through and after the Effective Date, when due (or, if no stated due date, upon demand by Bank). Borrower has paid to Bank a deposit of Fifteen Thousand Dollars ($15,000) (the "**Good Faith Deposit**"). If Borrower executes the Loan Documents, the Good Faith Deposit shall be applied to Bank Expenses due on the Effective Date. If Borrower chooses not to execute the Loan Documents, the Good Faith Deposit shall be applied to Bank Expenses incurred with the remainder to be kept by Bank.

(d) Fees Fully Earned. Unless otherwise provided in this Agreement or in a separate writing by Bank, Borrower shall not be entitled to any credit, rebate, or repayment of any fees earned by Bank pursuant to this Agreement notwithstanding any termination of this Agreement or the suspension or termination of Bank's

obligation to make loans and advances hereunder. Bank may deduct amounts owing by Borrower under the clauses of this Section 2.4 pursuant to the terms of Section 2.5(c). Bank shall provide Borrower written notice of deductions made from the Designated Deposit Account pursuant to the terms of the clauses of this Section 2.4.

2.5 Payments; Application of Payments; Debit of Accounts.

(a) All payments to be made by Borrower under any Loan Document shall be made in immediately available funds in Dollars, without setoff or counterclaim, before 12:00 p.m. Pacific time on the date when due. Payments of principal and/or interest received after 12:00 p.m. Pacific time are considered received at the opening of business on the next Business Day. When a payment is due on a day that is not a Business Day, the payment shall be due the next Business Day, and additional fees or interest, as applicable, shall continue to accrue until paid.

(b) Bank has the exclusive right to determine the order and manner in which all payments with respect to the Obligations may be applied. Borrower shall have no right to specify the order or the accounts to which Bank shall allocate or apply any payments required to be made by Borrower to Bank or otherwise received by Bank under this Agreement when any such allocation or application is not specified elsewhere in this Agreement.

(c) Bank may debit any of Borrower's deposit accounts, including the Designated Deposit Account, for principal and interest payments or any other amounts Borrower owes Bank when due. These debits shall not constitute a set-off.

2.6 Withholding.

(a) Payments received by Bank from Borrower under this Agreement will be made free and clear of and without deduction for any and all present or future taxes, levies, imposts, duties, deductions, withholdings, assessments, fees or other charges imposed by any Governmental Authority (including any interest, additions to tax or penalties applicable thereto). Specifically, however, if at any time any Governmental Authority, applicable law, regulation or international agreement requires Borrower to make any withholding or deduction from any such payment or other sum payable hereunder to Bank, Borrower hereby covenants and agrees that the amount due from Borrower with respect to such payment or other sum payable hereunder will be increased to the extent necessary to ensure that, after the making of such required withholding or deduction, Bank receives a net sum equal to the sum which it would have received had no withholding or deduction been required, and Borrower shall pay the full amount withheld or deducted to the relevant Governmental Authority. Borrower will, upon request, furnish Bank with proof reasonably satisfactory to Bank indicating that Borrower has made such withholding payment; provided, however, that Borrower need not make any withholding payment if the amount or validity of such withholding payment is contested in good faith by appropriate and timely proceedings and as to which payment in full is bonded or reserved against by Borrower. The agreements and obligations of Borrower contained in this Section 2.6 shall survive the termination of this Agreement.

(b) If any assignee of Bank's rights under Section 12.2 of this Agreement is not a "United States Person" as defined in Section 7701(a)(30) of the Internal Revenue Code of 1986, as amended from time to time (such assignee, a "**Non-U.S. Lender**"), such Non-U.S. Lender shall, upon becoming party to this Agreement, to the extent that such Non-U.S. Lender is entitled to an exemption from U.S. withholding tax on interest, deliver to Borrower a complete and properly executed IRS Form W-8BEN, W-8ECI or W-8IMY, as appropriate, or any successor form prescribed by the IRS, certifying that such Non-U.S. Lender is entitled to such exemption from U.S. withholding tax on interest. Notwithstanding Section 2.6(a) above, Borrower shall not be required to pay any additional amount to any Non-U.S. Lender under Section 2.6(a) if such Non-U.S. Lender fails or is unable to deliver the forms, certificates or other evidence described in the preceding sentence, unless such non-U.S. Lender's failure or inability to deliver such forms is the result of any change in any applicable law, treaty or governmental rule, or any change in the interpretation thereof after such Non-U.S. Lender became a party to this Agreement.

3 CONDITIONS OF LOANS

3.1 Conditions Precedent to Initial Credit Extension. Bank's obligation to make the initial Credit Extension is subject to the condition precedent that Bank shall have received, in form and substance satisfactory to Bank, such documents, and completion of such other matters, as Bank may reasonably deem necessary or appropriate, including, without limitation:

(a) duly executed original signatures to the Loan Documents;

(b) duly executed original signatures to the Warrant;

(c) duly executed original signatures to the Control Agreements, if any;

(d) the Operating Documents and long-form good standing certificates of Borrower and its Subsidiaries certified by the Secretary of State (or equivalent agency) of Borrower's and such Subsidiaries' jurisdiction of organization or formation and each jurisdiction in which Borrower and each Subsidiary is qualified to conduct business, each as of a date no earlier than thirty (30) days prior to the Effective Date;

(e) duly executed original signatures to the completed Borrowing Resolutions for Borrower;

(f) certified copies, dated as of a recent date, of financing statement searches, as Bank may request, accompanied by written evidence (including any UCC termination statements) that the Liens indicated in any such financing statements either constitute Permitted Liens or have been or, in connection with the initial Credit Extension, will be terminated or released;

(g) the Perfection Certificate(s) of Borrower, together with the duly executed original signature thereto;

(h) a landlord's consent in favor of Bank for 1220 Old Alpharetta Road, Suite 300, Alpharetta, GA 30005, by the landlord thereof, together with the duly executed original signatures thereto;

(i) a bailee's waiver in favor of Bank for each location where Borrower maintains property with a third party (unless such leased location contain less than Fifty Thousand Dollars ($50,000) in Borrower's assets or property), by each such third party, together with the duly executed original signatures thereto;

(j) a copy of Borrower's Registration Rights Agreement or Investors' Rights Agreement and any amendments thereto;

(k) evidence satisfactory to Bank that the insurance policies and endorsements required by Section 6.5 hereof are in full force and effect, together with appropriate evidence showing lender loss payable and/or additional insured clauses or endorsements in favor of Bank; and

(l) payment of the fees and Bank Expenses then due as specified in Section 2.5 hereof.

3.2 Conditions Precedent to all Credit Extensions. Bank's obligations to make each Credit Extension, including the initial Credit Extension, is subject to the following conditions precedent:

(a) except as otherwise provided in Section 3.5(a), timely receipt of an executed Payment/Advance Form;

(b) the representations and warranties in this Agreement shall be true, accurate, and complete in all material respects on the date of the Payment/Advance Form and on the Funding Date of each Credit Extension; provided, however, that such materiality qualifier shall not be applicable to any representations and warranties that already are qualified or modified by materiality in the text thereof; and provided, further that those representations and warranties expressly referring to a specific date shall be true, accurate and complete in all material respects as of

such date, and no Event of Default shall have occurred and be continuing or result from the Credit Extension. Each Credit Extension is Borrower's representation and warranty on that date that the representations and warranties in this Agreement remain true, accurate, and complete in all material respects; provided, however, that such materiality qualifier shall not be applicable to any representations and warranties that already are qualified or modified by materiality in the text thereof; and provided, further that those representations and warranties expressly referring to a specific date shall be true, accurate and complete in all material respects as of such date; and

(c) Bank determines to its satisfaction that there has not been a Material Adverse Change.

3.3 Covenant to Deliver. Borrower agrees to deliver to Bank each item required to be delivered to Bank under this Agreement as a condition precedent to any Credit Extension. Borrower expressly agrees that a Credit Extension made prior to the receipt by Bank of any such item shall not constitute a waiver by Bank of Borrower's obligation to deliver such item, and the making of any Credit Extension in the absence of a required item shall be in Bank's sole discretion.

3.4 Procedures for Borrowing. Subject to the prior satisfaction of all other applicable conditions to the making of a Growth Capital Advance set forth in this Agreement, to obtain a Growth Capital Advance, Borrower shall notify Bank (which notice shall be irrevocable) by electronic mail, facsimile, or telephone by 12:00 p.m. Eastern time on the Funding Date of the Growth Capital Advance. Together with any such electronic or facsimile notification, Borrower shall deliver to Bank by electronic mail or facsimile a completed Payment/Advance Form executed by a Responsible Officer or his or her designee. Bank may rely on any telephone notice given by a person whom Bank believes is a Responsible Officer or designee. Bank shall credit Growth Capital Advances to the Designated Deposit Account. Bank may make Growth Capital Advances under this Agreement based on instructions from a Responsible Officer or his or her designee or without instructions if the Growth Capital Advances are necessary to meet Obligations which have become due.

4 CREATION OF SECURITY INTEREST

4.1 Grant of Security Interest. Borrower hereby grants Bank, to secure the payment and performance in full of all of the Obligations, a continuing security interest in, and pledges to Bank, the Collateral, wherever located, whether now owned or hereafter acquired or arising, and all proceeds and products thereof.

Borrower acknowledges that it previously has entered, and/or may in the future enter, into Bank Services Agreements with Bank. Regardless of the terms of any Bank Services Agreement, Borrower agrees that any amounts Borrower owes Bank thereunder shall be deemed to be Obligations hereunder and that it is the intent of Borrower and Bank to have all such Obligations secured by the first priority perfected security interest in the Collateral granted herein (subject only to Permitted Liens that are permitted pursuant to the terms of this Agreement to have superior priority to Bank's Lien in this Agreement).

If this Agreement is terminated, Bank's Lien in the Collateral shall continue until the Obligations (other than inchoate indemnity obligations) are repaid in full in cash. Upon payment in full in cash of the Obligations (other than inchoate indemnity obligations) and at such time as Bank's obligation to make Credit Extensions has terminated, Bank shall, at the sole cost and expense of Borrower, release its Liens in the Collateral and all rights therein shall revert to Borrower. In the event (x) all Obligations (other than inchoate indemnity obligations), except for Bank Services, are satisfied in full, and (y) this Agreement is terminated, Bank shall terminate the security interest granted herein upon Borrower providing cash collateral acceptable to Bank in its good faith business judgment for Bank Services, if any. In the event such Bank Services consist of outstanding Letters of Credit, Borrower shall provide to Bank cash collateral in an amount equal to (x) if such Letters of Credit are denominated in Dollars, then at least one hundred five percent (105.0%); and (y) if such Letters of Credit are denominated in a Foreign Currency, then at least one hundred ten percent (110.0%), of the Dollar Equivalent of the face amount of all such Letters of Credit plus all interest, fees, and costs due or to become due in connection therewith (as estimated by Bank in its business judgment), to secure all of the Obligations relating to such Letters of Credit.

4.2 Priority of Security Interest. Borrower represents, warrants, and covenants that the security interest granted herein is and shall at all times continue to be a first priority perfected security interest in the Collateral (subject only to Permitted Liens that are permitted pursuant to the terms of this Agreement to have superior priority to Bank's Lien under this Agreement). If Borrower shall acquire a commercial tort claim in excess of Fifty Thousand Dollars ($50,000), Borrower shall promptly notify Bank in a writing signed by Borrower of the general details thereof and grant to Bank in such writing a security interest therein and in the proceeds thereof, all upon the terms of this Agreement, with such writing to be in form and substance reasonably satisfactory to Bank.

4.3 Authorization to File Financing Statements. Borrower hereby authorizes Bank to file financing statements, without notice to Borrower, with all appropriate jurisdictions to perfect or protect Bank's interest or rights hereunder, including a notice that any disposition of the Collateral except as permitted under Section 7.1 hereof, by either Borrower or any other Person, shall be deemed to violate the rights of Bank under the Code. Such financing statements may indicate the Collateral as "all assets of the Debtor" or words of similar effect, or as being of an equal or lesser scope, or with greater detail, all in Bank's discretion.

5 REPRESENTATIONS AND WARRANTIES

Borrower represents and warrants as follows:

5.1 Due Organization, Authorization; Power and Authority. Borrower is duly existing and in good standing as a Registered Organization in its jurisdiction of formation and is qualified and licensed to do business and is in good standing in any jurisdiction in which the conduct of its business or its ownership of property requires that it be qualified except where the failure to do so could not reasonably be expected to have a material adverse effect on Borrower's business. In connection with this Agreement, Borrower has delivered to Bank a completed certificate signed by Borrower entitled "Perfection Certificate". Borrower represents and warrants to Bank that (a) Borrower's exact legal name is that indicated on the Perfection Certificate and on the signature page hereof; (b) Borrower is an organization of the type and is organized in the jurisdiction set forth in the Perfection Certificate; (c) the Perfection Certificate accurately sets forth Borrower's organizational identification number or accurately states that Borrower has none; (d) the Perfection Certificate accurately sets forth Borrower's place of business, or, if more than one, its chief executive office as well as Borrower's mailing address (if different than its chief executive office); (e) Borrower (and each of its predecessors) has not, in the past five (5) years, changed its jurisdiction of formation, organizational structure or type, or any organizational number assigned by its jurisdiction; and (f) all other information set forth on the Perfection Certificate pertaining to Borrower and each of its Subsidiaries is accurate and complete in all material respects (it being understood and agreed that Borrower may from time to time update certain information in the Perfection Certificate after the Effective Date to the extent permitted by one or more specific provisions in this Agreement). If Borrower is not now a Registered Organization but later becomes one, Borrower shall promptly notify Bank of such occurrence and provide Bank with Borrower's organizational identification number.

The execution, delivery and performance by Borrower of the Loan Documents to which it is a party have been duly authorized, and do not (i) conflict with any of Borrower's organizational documents, (ii) contravene, conflict with, constitute a default under or violate any material Requirement of Law, (iii) contravene, conflict or violate any applicable order, writ, judgment, injunction, decree, determination or award of any Governmental Authority by which Borrower or any of its Subsidiaries or any of their property or assets may be bound or affected, (iv) require any action by, filing, registration, or qualification with, or Governmental Approval from, any Governmental Authority (except such Governmental Approvals which have already been obtained and are in full force and effect (or are being obtained pursuant to Section 6.1(b))) or (v) conflict with, contravene, constitute a default or breach under, or result in or permit the termination or acceleration of, any material agreement by which Borrower is bound. Borrower is not in default under any agreement to which it is a party or by which it is bound in which the default could reasonably be expected to have a material adverse effect on Borrower's business.

5.2 Collateral. Borrower has good title to, rights in, and the power to transfer each item of the Collateral upon which it purports to grant a Lien hereunder, free and clear of any and all Liens except Permitted Liens. Borrower has no Collateral Accounts at or with any bank or financial institution other than Bank or Bank's Affiliates except for the Collateral Accounts described in the Perfection Certificate delivered to Bank in connection herewith and which Borrower has taken such actions as are necessary to give Bank a perfected security interest therein, pursuant to the terms of Section 6.6(b). The Accounts are bona fide, existing obligations of the Account Debtors.

The Collateral is not in the possession of any third party bailee (such as a warehouse) except as otherwise provided in the Perfection Certificate or as permitted pursuant to Section 7.2. None of the components of the Collateral shall be maintained at locations other than as provided in the Perfection Certificate or as permitted pursuant to Section 7.2.

Borrower is the sole owner of the Intellectual Property which it owns or purports to own except for (a) non-exclusive licenses granted to its customers in the ordinary course of business and licenses of Intellectual Property that could not result in a legal transfer of title of the licensed property that may be exclusive in respects other than territory and that may be exclusive as to territory only as to discrete geographical areas outside of the United States, (b) over-the-counter software that is commercially available to the public, and (c) Intellectual Property licensed to Borrower and noted on the Perfection Certificate. To the best of Borrower's knowledge, each Patent which it owns or purports to own and which is material to Borrower's business is valid and enforceable, and no part of the Intellectual Property which Borrower owns or purports to own and which is material to Borrower's business has been judged invalid or unenforceable, in whole or in part. To the best of Borrower's knowledge, no claim has been made that any part of the Intellectual Property violates the rights of any third party except to the extent such claim would not reasonably be expected to have a material adverse effect on Borrower's business.

Except as noted on the Perfection Certificate, Borrower is not a party to, nor is it bound by, any Restricted License.

5.3 Litigation. There are no actions or proceedings pending or, to the knowledge of any Responsible Officer, threatened in writing by or against Borrower or any of its Subsidiaries involving more than, individually or in the aggregate, One Hundred Thousand Dollars ($100,000).

5.4 Financial Statements; Financial Condition. All consolidated financial statements for Borrower and any of its Subsidiaries delivered to Bank fairly present in all material respects Borrower's consolidated financial condition and Borrower's consolidated results of operations as of the dates and periods covered thereby. There has not been any material deterioration in Borrower's consolidated financial condition since the date of the most recent financial statements submitted to Bank.

5.5 Solvency. The fair salable value of Borrower's consolidated assets (including goodwill minus disposition costs) exceeds the fair value of Borrower's liabilities; Borrower is not left with unreasonably small capital after the transactions in this Agreement; and Borrower is able to pay its debts (including trade debts) as they mature.

5.6 Regulatory Compliance. Borrower is not an "investment company" or a company "controlled" by an "investment company" under the Investment Company Act of 1940, as amended. Borrower is not engaged as one of its important activities in extending credit for margin stock (under Regulations X, T and U of the Federal Reserve Board of Governors). Borrower (a) has complied in all material respects with all Requirements of Law, and (b) has not violated any Requirements of Law the violation of which could reasonably be expected to have a material adverse effect on its business. None of Borrower's or any of its Subsidiaries' properties or assets has been used by Borrower or any Subsidiary or, to the best of Borrower's knowledge, by previous Persons, in disposing, producing, storing, treating, or transporting any hazardous substance other than legally. Borrower and each of its Subsidiaries have obtained all consents, approvals and authorizations of, made all declarations or filings with, and given all notices to, all Government Authorities that are necessary to continue their respective businesses as currently conducted.

5.7 Subsidiaries; Investments. Borrower does not own any stock, partnership, or other ownership interest or other equity securities except for Permitted Investments.

5.8 Tax Returns and Payments; Pension Contributions. Borrower has timely filed, or has obtained extensions for filing, all required tax returns and reports, and Borrower has timely paid all foreign, federal, state and local taxes, assessments, deposits and contributions owed by Borrower except (a) to the extent such taxes are being contested in good faith by appropriate proceedings promptly instituted and diligently conducted, so long as such reserve or other appropriate provision, if any, as shall be required in conformity with GAAP shall have been made therefor, or (b) if such taxes, assessments, deposits and contributions do not, individually or in the aggregate, exceed Twenty-Five Thousand Dollars ($25,000).

To the extent Borrower defers payment of any contested taxes, Borrower shall (i) notify Bank in writing of the commencement of, and any material development in, the proceedings, and (ii) post bonds or take any other steps required to prevent the governmental authority levying such contested taxes from obtaining a Lien upon any of the Collateral that is other than a "Permitted Lien." Borrower is unaware of any claims or adjustments proposed for any of Borrower's prior tax years which could result in additional taxes becoming due and payable by Borrower in excess of Twenty-Five Thousand Dollars ($25,000). Borrower has paid all amounts necessary to fund all present pension, profit sharing and deferred compensation plans in accordance with their terms, and Borrower has not withdrawn from participation in, and has not permitted partial or complete termination of, or permitted the occurrence of any other event with respect to, any such plan which could reasonably be expected to result in any liability of Borrower, including any liability to the Pension Benefit Guaranty Corporation or its successors or any other governmental agency.

5.9 Use of Proceeds. Borrower shall use the proceeds of the Credit Extensions solely as working capital and to fund its general business requirements and not for personal, family, household or agricultural purposes.

5.10 Full Disclosure. No written representation, warranty or other statement of Borrower in any certificate or written statement given to Bank, as of the date such representation, warranty, or other statement was made, taken together with all such written certificates and written statements given to Bank, contains any untrue statement of a material fact or omits to state a material fact necessary to make the statements contained in the certificates or statements not misleading (it being recognized by Bank that the projections and forecasts provided by Borrower in good faith and based upon reasonable assumptions are not viewed as facts and that actual results during the period or periods covered by such projections and forecasts may differ from the projected or forecasted results).

5.11 Definition of "Knowledge." For purposes of the Loan Documents, whenever a representation or warranty is made to Borrower's knowledge or awareness, to the "best of" Borrower's knowledge, or with a similar qualification, knowledge or awareness means the actual knowledge, after reasonable investigation, of any Responsible Officer.

6 AFFIRMATIVE COVENANTS

Borrower shall do all of the following:

6.1 Government Compliance.

(a) Maintain its and all its Subsidiaries' legal existence and good standing in their respective jurisdictions of formation and maintain qualification in each other jurisdiction in which the failure to so qualify would reasonably be expected to have a material adverse effect on Borrower's business or operations. Borrower shall comply, and have each Subsidiary comply, in all material respects, with all laws, ordinances and regulations to which it is subject.

(b) Obtain all of the Governmental Approvals necessary for the performance by Borrower of its obligations under the Loan Documents to which it is a party and the grant of a security interest to Bank in all of its property. Borrower shall promptly provide copies of any such obtained Governmental Approvals to Bank.

6.2 Financial Statements, Reports, Certificates. Provide Bank with the following:

(a) Revenue Reports. Within thirty (30) days after the last day of each month, (i) aged listings of accounts receivable and accounts payable (by invoice date), (ii) Deferred Revenue reports, (iii) current backlog report, all in form and substance reasonably satisfactory to Bank;

(b) Monthly Financial Statements. As soon as available, but no later than thirty (30) days after the last day of each month, a company prepared consolidated balance sheet and income statement covering Borrower's consolidated operations for such month certified by a Responsible Officer and in a form acceptable to Bank (the "**Monthly Financial Statements**");

(c) Monthly Compliance Certificate. Within thirty (30) days after the last day of each month and together with the Monthly Financial Statements, a duly completed Compliance Certificate signed by a Responsible Officer, certifying that as of the end of such month, Borrower was in full compliance with all of the terms and conditions of this Agreement, and setting forth calculations showing compliance with the financial covenants set forth in this Agreement and such other information as Bank may reasonably request;

(d) Annual Operating Budget and Financial Projections. Within forty-five (45) days after the end of each fiscal year of Borrower, (i) annual operating budgets (including income statements, balance sheets and cash flow statements, by month) for the upcoming fiscal year of Borrower, and (ii) annual financial projections for the following fiscal year (on a quarterly basis) as approved by Borrower's board of directors, together with any related business forecasts used in the preparation of such annual financial projections and, as soon as available, any periodic updates thereto;

(e) Annual Audited Financial Statements. As soon as available, but no later than one hundred twenty (120) days after the last day of Borrower's fiscal year, audited consolidated financial statements prepared under GAAP, consistently applied, together with an unqualified opinion on the financial statements from an independent certified public accounting firm reasonably acceptable to Bank;

(f) Other Statements. Within five (5) days of delivery, copies of all statements, reports and notices made available to Borrower's security holders or to any holders of Subordinated Debt;

(g) SEC Filings. In the event that Borrower becomes subject to the reporting requirements under the Exchange Act within five (5) days of filing, copies of all periodic and other reports, proxy statements and other materials filed by Borrower with the SEC, any Governmental Authority succeeding to any or all of the functions of the SEC or with any national securities exchange, or distributed to its shareholders, as the case may be. Documents required to be delivered pursuant to the terms hereof (to the extent any such documents are included in materials otherwise filed with the SEC) may be delivered electronically and if so delivered, shall be deemed to have been delivered on the date on which Borrower posts such documents, or provides a link thereto, on Borrower's website on the Internet at Borrower's website address; provided, however, Borrower shall promptly notify Bank in writing (which may be by electronic mail) of the posting of any such documents;

(h) Legal Action Notice. A prompt report of any legal actions pending or threatened in writing against Borrower or any of its Subsidiaries that could result in damages or costs to Borrower or any of its Subsidiaries of, individually or in the aggregate, One Hundred Thousand Dollars ($100,000) or more; and

(i) Other Financial Information. Promptly after Bank's reasonable request therefor, such other information regarding Borrower's or any of its Subsidiaries' operations, business affairs, financial condition and/or compliance with this Agreement.

6.3 Inventory; Returns. Keep all Inventory in good and marketable condition, free from material defects. Returns and allowances between Borrower and its Account Debtors shall follow Borrower's customary practices as they exist at the Effective Date. Borrower must promptly notify Bank of all returns, recoveries, disputes and claims that involve more than One Hundred Thousand Dollars ($100,000).

6.4 Taxes; Pensions. Timely file, and require each of its Subsidiaries to timely file, or obtain extensions for filing, all required tax returns and reports and timely pay, and require each of its Subsidiaries to timely pay, all foreign, federal, state and local taxes, assessments, deposits and contributions owed by Borrower and each of its Subsidiaries, except for deferred payment of any taxes contested pursuant to the terms of Section 5.9 hereof, and shall deliver to Bank, on demand, appropriate certificates attesting to such payments, and pay all amounts necessary to fund all present pension, profit sharing and deferred compensation plans in accordance with their terms.

6.5 Insurance.

(a) Keep its business and the Collateral insured for risks and in amounts standard for companies in Borrower's industry and location and as Bank may reasonably request. Insurance policies shall be in a form, with financially sound and reputable insurance companies that are not Affiliates of Borrower, and in amounts that are satisfactory to Bank. All property policies shall have a lender's loss payable endorsement showing Bank as lender loss payee. All liability policies shall show, or have endorsements showing, Bank as an additional insured. Bank shall be named as lender loss payee and/or additional insured with respect to any such insurance providing coverage in respect of any Collateral.

(b) Ensure that proceeds payable under any property policy are, at Bank's option, payable to Bank on account of the Obligations. Notwithstanding the foregoing, (a) so long as no Event of Default has occurred and is continuing, Borrower shall have the option of applying the proceeds of any casualty policy up to One Hundred Thousand Dollars ($100,000) with respect to any loss, but not exceeding One Hundred Thousand Dollars ($100,000) in the aggregate for all losses under all casualty policies in any one year, toward the replacement or repair of destroyed or damaged property; provided that any such replaced or repaired property (i) shall be of equal or like value as the replaced or repaired Collateral and (ii) shall be deemed Collateral in which Bank has been granted a first priority security interest, and (b) after the occurrence and during the continuance of an Event of Default, all proceeds payable under such casualty policy shall, at the option of Bank, be payable to Bank on account of the Obligations.

(c) At Bank's request, Borrower shall deliver certified copies of insurance policies and evidence of all premium payments. Each provider of any such insurance required under this Section 6.5 shall agree, by endorsement upon the policy or policies issued by it or by independent instruments furnished to Bank, that it will give Bank twenty (20) days (ten (10) days for non-payment of premiums) prior written notice before any such policy or policies shall be materially altered or canceled. If Borrower fails to obtain insurance as required under this Section 6.5 or to pay any amount or furnish any required proof of payment to third persons and Bank, Bank may make all or part of such payment or obtain such insurance policies required in this Section 6.5, and take any action under the policies Bank deems prudent.

6.6 Operating Accounts.

(a) Maintain its primary operating and other deposit accounts and securities accounts, letters of credit and foreign exchange transactions and excess cash with Bank and Bank's Affiliates.

(b) Provide Bank five (5) days prior written notice before establishing any Collateral Account at or with any bank or financial institution other than Bank or Bank's Affiliates. For each Collateral Account that Borrower at any time maintains, Borrower shall cause the applicable bank or financial institution (other than Bank) at or with which any Collateral Account is maintained to execute and deliver a Control Agreement or other appropriate instrument with respect to such Collateral Account to perfect Bank's Lien in such Collateral Account in accordance with the terms hereunder which Control Agreement may not be terminated without the prior written consent of Bank. The provisions of the previous sentence shall not apply to deposit accounts exclusively used for payroll, payroll taxes and other employee wage and benefit payments to or for the benefit of Borrower's employees and identified to Bank by Borrower as such.

6.7 Intentionally Omitted.

6.8 Protection of Intellectual Property Rights.

(a) (i) Use commercially reasonable efforts to protect, defend and maintain the validity and enforceability of its Intellectual Property material to Borrower's business; (ii) promptly advise Bank in writing of material infringements or any other event that could reasonably be expected to materially and adversely affect the value of its Intellectual Property material to Borrower's business; and (iii) not allow any Intellectual Property material to Borrower's business to be abandoned, forfeited or dedicated to the public without Bank's written consent.

(b) Provide written notice to Bank within ten (10) days of entering or becoming bound by any Restricted License (other than over-the-counter software that is commercially available to the public). Borrower shall take such commercially reasonable steps as Bank requests to obtain the consent of, or waiver by, any person whose consent or waiver is necessary for (i) any Restricted License to be deemed "Collateral" and for Bank to have a security interest in it that might otherwise be restricted or prohibited by law or by the terms of any such Restricted License, whether now existing or entered into in the future, and (ii) Bank to have the ability in the event of a liquidation of any Collateral to dispose of such Collateral in accordance with Bank's rights and remedies under this Agreement and the other Loan Documents, provided that the failure to obtain such consent or waiver, after talking the steps set forth above, shall not constitute an Event of Default hereunder.

6.9 Litigation Cooperation. From the date hereof and continuing through the termination of this Agreement, make available to Bank, without expense to Bank, Borrower and its officers, employees and agents and Borrower's books and records, to the extent that Bank may deem them reasonably necessary to prosecute or defend any third-party suit or proceeding instituted by or against Bank with respect to any Collateral or relating to Borrower.

6.10 Access to Collateral; Books and Records. Allow Bank, or its agents, at reasonable times, on three (3) Business Days' notice (provided no notice is required if an Event of Default has occurred and is continuing), to inspect the Collateral and audit and copy Borrower's Books. Such inspections or audits shall be conducted no more often than once every twelve (12) months unless an Event of Default has occurred and is continuing in which case such inspections and audits shall occur as often as Bank shall determine is necessary. The foregoing inspections and audits shall be at Borrower's expense, and the charge therefor shall be Eight Hundred Fifty Dollars ($850) per person per day (or such higher amount as shall represent Bank's then-current standard charge for the same), plus reasonable out-of-pocket expenses. In the event Borrower and Bank schedule an audit more than ten (10) days in advance, and Borrower cancels or seeks to reschedule the audit with less than ten (10) days written notice to Bank, then (without limiting any of Bank's rights or remedies), Borrower shall pay Bank a fee of One Thousand Dollars ($1,000) plus any out-of-pocket expenses incurred by Bank to compensate Bank for the anticipated costs and expenses of the cancellation or rescheduling.

6.11 Formation or Acquisition of Subsidiaries. Notwithstanding and without limiting the negative covenants contained in Sections 7.3 and 7.7 hereof, at the time that Borrower forms any direct or indirect Subsidiary or acquires any direct or indirect Subsidiary after the Effective Date, Borrower shall (a) with respect to Domestic Subsidiaries only, cause such new Domestic Subsidiary to provide to Bank a joinder to the Loan Agreement to cause such Domestic Subsidiary to become a co-borrower hereunder, together with such appropriate financing statements and/or Control Agreements, all in form and substance satisfactory to Bank (including being sufficient to grant Bank a first priority Lien (subject to Permitted Liens) in and to the assets of such newly formed or acquired Domestic Subsidiary), (b) provide to Bank appropriate certificates and powers and financing statements, pledging all of the direct or beneficial ownership interest in such new Subsidiary, in form and substance satisfactory to Bank, provided, however, that Borrower shall not be required to pledge more than sixty-five percent (65%) of the direct or beneficial ownership interest of any Foreign Subsidiary and (c) provide to Bank all other documentation in form and substance reasonably satisfactory to Bank, which in its opinion is appropriate with respect to the execution and delivery of the applicable documentation referred to above. Any document, agreement, or instrument executed or issued pursuant to this Section 6.11 shall be a Loan Document.

6.12 Further Assurances. Execute any further instruments and take further action as Bank reasonably requests to perfect or continue Bank's Lien in the Collateral or to effect the purposes of this Agreement. Deliver to Bank, within five (5) days after the same are sent or received, copies of all correspondence, reports, documents and other filings with any Governmental Authority regarding compliance with or maintenance of Governmental Approvals or Requirements of Law or that could reasonably be expected to have a material effect on any of the Governmental Approvals or otherwise on the operations of Borrower or any of its Subsidiaries.

7 NEGATIVE COVENANTS

Borrower shall not do any of the following without Bank's prior written consent:

7.1 Dispositions. Convey, sell, lease, transfer, assign, or otherwise dispose of (collectively, "**Transfer**"), or permit any of its Subsidiaries to Transfer, all or any part of its business or property, except for Transfers (a) of Inventory in the ordinary course of business; (b) of surplus, worn-out or obsolete Equipment that is, in the reasonable judgment of Borrower, no longer economically practicable to maintain or useful in the ordinary course of business of Borrower; (c) consisting of Permitted Liens and Permitted Investments; (d) consisting of the sale or issuance of any stock of Borrower permitted under Section 7.2 of this Agreement; (e) consisting of Borrower's use or transfer of money or Cash Equivalents in a manner that is not prohibited by the terms of this Agreement or the other Loan Documents; (f) of non-exclusive licenses for the use of the property of Borrower or its Subsidiaries in the ordinary course of business and licenses that could not result in a legal transfer of title of the licensed property but that may be exclusive in respects other than territory and that may be exclusive as to territory only as to discrete geographical areas outside of the United States, and (g) not to exceed One Hundred Thousand Dollars ($100,000) in the aggregate in any fiscal year.

7.2 Changes in Business, Management, Ownership or Business Locations. (a) Engage in or permit any of its Subsidiaries to engage in any business other than the businesses currently engaged in by Borrower and such Subsidiary, as applicable, or reasonably related thereto; (b) liquidate or dissolve; or (c) (i) fail to provide notice to Bank of any Key Person departing from or ceasing to be employed by Borrower within five (5) days after his or her departure from Borrower; or (ii) enter into any transaction or series of related transactions in which the stockholders of Borrower who were not stockholders immediately prior to the first such transaction own more than forty-nine percent (49%) of the voting stock of Borrower immediately after giving effect to such transaction or related series of such transactions (other than by the sale of Borrower's equity securities in a public offering or to venture capital or private equity investors so long as Borrower identifies to Bank the venture capital or private equity investors at least seven (7) Business Days prior to the closing of the transaction and provides to Bank a description of the material terms of the transaction).

Borrower shall not, without at least ten (10) days prior written notice to Bank: (1) add any new offices or business locations, including warehouses (unless such new offices or business locations contain less than Fifty Thousand Dollars ($50,000) in Borrower's assets or property) or deliver any portion of the Collateral valued, individually or in the aggregate, in excess of Fifty Thousand Dollars ($50,000) to a bailee at a location other than to a bailee and at a location already disclosed in the Perfection Certificate, (2) change its jurisdiction of organization, (3) change its organizational structure or type, (4) change its legal name, or (5) change any organizational number (if any) assigned by its jurisdiction of organization. If Borrower intends to deliver any portion of the Collateral valued, individually or in the aggregate, in excess of Fifty Thousand Dollars ($50,000) to a bailee, and Bank and such bailee are not already parties to a bailee agreement governing both the Collateral and the location to which Borrower intends to deliver the Collateral, then Borrower will first receive the written consent of Bank, and such bailee shall execute and deliver a bailee agreement in form and substance satisfactory to Bank in its reasonable discretion.

7.3 Mergers or Acquisitions. Merge or consolidate, or permit any of its Subsidiaries to merge or consolidate, with any other Person, or acquire, or permit any of its Subsidiaries to acquire, all or substantially all of the capital stock or property of another Person (including, without limitation, by the formation of any Subsidiary). A Subsidiary may merge or consolidate into another Subsidiary or into Borrower.

7.4 Indebtedness. Create, incur, assume, or be liable for any Indebtedness, or permit any Subsidiary to do so, other than Permitted Indebtedness.

7.5 Encumbrance. Create, incur, allow, or suffer any Lien on any of its property, or assign or convey any right to receive income, including the sale of any Accounts, or permit any of its Subsidiaries to do so, except for Permitted Liens, permit any Collateral not to be subject to the first priority security interest granted herein, or enter into any agreement, document, instrument or other arrangement (except with or in favor of Bank and Liens described in clause (c) of Permitted Liens) with any Person which directly or indirectly prohibits or has the effect of prohibiting Borrower or any Subsidiary from assigning, mortgaging, pledging, granting a security interest in or upon, or encumbering any of Borrower's or any Subsidiary's Intellectual Property, except as is otherwise permitted in Section 7.1 hereof and the definition of "Permitted Liens" herein.

7.6 Maintenance of Collateral Accounts. Maintain any Collateral Account except pursuant to the terms of Section 6.6(b) hereof.

7.7 Distributions; Investments. (a) Pay any dividends or make any distribution or payment or redeem, retire or purchase any capital stock provided that (i) Borrower may convert any of its convertible securities into other securities pursuant to the terms of such convertible securities or otherwise in exchange thereof, (ii) Borrower may pay dividends solely in common stock; and (iii) Borrower may repurchase the stock of former employees or consultants pursuant to stock repurchase agreements so long as an Event of Default does not exist at the time of such repurchase and would not exist after giving effect to such repurchase, provided that the aggregate amount of all such repurchases does not exceed One Hundred Thousand Dollars ($100,000) per fiscal year; or (b) directly or indirectly make any Investment (including, without limitation, by the formation of any Subsidiary) other than Permitted Investments, or permit any of its Subsidiaries to do so.

7.8 Transactions with Affiliates. Directly or indirectly enter into or permit to exist any material transaction with any Affiliate of Borrower, except for (i) transactions that are in the ordinary course of Borrower's business, upon fair and reasonable terms that are no less favorable to Borrower than would be obtained in an arm's length transaction with a non-affiliated Person, (ii) transactions permitted pursuant to the terms of Section 7.2 hereof, (iii) transactions permitted pursuant to the terms of the second sentence of Section 7.3 hereof, (iv) Investments permitted under sub-clause (f) of the definition of Permitted Investments, and (v) debt financings from Borrower's existing investors so long as all such Indebtedness is Subordinated Debt.

7.9 Subordinated Debt. (a) Make or permit any payment on any Subordinated Debt, except under the terms of the subordination, intercreditor, or other similar agreement to which such Subordinated Debt is subject, or (b) amend any provision in any document relating to the Subordinated Debt which would increase the amount thereof, provide for earlier or greater principal, interest, or other payments thereon, or adversely affect the subordination thereof to Obligations owed to Bank (except as otherwise provided for by the terms of the subordination agreement, intercreditor, or other similar agreement between such Person and Bank).

7.10 Compliance. Become an "investment company" or a company controlled by an "investment company", under the Investment Company Act of 1940, as amended, or undertake as one of its important activities extending credit to purchase or carry margin stock (as defined in Regulation U of the Board of Governors of the Federal Reserve System), or use the proceeds of any Credit Extension for that purpose; fail to (a) meet the minimum funding requirements of ERISA, (b) prevent a Reportable Event or Prohibited Transaction as defined in ERISA, or (c) comply with the Federal Labor Standards Act, the failure of any of the conditions in clauses (a) through (c) which could reasonably be expected to have a material adverse effect on Borrower's business, or violate any other law or regulation, if the violation could reasonably be expected to have a materials adverse effect on Borrower's business or permit any Subsidiaries to do so; withdraw or permit any Subsidiary to withdraw from participation in, permit partial or complete termination of, or permit the occurrence of any other event with respect to, any present pension, profit sharing and deferred compensation plan which could reasonably be expected to result in any liability of Borrower, including any liability to the Pension Benefit Guaranty Corporation or its successors or any other governmental agency.

8 EVENTS OF DEFAULT

Any one of the following shall constitute an event of default (an "**Event of Default**") under this Agreement:

8.1 Payment Default. Borrower fails to (a) make any payment of principal or interest on any Credit Extension when due, or (b) pay any other Obligations within three (3) Business Days after such Obligations are due and payable (which three (3) Business Day cure period shall not apply to payments due on the Growth Capital Maturity Date). During the cure period, the failure to make or pay any payment specified under clause (b) hereunder is not an Event of Default (but no Credit Extension will be made during the cure period);

8.2 Covenant Default.

(a) Borrower fails or neglects to perform any obligation in Sections 6.2, 6.4, 6.5, 6.6, 6.8(b), 6.10 or 6.11 or violates any covenant in Section 7; or

(b) Borrower fails or neglects to perform, keep, or observe any other term, provision, condition, covenant or agreement contained in this Agreement or any Loan Documents, and as to any default (other than those specified elsewhere in this Section 8) under such other term, provision, condition, covenant or agreement that can be cured, has failed to cure the default within ten (10) days after the occurrence thereof; provided, however, that if the default cannot by its nature be cured within the ten (10) day period or cannot after diligent attempts by Borrower be cured within such ten (10) day period, and such default is likely to be cured within a reasonable time, then Borrower shall have an additional period (which shall not in any case exceed thirty (30) days) to attempt to cure such default, and within such reasonable time period the failure to cure the default shall not be deemed an Event of Default (but no Credit Extensions shall be made during such cure period). Cure periods provided under this section shall not apply, among other things, to financial covenants or any other covenants set forth in clause (a) above;

8.3 Material Adverse Change. A Material Adverse Change occurs;

8.4 Attachment; Levy; Restraint on Business.

(a) (i) The service of process seeking to attach, by trustee or similar process, any funds of Borrower or of any entity under the control of Borrower (including a Subsidiary) in excess of One Hundred Thousand Dollars ($100,000), or (ii) a notice of lien or levy is filed against any of Borrower's assets by any Governmental Authority, and the same under subclauses (i) and (ii) hereof are not, within ten (10) days after the occurrence thereof, discharged or stayed (whether through the posting of a bond or otherwise); provided, however, no Credit Extensions shall be made during any ten (10) day cure period; or

(b) (i) any material portion of Borrower's assets is attached, seized, levied on, or comes into possession of a trustee or receiver, or (ii) any court order enjoins, restrains, or prevents Borrower from conducting all or any material part of its business;

8.5 Insolvency. (a) Borrower or any of its Subsidiaries is unable to pay its debts (including trade debts) as they become due or otherwise becomes insolvent; (b) Borrower or any of its Subsidiaries begins an Insolvency Proceeding; or (c) an Insolvency Proceeding is begun against Borrower or any of its Subsidiaries and is not dismissed or stayed within thirty (30) days (but no Credit Extensions shall be made while any of the conditions described in clause (a) exist and/or until any Insolvency Proceeding is dismissed);

8.6 Other Agreements. There is, under any agreement to which Borrower or any Guarantor is a party with a third party or parties, (a) any default resulting in a right by such third party or parties, whether or not exercised, to accelerate the maturity of any Indebtedness in an amount individually or in the aggregate in excess of One Hundred Thousand Dollars ($100,000); or (b) any breach or default by Borrower, the result of which could reasonably be expected to have a material adverse effect on Borrower's business; provided, however, that the Event of Default under this Section 8.6 caused by the occurrence of a default under such other agreement shall be cured or waived for purposes of this Agreement upon Bank receiving written notice from the party asserting such default of such cure or waiver of the default under such other agreement, if at the time of such cure or waiver under such other agreement (x) Bank has not declared an Event of Default under this Agreement and/or exercised any rights with respect thereto; (y) any such cure or waiver does not result in an Event of Default under any other provision of this Agreement or any Loan Document; and (z) in connection with any such cure or waiver under such other agreement, the terms of any agreement with such third party are not modified or amended in any manner which could in the good faith judgment of Bank be materially less advantageous to Borrower;

8.7 Judgments; Penalties. One or more fines, penalties or final judgments, orders or decrees for the payment of money in an amount, individually or in the aggregate, of at least One Hundred Thousand Dollars ($100,000) (not covered by independent third-party insurance as to which liability has been accepted by such insurance carrier) shall be rendered against Borrower by any Governmental Authority, and the same are not, within

ten (10) days after the entry, assessment or issuance thereof, discharged, satisfied, or paid, or after execution thereof, stayed or bonded pending appeal, or such judgments are not discharged prior to the expiration of any such stay (provided that no Credit Extensions will be made prior to the satisfaction, payment, discharge, stay, or bonding of such fine, penalty, judgment, order or decree);

8.8 Misrepresentations. Borrower or any Person acting for Borrower makes any representation, warranty, or other statement now or later in this Agreement, any Loan Document or in any writing delivered to Bank or to induce Bank to enter this Agreement or any Loan Document, and such representation, warranty, or other statement is incorrect in any material respect when made;

8.9 Subordinated Debt. Any document, instrument, or agreement evidencing the subordination of any Subordinated Debt shall for any reason be revoked or invalidated or otherwise cease to be in full force and effect, any Person shall be in breach thereof or contest in any manner the validity or enforceability thereof or deny that it has any further liability or obligation thereunder, or the Obligations shall for any reason be subordinated or shall not have the priority contemplated by this Agreement; or

8.10 Governmental Approvals. Any Governmental Approval shall have been (a) revoked, rescinded, suspended, modified in an adverse manner or not renewed in the ordinary course for a full term or (b) subject to any decision by a Governmental Authority that designates a hearing with respect to any applications for renewal of any of such Governmental Approval or that could result in the Governmental Authority taking any of the actions described in clause (a) above, and such decision or such revocation, rescission, suspension, modification or non-renewal (i) cause, or could reasonably be expected to cause, a Material Adverse Change, or (ii) adversely affects the legal qualifications of Borrower or any of its Subsidiaries to hold such Governmental Approval in any applicable jurisdiction and such revocation, rescission, suspension, modification or non-renewal could reasonably be expected to affect the status of or legal qualifications of Borrower or any of its Subsidiaries to hold any Governmental Approval in any other jurisdiction.

9 BANK'S RIGHTS AND REMEDIES

9.1 Rights and Remedies. Upon the occurrence and during the continuance of an Event of Default, Bank may, without notice or demand, do any or all of the following:

(a) declare all Obligations immediately due and payable (but if an Event of Default described in Section 8.5 occurs all Obligations are immediately due and payable without any action by Bank);

(b) stop advancing money or extending credit for Borrower's benefit under this Agreement or under any other agreement between Borrower and Bank;

(c) demand that Co-Borrower (i) deposit cash with Bank in an amount equal to at least (x) if one hundred five percent (105.0%), with respect to Letters of Credit denominated in Dollars, and (y) one hundred ten percent (110.0%), with respect to Letters of Credit denominated in a Foreign Currency, of the Dollar Equivalent of the aggregate face amount of all Letters of Credit remaining undrawn (plus all interest, fees, and costs due or to become due in connection therewith (as estimated by Bank in its good faith business judgment)), to secure all of the Obligations relating to such Letters of Credit, as collateral security for the repayment of any future drawings under such Letters of Credit, and Borrower shall forthwith deposit and pay such amounts, and (ii) pay in advance all letter of credit fees scheduled to be paid or payable over the remaining term of any Letters of Credit;

(d) terminate any FX Contracts;

(e) verify the amount of, demand payment of and performance under, and collect any Accounts and General Intangibles, settle or adjust disputes and claims directly with Account Debtors for amounts on terms and in any order that Bank considers advisable, and notify any Person owing Borrower money of Bank's security interest in such funds;

(f) make any payments and do any acts it considers necessary or reasonable to protect the Collateral and/or its security interest in the Collateral. Borrower shall assemble the Collateral if Bank requests and make it available as Bank designates. Bank may enter premises where the Collateral is located, take and maintain possession of any part of the Collateral, and pay, purchase, contest, or compromise any Lien which appears to be prior or superior to its security interest and pay all expenses incurred. Borrower grants Bank a license to enter and occupy any of its premises, without charge, to exercise any of Bank's rights or remedies;

(g) apply to the Obligations any (i) balances and deposits of Borrower it holds, or (ii) any amount held by Bank owing to or for the credit or the account of Borrower;

(h) ship, reclaim, recover, store, finish, maintain, repair, prepare for sale, advertise for sale, and sell the Collateral. Bank is hereby granted a non-exclusive, royalty-free license or other right to use, without charge, Borrower's labels, Patents, Copyrights, mask works, rights of use of any name, trade secrets, trade names, Trademarks, and advertising matter, or any similar property as it pertains to the Collateral, in completing production of, advertising for sale, and selling any Collateral and, in connection with Bank's exercise of its rights under this Section, Borrower's rights under all licenses and all franchise agreements inure to Bank's benefit;

(i) place a "hold" on any account maintained with Bank and/or deliver a notice of exclusive control, any entitlement order, or other directions or instructions pursuant to any Control Agreement or similar agreements providing control of any Collateral;

(j) demand and receive possession of Borrower's Books; and

(k) exercise all rights and remedies available to Bank under the Loan Documents or at law or equity, including all remedies provided under the Code (including disposal of the Collateral pursuant to the terms thereof).

9.2 Power of Attorney. Borrower hereby irrevocably appoints Bank as its lawful attorney-in-fact, exercisable upon the occurrence and during the continuance of an Event of Default, to: (a) endorse Borrower's name on any checks or other forms of payment or security; (b) sign Borrower's name on any invoice or bill of lading for any Account or drafts against Account Debtors; (c) settle and adjust disputes and claims about the Accounts directly with Account Debtors, for amounts and on terms Bank determines reasonable; (d) make, settle, and adjust all claims under Borrower's insurance policies; (e) pay, contest or settle any Lien, charge, encumbrance, security interest, and adverse claim in or to the Collateral, or any judgment based thereon, or otherwise take any action to terminate or discharge the same; and (f) transfer the Collateral into the name of Bank or a third party as the Code permits. Borrower hereby appoints Bank as its lawful attorney-in-fact to sign Borrower's name on any documents necessary to perfect or continue the perfection of Bank's security interest in the Collateral regardless of whether an Event of Default has occurred until all Obligations (other than inchoate indemnity obligations) have been satisfied in full and Bank is under no further obligation to make Credit Extensions hereunder. Bank's foregoing appointment as Borrower's attorney in fact, and all of Bank's rights and powers, coupled with an interest, are irrevocable until all Obligations (other than inchoate indemnity obligations) have been fully repaid and performed and Bank's obligation to provide Credit Extensions terminates.

9.3 Protective Payments. If Borrower fails to obtain the insurance called for by Section 6.5 or fails to pay any premium thereon or fails to pay any other amount which Borrower is obligated to pay under this Agreement or any other Loan Document or which may be required to preserve the Collateral, Bank may obtain such insurance or make such payment, and all amounts so paid by Bank are Bank Expenses and immediately due and payable, bearing interest at the then highest rate applicable to the Obligations, and secured by the Collateral. Bank will make reasonable efforts to provide Borrower with notice of Bank obtaining such insurance at the time it is obtained or within a reasonable time thereafter. No payments by Bank are deemed an agreement to make similar payments in the future or Bank's waiver of any Event of Default.

9.4 Application of Payments and Proceeds Upon Default. If an Event of Default has occurred and is continuing, Bank shall have the right to apply in any order any funds in its possession, whether from Borrower account balances, payments, proceeds realized as the result of any collection of Accounts or other disposition of the Collateral, or otherwise, to the Obligations. Bank shall pay any surplus to Borrower by credit to the Designated

Deposit Account or to other Persons legally entitled thereto; Borrower shall remain liable to Bank for any deficiency. If Bank, directly or indirectly, enters into a deferred payment or other credit transaction with any purchaser at any sale of Collateral, Bank shall have the option, exercisable at any time, of either reducing the Obligations by the principal amount of the purchase price or deferring the reduction of the Obligations until the actual receipt by Bank of cash therefor.

9.5 Bank's Liability for Collateral. So long as Bank complies with reasonable banking practices regarding the safekeeping of the Collateral in the possession or under the control of Bank, Bank shall not be liable or responsible for: (a) the safekeeping of the Collateral; (b) any loss or damage to the Collateral; (c) any diminution in the value of the Collateral; or (d) any act or default of any carrier, warehouseman, bailee, or other Person. Borrower bears all risk of loss, damage or destruction of the Collateral.

9.6 No Waiver; Remedies Cumulative. Bank's failure, at any time or times, to require strict performance by Borrower of any provision of this Agreement or any other Loan Document shall not waive, affect, or diminish any right of Bank thereafter to demand strict performance and compliance herewith or therewith. No waiver hereunder shall be effective unless signed by the party granting the waiver and then is only effective for the specific instance and purpose for which it is given. Bank's rights and remedies under this Agreement and the other Loan Documents are cumulative. Bank has all rights and remedies provided under the Code, by law, or in equity. Bank's exercise of one right or remedy is not an election and shall not preclude Bank from exercising any other remedy under this Agreement or other remedy available at law or in equity, and Bank's waiver of any Event of Default is not a continuing waiver. Bank's delay in exercising any remedy is not a waiver, election, or acquiescence.

9.7 Demand Waiver. Borrower waives demand, notice of default or dishonor, notice of payment and nonpayment, notice of any default, nonpayment at maturity, release, compromise, settlement, extension, or renewal of accounts, documents, instruments, chattel paper, and guarantees held by Bank on which Borrower is liable.

10 NOTICES

All notices, consents, requests, approvals, demands, or other communication by any party to this Agreement or any other Loan Document must be in writing and shall be deemed to have been validly served, given, or delivered: (a) upon the earlier of actual receipt and three (3) Business Days after deposit in the U.S. mail, first class, registered or certified mail return receipt requested, with proper postage prepaid; (b) upon transmission, when sent by electronic mail or facsimile transmission; (c) one (1) Business Day after deposit with a reputable overnight courier with all charges prepaid; or (d) when delivered, if hand-delivered by messenger, all of which shall be addressed to the party to be notified and sent to the address, facsimile number, or email address indicated below. Bank or Borrower may change its mailing or electronic mail address or facsimile number by giving the other party written notice thereof in accordance with the terms of this Section 10.

If to Borrower:

CLEARSIDE BIOMEDICAL, INC.
1220 Old Alpharetta Road, Suite 300
Alpharetta, GA 30005
Attn: Charles A. Deignan – Chief Financial Officer
Fax: _____
Email: charlie.deignan@clearsidebio.com

If to Bank:

Silicon Valley Bank
3353 Peachtree Road N.E., North Tower, Suite M-10
Atlanta, GA 30326
Attn: Ryan Roller – Vice President
Fax: _____
Email: rroller@svb.com

11 CHOICE OF LAW, VENUE, JURY TRIAL WAIVER, AND JUDICIAL REFERENCE

Except as otherwise expressly provided in any of the Loan Documents, California law governs the Loan Documents without regard to principles of conflicts of law. Borrower and Bank each submit to the exclusive jurisdiction of the State and Federal courts in Santa Clara County, California; provided, however, that nothing in this Agreement shall be deemed to operate to preclude Bank from bringing suit or taking other legal action in any other jurisdiction to realize on the Collateral or any other security for the Obligations, or to enforce a judgment or other court order in favor of Bank. Borrower expressly submits and consents in advance to such jurisdiction in any action or suit commenced in any such court, and Borrower hereby waives any objection that it may have based upon lack of personal jurisdiction, improper venue, or forum non conveniens and hereby consents to the granting of such legal or equitable relief as is deemed appropriate by such court. Borrower hereby waives personal service of the summons, complaints, and other process issued in such action or suit and agrees that service of such summons, complaints, and other process may be made by registered or certified mail addressed to Borrower at the address set forth in, or subsequently provided by Borrower in accordance with, Section 10 of this Agreement and that service so made shall be deemed completed upon the earlier to occur of Borrower's actual receipt thereof or three (3) days after deposit in the U.S. mails, proper postage prepaid.

BORROWER AND BANK EACH WAIVE THEIR RIGHT TO A JURY TRIAL OF ANY CLAIM OR CAUSE OF ACTION ARISING OUT OF OR BASED UPON THIS AGREEMENT, THE LOAN DOCUMENTS OR ANY CONTEMPLATED TRANSACTION, INCLUDING CONTRACT, TORT, BREACH OF DUTY AND ALL OTHER CLAIMS. THIS WAIVER IS A MATERIAL INDUCEMENT FOR BOTH PARTIES TO ENTER INTO THIS AGREEMENT. EACH PARTY HAS REVIEWED THIS WAIVER WITH ITS COUNSEL.

WITHOUT INTENDING IN ANY WAY TO LIMIT THE PARTIES' AGREEMENT TO WAIVE THEIR RESPECTIVE RIGHT TO A TRIAL BY JURY, if the above waiver of the right to a trial by jury is not enforceable, the parties hereto agree that any and all disputes or controversies of any nature between them arising at any time shall be decided by a reference to a private judge, mutually selected by the parties (or, if they cannot agree, by the Presiding Judge of the Santa Clara County, California Superior Court) appointed in accordance with California Code of Civil Procedure Section 638 (or pursuant to comparable provisions of federal law if the dispute falls within the exclusive jurisdiction of the federal courts), sitting without a jury, in Santa Clara County, California; and the parties hereby submit to the jurisdiction of such court. The reference proceedings shall be conducted pursuant to and in accordance with the provisions of California Code of Civil Procedure §§ 638 through 645.1, inclusive. The private judge shall have the power, among others, to grant provisional relief, including without limitation, entering temporary restraining orders, issuing preliminary and permanent injunctions and appointing receivers. All such proceedings shall be closed to the public and confidential and all records relating thereto shall be permanently sealed. If during the course of any dispute, a party desires to seek provisional relief, but a judge has not been appointed at that point pursuant to the judicial reference procedures, then such party may apply to the Santa Clara County, California Superior Court for such relief. The proceeding before the private judge shall be conducted in the same manner as it would be before a court under the rules of evidence applicable to judicial proceedings. The parties shall be entitled to discovery which shall be conducted in the same manner as it would be before a court under the rules of discovery applicable to judicial proceedings. The private judge shall oversee discovery and may enforce all discovery rules and orders applicable to judicial proceedings in the same manner as a trial court judge. The parties agree that the selected or appointed private judge shall have the power to decide all issues in the action or proceeding, whether of fact or of law, and shall report a statement of decision thereon pursuant to California Code of Civil Procedure § 644(a). Nothing in this paragraph shall limit the right of any party at any time to exercise self-help remedies, foreclose against collateral, or obtain provisional remedies. The private judge shall also determine all issues relating to the applicability, interpretation, and enforceability of this paragraph.

This Section 11 shall survive the termination of this Agreement.

12 GENERAL PROVISIONS

12.1 Termination Prior to Growth Capital Maturity Date; Survival. All covenants, representations and warranties made in this Agreement continue in full force until this Agreement has terminated pursuant to its terms and all Obligations have been satisfied. So long as Borrower has satisfied the Obligations (other than inchoate indemnity obligations, and any other obligations which, by their terms, are to survive the termination of this Agreement, and any Obligations under Bank Services Agreements that are cash collateralized in accordance with Section 4.1 of this Agreement), this Agreement may be terminated prior to the Growth Capital Maturity Date by Borrower, effective three (3) Business Days after written notice of termination is given to Bank. Those obligations that are expressly specified in this Agreement as surviving this Agreement's termination shall continue to survive notwithstanding this Agreement's termination.

12.2 Successors and Assigns. This Agreement binds and is for the benefit of the successors and permitted assigns of each party. Borrower may not assign this Agreement or any rights or obligations under it without Bank's prior written consent (which may be granted or withheld in Bank's discretion). Bank has the right, without the consent of or notice to Borrower, to sell, transfer, assign, negotiate, or grant participation in all or any part of, or any interest in, Bank's obligations, rights, and benefits under this Agreement and the other Loan Documents (other than the Warrant, as to which assignment, transfer and other such actions are governed by the terms thereof).

12.3 Indemnification. Borrower agrees to indemnify, defend and hold Bank and its directors, officers, employees, agents, attorneys, or any other Person affiliated with or representing Bank (each, an "**Indemnified Person**") harmless against: (i) all obligations, demands, claims, and liabilities (collectively, "**Claims**") claimed or asserted by any other party in connection with the transactions contemplated by the Loan Documents; and (ii) all losses or expenses (including Bank Expenses) in any way suffered, incurred, or paid by such Indemnified Person as a result of, following from, consequential to, or arising from transactions between Bank and Borrower (including reasonable attorneys' fees and expenses), except for Claims and/or losses and/or expenses (including Bank Expenses) directly caused by such Indemnified Person's gross negligence or willful misconduct.

This Section 12.3 shall survive until all statutes of limitation with respect to the Claims, losses, and expenses for which indemnity is given shall have run.

12.4 Time of Essence. Time is of the essence for the performance of all Obligations in this Agreement.

12.5 Severability of Provisions. Each provision of this Agreement is severable from every other provision in determining the enforceability of any provision.

12.6 Correction of Loan Documents. Bank may correct patent errors and fill in any blanks in the Loan Documents consistent with the agreement of the parties so long as Bank provides Borrower with written notice of such correction and allows Borrower at least ten (10) days to object to such correction. In the event of such objection, such correction shall not be made except by an amendment signed by both Bank and Borrower.

12.7 Amendments in Writing; Waiver; Integration. No purported amendment or modification of any Loan Document, or waiver, discharge or termination of any obligation under any Loan Document, shall be enforceable or admissible unless, and only to the extent, expressly set forth in a writing signed by the party against which enforcement or admission is sought. Without limiting the generality of the foregoing, no oral promise or statement, nor any action, inaction, delay, failure to require performance or course of conduct shall operate as, or evidence, an amendment, supplement or waiver or have any other effect on any Loan Document. Any waiver granted shall be limited to the specific circumstance expressly described in it, and shall not apply to any subsequent or other circumstance, whether similar or dissimilar, or give rise to, or evidence, any obligation or commitment to grant any further waiver. The Loan Documents represent the entire agreement about this subject matter and supersede prior negotiations or agreements. All prior agreements, understandings, representations, warranties, and negotiations between the parties about the subject matter of the Loan Documents merge into the Loan Documents.

12.8 Counterparts. This Agreement may be executed in any number of counterparts and by different parties on separate counterparts, each of which, when executed and delivered, is an original, and all taken together, constitute one Agreement.

12.9 Confidentiality. In handling any confidential information, Bank shall exercise the same degree of care that it exercises for its own proprietary information, but disclosure of information may be made: (a) to Bank's Subsidiaries or Affiliates (such Subsidiaries and Affiliates, together with Bank, collectively, "**Bank Entities**"); (b) to prospective transferees or purchasers of any interest in the Credit Extensions (provided, however, Bank shall use its best efforts to obtain any prospective transferee's or purchaser's agreement to the terms of this provision); (c) as required by law, regulation, subpoena, or other order; (d) to Bank's regulators or as otherwise required in connection with Bank's examination or audit; (e) as Bank considers appropriate in exercising remedies under the Loan Documents; and (f) to third-party service providers of Bank so long as such service providers have executed a confidentiality agreement with Bank with terms no less restrictive than those contained herein. Confidential information does not include information that is either: (i) in the public domain or in Bank's possession when disclosed to Bank through no fault of Bank, or becomes part of the public domain (other than as a result of its disclosure by Bank in violation of this Agreement) after disclosure to Bank; or (ii) disclosed to Bank by a third party, if Bank does not know that the third party is prohibited from disclosing the information.

Bank Entities may use anonymous forms of confidential information for aggregate datasets, for analyses or reporting, and for any other uses not expressly prohibited in writing by Borrower. The provisions of the immediately preceding sentence shall survive termination of this Agreement.

12.10 Attorneys' Fees, Costs and Expenses. In any action or proceeding between Borrower and Bank arising out of or relating to the Loan Documents, the prevailing party shall be entitled to recover its reasonable attorneys' fees and other costs and expenses incurred, in addition to any other relief to which it may be entitled.

12.11 Electronic Execution of Documents. The words "execution," "signed," "signature" and words of like import in any Loan Document shall be deemed to include electronic signatures or the keeping of records in electronic form, each of which shall be of the same legal effect, validity and enforceability as a manually executed signature or the use of a paper-based recordkeeping systems, as the case may be, to the extent and as provided for in any applicable law, including, without limitation, any state law based on the Uniform Electronic Transactions Act.

12.12 Captions. The headings used in this Agreement are for convenience only and shall not affect the interpretation of this Agreement.

12.13 Construction of Agreement. The parties mutually acknowledge that they and their attorneys have participated in the preparation and negotiation of this Agreement. In cases of uncertainty this Agreement shall be construed without regard to which of the parties caused the uncertainty to exist.

12.14 Relationship. The relationship of the parties to this Agreement is determined solely by the provisions of this Agreement. The parties do not intend to create any agency, partnership, joint venture, trust, fiduciary or other relationship with duties or incidents different from those of parties to an arm's-length contract.

12.15 Third Parties. Nothing in this Agreement, whether express or implied, is intended to: (a) confer any benefits, rights or remedies under or by reason of this Agreement on any persons other than the express parties to it and their respective permitted successors and assigns; (b) relieve or discharge the obligation or liability of any person not an express party to this Agreement; or (c) give any person not an express party to this Agreement any right of subrogation or action against any party to this Agreement.

13 DEFINITIONS

13.1 Definitions. As used in the Loan Documents, the word "shall" is mandatory, the word "may" is permissive, the word "or" is not exclusive, the words "includes" and "including" are not limiting, the singular includes the plural, and numbers denoting amounts that are set off in brackets are negative. As used in this Agreement, the following capitalized terms have the following meanings:

"**Account**" is any "account" as defined in the Code with such additions to such term as may hereafter be made, and includes, without limitation, all accounts receivable and other sums owing to Borrower.

"**Account Debtor**" is any "account debtor" as defined in the Code with such additions to such term as may hereafter be made.

"**Affiliate**" is, with respect to any Person, each other Person that owns or controls directly or indirectly the Person, any Person that controls or is controlled by or is under common control with the Person, and each of that Person's senior executive officers, directors, partners and, for any Person that is a limited liability company, that Person's managers and members.

"**Agreement**" is defined in the preamble hereof. "**Amortization Start Date**" is May 1, 2016.

"**Authorized Signer**" is any individual listed in Borrower's Borrowing Resolution who is authorized to execute the Loan Documents, including any Advance request, on behalf of Borrower.

"**Bank**" is defined in the preamble hereof. "**Bank Entities**" is defined in Section 12.9.

"**Bank Expenses**" are all audit fees and expenses, costs, and expenses (including reasonable attorneys' fees and expenses) for preparing, amending, negotiating, administering, defending and enforcing the Loan Documents (including, without limitation, those incurred in connection with appeals or Insolvency Proceedings) or otherwise incurred with respect to Borrower.

"**Bank Services**" are any products, credit services, and/or financial accommodations previously, now, or hereafter provided to Borrower or any of its Subsidiaries by Bank or any Bank Affiliate, including, without limitation, any letters of credit, cash management services (including, without limitation, merchant services, direct deposit of payroll, business credit cards, and check cashing services), interest rate swap arrangements, and foreign exchange services as any such products or services may be identified in Bank's various agreements related thereto (each, a "**Bank Services Agreement**").

"**Borrower**" is defined in the preamble hereof.

"**Borrower's Books**" are all Borrower's books and records including ledgers, federal and state tax returns, records regarding Borrower's assets or liabilities, the Collateral, business operations or financial condition, and all computer programs or storage or any equipment containing such information.

"**Borrowing Resolutions**" are, with respect to any Person, those resolutions substantially in the form attached hereto as Exhibit D.

"**Business Day**" is any day that is not a Saturday, Sunday or a day on which Bank is closed.

"**Cash Equivalents**" means (a) marketable direct obligations issued or unconditionally guaranteed by the United States or any agency or any State thereof having maturities of not more than one (1) year from the date of acquisition; (b) commercial paper maturing no more than one (1) year after its creation and having the highest rating

from either Standard & Poor's Ratings Group or Moody's Investors Service, Inc.; (c) Bank's certificates of deposit issued maturing no more than one (1) year after issue; and (d) money market funds at least ninety-five percent (95%) of the assets of which constitute Cash Equivalents of the kinds described in clauses (a) through (c) of this definition.

"**Claims**" is defined in Section 12.3.

"**Code**" is the Uniform Commercial Code, as the same may, from time to time, be enacted and in effect in the State of California; provided, that, to the extent that the Code is used to define any term herein or in any Loan Document and such term is defined differently in different Articles or Divisions of the Code, the definition of such term contained in Article or Division 9 shall govern; provided further, that in the event that, by reason of mandatory provisions of law, any or all of the attachment, perfection, or priority of, or remedies with respect to, Bank's Lien on any Collateral is governed by the Uniform Commercial Code in effect in a jurisdiction other than the State of California, the term "**Code**" shall mean the Uniform Commercial Code as enacted and in effect in such other jurisdiction solely for purposes of the provisions thereof relating to such attachment, perfection, priority, or remedies and for purposes of definitions relating to such provisions.

"**Collateral**" is any and all properties, rights and assets of Borrower described on Exhibit A.

"**Collateral Account**" is any Deposit Account, Securities Account, or Commodity Account.

"**Commodity Account**" is any "commodity account" as defined in the Code with such additions to such term as may hereafter be made.

"**Compliance Certificate**" is that certain certificate in the form attached hereto as Exhibit B.

"**Contingent Obligation**" is, for any Person, any direct or indirect liability, contingent or not, of that Person for (a) any indebtedness, lease, dividend, letter of credit or other obligation of another such as an obligation, in each case, directly or indirectly guaranteed, endorsed, co-made, discounted or sold with recourse by that Person, or for which that Person is directly or indirectly liable; (b) any obligations for undrawn letters of credit for the account of that Person; and (c) all obligations from any interest rate, currency or commodity swap agreement, interest rate cap or collar agreement, or other agreement or arrangement designated to protect a Person against fluctuation in interest rates, currency exchange rates or commodity prices; but "Contingent Obligation" does not include endorsements in the ordinary course of business. The amount of a Contingent Obligation is the stated or determined amount of the primary obligation for which the Contingent Obligation is made or, if not determinable, the maximum reasonably anticipated liability for it determined by the Person in good faith; but the amount may not exceed the maximum of the obligations under any guarantee or other support arrangement.

"**Control Agreement**" is any control agreement entered into among the depository institution at which Borrower maintains a Deposit Account or the securities intermediary or commodity intermediary at which Borrower maintains a Securities Account or a Commodity Account, Borrower, and Bank pursuant to which Bank obtains control (within the meaning of the Code) over such Deposit Account, Securities Account, or Commodity Account.

"**Copyrights**" are any and all copyright rights, copyright applications, copyright registrations and like protections in each work of authorship and derivative work thereof, whether published or unpublished and whether or not the same also constitutes a trade secret.

"**Credit Extension**" is any Growth Capital Advance or any other extension of credit by Bank for Borrower's benefit.

"**Currency**" is coined money and such other banknotes or other paper money as are authorized by law and circulate as a medium of exchange.

"**Default Rate**" is defined in Section 2.3(b).

"**Deferred Revenue**" is all amounts received or invoiced in advance of performance under contracts and not yet recognized as revenue.

"**Deposit Account**" is any "deposit account" as defined in the Code with such additions to such term as may hereafter be made.

"**Designated Deposit Account**" is the multicurrency account denominated in Dollars, account number , maintained by Borrower with Bank.

"**Dollars**," "**dollars**" or use of the sign "**$**" means only lawful money of the United States and not any other currency, regardless of whether that currency uses the "$" sign to denote its currency or may be readily converted into lawful money of the United States.

"**Dollar Equivalent**" is, at any time, (a) with respect to any amount denominated in Dollars, such amount, and (b) with respect to any amount denominated in a Foreign Currency, the equivalent amount therefor in Dollars as determined by Bank at such time on the basis of the then-prevailing rate of exchange in San Francisco, California, for sales of the Foreign Currency for transfer to the country issuing such Foreign Currency.

"**Domestic Subsidiary**" means a Subsidiary organized under the laws of the United States or any state or territory thereof or the District of Columbia.

"**Effective Date**" is defined in the preamble hereof.

"**Equipment**" is all "equipment" as defined in the Code with such additions to such term as may hereafter be made, and includes without limitation all machinery, fixtures, goods, vehicles (including motor vehicles and trailers), and any interest in any of the foregoing.

"**ERISA**" is the Employee Retirement Income Security Act of 1974, and its regulations.

"**Event of Default**" is defined in Section 8.

"**Exchange Act**" is the Securities Exchange Act of 1934, as amended.

"**FDA**" is the U.S. Food and Drug Administration.

"**Final Payment**" is a payment (in addition to and not a substitution for the regular monthly payments of principal plus accrued interest) due on the earliest to occur of (a) the Growth Capital Maturity Date, (b) the acceleration of the Growth Capital Advances, or (c) the prepayment of the Growth Capital Advances, equal to the original principal amount of the Growth Capital Advances made to Borrower multiplied by the Final Payment Percentage.

"**Final Payment Percentage**" is five and one half of one percentage points (5.50%).

"**Foreign Currency**" means lawful money of a country other than the United States.

"**Foreign Subsidiary**" means any Subsidiary which is not a Domestic Subsidiary.

"**Funding Date**" is any date on which a Credit Extension is made to or for the account of Borrower which shall be a Business Day.

"**FX Contract**" is any foreign exchange contract by and between Borrower and Bank under which Borrower commits to purchase from or sell to Bank a specific amount of Foreign Currency on a specified date.

"**GAAP**" is generally accepted accounting principles set forth in the opinions and pronouncements of the Accounting Principles Board of the American Institute of Certified Public Accountants and statements and pronouncements of the Financial Accounting Standards Board or in such other statements by such other Person as may be approved by a significant segment of the accounting profession, which are applicable to the circumstances as of the date of determination.

"**General Intangibles**" is all "general intangibles" as defined in the Code in effect on the date hereof with such additions to such term as may hereafter be made, and includes without limitation, all Intellectual Property, claims, income and other tax refunds, security and other deposits, payment intangibles, contract rights, options to purchase or sell real or personal property, rights in all litigation presently or hereafter pending (whether in contract, tort or otherwise), insurance policies (including without limitation key man, property damage, and business interruption insurance), payments of insurance and rights to payment of any kind.

"**Governmental Approval**" is any consent, authorization, approval, order, license, franchise, permit, certificate, accreditation, registration, filing or notice, of, issued by, from or to, or other act by or in respect of, any Governmental Authority.

"**Governmental Authority**" is any nation or government, any state or other political subdivision thereof, any agency, authority, instrumentality, regulatory body, court, central bank or other entity exercising executive, legislative, judicial, taxing, regulatory or administrative functions of or pertaining to government, any securities exchange and any self-regulatory organization.

"**Growth Capital Advance**" or "**Growth Capital Advances**" is defined in Section 2.1.1(a).

"**Growth Capital Advance Payment**" is defined in Section 2.1.1(b).

"**Growth Capital Line**" is an aggregate principal amount of up to Six Million Dollars ($6,000,000).

"**Growth Capital Maturity Date**" is the date twenty nine (29) months after the Amortization Start Date.

"**Guarantor**" is any Person providing a Guaranty in favor of Bank.

"**Guaranty**" is any guarantee of all or any part of the Obligations, as the same may from time to time be amended, restated, modified or otherwise supplemented.

"**Indebtedness**" is (a) indebtedness for borrowed money or the deferred price of property or services, such as reimbursement and other obligations for surety bonds and letters of credit, (b) obligations evidenced by notes, bonds, debentures or similar instruments, (c) capital lease obligations, and (d) Contingent Obligations.

"**Indemnified Person**" is defined in Section 12.3.

"**Insolvency Proceeding**" is any proceeding by or against any Person under the United States Bankruptcy Code, or any other bankruptcy or insolvency law, including assignments for the benefit of creditors, compositions, extensions generally with its creditors, or proceedings seeking reorganization, arrangement, or other relief.

"**Intellectual Property**" means, with respect to any Person, means all of such Person's right, title, and interest in and to the following:

(a) its Copyrights, Trademarks and Patents;

(b) any and all trade secrets and trade secret rights, including, without limitation, any rights to unpatented inventions, know-how, operating manuals;

(c) any and all source code;

(d) any and all design rights which may be available to such Person;

(e) any and all claims for damages by way of past, present and future infringement of any of the foregoing, with the right, but not the obligation, to sue for and collect such damages for said use or infringement of the Intellectual Property rights identified above; and

(f) all amendments, renewals and extensions of any of the Copyrights, Trademarks or Patents.

"**Inventory**" is all "inventory" as defined in the Code in effect on the date hereof with such additions to such term as may hereafter be made, and includes without limitation all merchandise, raw materials, parts, supplies, packing and shipping materials, work in process and finished products, including without limitation such inventory as is temporarily out of Borrower's custody or possession or in transit and including any returned goods and any documents of title representing any of the above.

"**Investment**" is any beneficial ownership interest in any Person (including stock, partnership interest or other securities), and any loan, advance or capital contribution to any Person.

"**Key Person**" is each of Borrower's (a) Chief Executive Officer, who is Daniel H. White as of the Effective Date, (b) Chief Financial Officer, who is Charles A. Deignan as of the Effective Date, and (c) Executive VP, Research & Development, who is Glenn Noronha as of the Effective Date.

"**Letter of Credit**" is a standby or commercial letter of credit issued by Bank upon request of Borrower based upon an application, guarantee, indemnity, or similar agreement.

"**Lien**" is a claim, mortgage, deed of trust, levy, charge, pledge, security interest or other encumbrance of any kind, whether voluntarily incurred or arising by operation of law or otherwise against any property.

"**Loan Documents**" are, collectively, this Agreement and any schedules, exhibits, certificates, notices, and any other documents related to this Agreement, the Warrant, any Bank Services Agreement, any subordination agreement, any note, or notes or guaranties executed by Borrower or any Guarantor, and any other present or future agreement by Borrower and/or any Guarantor with or for the benefit of Bank in connection with this Agreement or Bank Services, all as amended, restated, or otherwise modified.

"**Material Adverse Change**" is (a) a material impairment in the perfection or priority of Bank's Lien in the Collateral or in the value of such Collateral; (b) a material adverse change in the business, operations, or condition (financial or otherwise) of Borrower; or (c) a material impairment of the prospect of repayment of any portion of the Obligations.

"**Monthly Financial Statements**" is defined in Section 6.2(b).

"**Obligations**" are Borrower's obligations to pay when due any debts, principal, interest, fees, Bank Expenses, and other amounts Borrower owes Bank now or later, whether under this Agreement, the other Loan Documents (other than the Warrant), or otherwise, including, without limitation, all obligations relating to letters of credit (including reimbursement obligations for drawn and undrawn letters of credit), cash management services, and foreign exchange contracts, if any, and including interest accruing after Insolvency Proceedings begin and debts, liabilities, or obligations of Borrower assigned to Bank, and to perform Borrower's duties under the Loan Documents (other than the Warrant).

"**Operating Documents**" are, for any Person, such Person's formation documents, as certified by the Secretary of State (or equivalent agency) of such Person's jurisdiction of organization on a date that is no earlier than thirty (30) days prior to the Effective Date, and, (a) if such Person is a corporation, its bylaws in current form, (b) if such Person is a limited liability company, its limited liability company agreement (or similar agreement), and (c) if such Person is a partnership, its partnership agreement (or similar agreement), each of the foregoing with all current amendments or modifications thereto.

"**Parent**" is defined in Section 3.8(b).

"**Patents**" means all patents, patent applications and like protections including without limitation improvements, divisions, continuations, renewals, reissues, extensions and continuations-in-part of the same.

"**Payment/Advance Form**" is that certain form attached hereto as Exhibit C.

"**Perfection Certificate**" is defined in Section 5.1.

"**Permitted Indebtedness**" is:

(a) Borrower's Indebtedness to Bank under this Agreement and the other Loan Documents;

(b) Indebtedness existing on the Effective Date and shown on the Perfection Certificate;

(c) Subordinated Debt;

(d) unsecured Indebtedness to trade creditors incurred in the ordinary course of business;

(e) Indebtedness incurred as a result of endorsing negotiable instruments received in the ordinary course of business;

(f) Indebtedness secured by Liens permitted under clauses (a) and (c) of the definition of "Permitted Liens" hereunder;

(g) Indebtedness of Borrower to any Subsidiary and Contingent Obligations of any Subsidiary with respect to obligations of Borrower (provided that the primary obligations are not prohibited hereby), and Indebtedness of any Subsidiary to Borrower in an aggregate principal amount not to exceed One Hundred Thousand Dollars ($100,000) or any other Subsidiary and Contingent Obligations of any Subsidiary with respect to obligations of any other Subsidiary (provided that the primary obligations are not prohibited hereby); and

(h) extensions, refinancings, modifications, amendments and restatements of any items of Permitted Indebtedness (a) through (g) above, provided that the principal amount thereof is not increased or the terms thereof are not modified to impose more burdensome terms upon Borrower or its Subsidiary, as the case may be.

"**Permitted Investments**" are:

(a) Investments (including, without limitation, Subsidiaries) existing on the Effective Date and shown on the Perfection Certificate;

(b) Investments consisting of Cash Equivalents;

(c) Investments consisting of the endorsement of negotiable instruments for deposit or collection or similar transactions in the ordinary course of Borrower;

(d) Investments consisting of deposit accounts in which Bank has a perfected security interest;

(e) Investments accepted in connection with Transfers permitted by Section 7.1;

(f) Investments consisting of the creation of a Subsidiary for the purpose of consummating a merger transaction permitted by Section 7.3 of this Agreement, which is otherwise a Permitted Investment;

(g) Investments (i) by Borrower in Subsidiaries not to exceed One Hundred Thousand Dollars ($100,000) in the aggregate in any fiscal year and (ii) by Subsidiaries in other Subsidiaries not to exceed One Hundred Thousand Dollars ($100,000) in the aggregate in any fiscal year or in Borrower;

(h) Investments consisting of (i) travel advances and employee relocation loans and other employee loans and advances in the ordinary course of business, and (ii) loans to employees, officers or directors relating to the purchase of equity securities of Borrower or its Subsidiaries pursuant to employee stock purchase plans or agreements approved by Borrower's Board of Directors;

(i) Investments (including debt obligations) received in connection with the bankruptcy or reorganization of customers or suppliers and in settlement of delinquent obligations of, and other disputes with, customers or suppliers arising in the ordinary course of business;

(j) Investments consisting of notes receivable of, or prepaid royalties and other credit extensions, to customers and suppliers who are not Affiliates, in the ordinary course of business; provided that this paragraph (j) shall not apply to Investments of Borrower in any Subsidiary; and

(k) joint ventures or strategic alliances in the ordinary course of Borrower's business consisting of the non-exclusive licensing of technology, the development of technology or the providing of technical support, provided that any cash investments by Borrower do not exceed One Hundred Thousand Dollars ($100,000) in the aggregate in any fiscal year.

"**Permitted Liens**" are:

(a) Liens existing on the Effective Date and shown on the Perfection Certificate or arising under this Agreement and the other Loan Documents;

(b) Liens for taxes, fees, assessments or other government charges or levies, either (i) not due and payable or (ii) being contested in good faith and for which Borrower maintains adequate reserves on its Books, provided that no notice of any such Lien has been filed or recorded under the Internal Revenue Code of 1986, as amended, and the Treasury Regulations adopted thereunder;

(c) purchase money Liens and capital leases (i) on Equipment acquired or held by Borrower incurred for financing the acquisition of the Equipment securing no more than One Hundred Thousand Dollars ($100,000) in the aggregate amount outstanding, or (ii) existing on Equipment when acquired, if the Lien is confined to the property and improvements and the proceeds of the Equipment;

(d) Liens of carriers, warehousemen, suppliers, or other Persons that are possessory in nature arising in the ordinary course of business so long as such Liens attach only to Inventory, securing liabilities in the aggregate amount not to exceed One Hundred Thousand Dollars ($100,000) and which are not delinquent or remain payable without penalty or which are being contested in good faith and by appropriate proceedings which proceedings have the effect of preventing the forfeiture or sale of the property subject thereto;

(e) Liens to secure payment of workers' compensation, employment insurance, old-age pensions, social security and other like obligations incurred in the ordinary course of business (other than Liens imposed by ERISA);

(f) Liens incurred in the extension, renewal or refinancing of the indebtedness secured by Liens described in (a) through (c), but any extension, renewal or replacement Lien must be limited to the property encumbered by the existing Lien and the principal amount of the indebtedness may not increase;

(g) leases or subleases of real property granted in the ordinary course of Borrower's business (or, if referring to another Person, in the ordinary course of such Person's business), and leases, subleases, non-exclusive licenses or sublicenses of personal property (other than Intellectual Property) granted in the ordinary course of Borrower's business (or, if referring to another Person, in the ordinary course of such Person's business), if the leases, subleases, licenses and sublicenses do not prohibit granting Bank a security interest therein;

(h) non-exclusive license of Intellectual Property granted to third parties in the ordinary course of business, and licenses of Intellectual Property that could not result in a legal transfer of title of the licensed property that may be exclusive in respects other than territory and that may be exclusive as to territory only as to discrete geographical areas outside of the United States;

(i) Liens arising from attachments or judgments, orders, or decrees in circumstances not constituting an Event of Default under Sections 8.4 and 8.7;

(j) Easements, reservations, rights-of-way, restrictions, minor defects or irregularities in title and other similar Liens affecting real property not interfering in any material respect with the ordinary course of the business of Borrower;

(k) deposits to secure the performance of leases incurred in the ordinary course of business and not representing an obligation for borrowed money so long as each such deposit: (1) is made at the commencement of a lease or its renewal when there is no underlying default under such lease, and (2) is in an amount not exceeding One Hundred Thousand Dollars ($100,000); and

(l) deposits to secure the performance of bids, trade contracts (other than for borrowed money), contracts for the purchase of property permitted hereunder, statutory obligations, surety and appeal bonds, performance bonds and other obligations of a like nature, in each case, incurred in the ordinary course of business not representing an obligation for borrowed money in an amount not to exceed One Hundred Thousand Dollars ($100,000);

(m) Liens in favor of other financial institutions arising in connection with Borrower's deposit and/or securities accounts held at such institutions, provided that Bank has a perfected security interest in the amounts held in such deposit and/or securities accounts.

"**Person**" is any individual, sole proprietorship, partnership, limited liability company, joint venture, company, trust, unincorporated organization, association, corporation, institution, public benefit corporation, firm, joint stock company, estate, entity or government agency.

"**Positive FDA Review Date**" is the date that Bank receives evidence, in form and substance reasonably satisfactory to Bank, that Borrower has completed successful meetings with the FDA (scheduled in May, 2015) in which the Phase I/II trial results for CLS-1001 were reviewed and the final design and structure of the Phase III trial for CLS-1001 were discussed.

"**Positive Phase I/II Milestone**" means the receipt by Bank of evidence, in form and substance reasonably satisfactory to Bank, on or prior to April 30, 2015 that Borrower has received positive data results from the Phase I/II trials for CLS-1001.

"**Prime Rate**" is the rate of interest per annum from time to time published in the money rates section of The Wall Street Journal or any successor publication thereto as the "prime rate" then in effect; provided that if such rate of interest, as set forth from time to time in the money rates section of The Wall Street Journal, becomes unavailable for any reason as determined by Bank, the "Prime Rate" shall mean the rate of interest per annum announced by Bank as its prime rate in effect at its principal office in the State of California (such Bank announced Prime Rate not being intended to be the lowest rate of interest charged by Bank in connection with extensions of credit to debtors).

"**Registered Organization**" is any "registered organization" as defined in the Code with such additions to such term as may hereafter be made.

"**Requirement of Law**" is as to any Person, the organizational or governing documents of such Person, and any law (statutory or common), treaty, rule or regulation or determination of an arbitrator or a court or other Governmental Authority, in each case applicable to or binding upon such Person or any of its property or to which such Person or any of its property is subject.

"**Responsible Officer**" is any of the President & Chief Executive Officer, Chief Financial Officer and Executive VP, Research & Development of Borrower.

"**Restricted License**" is any material license or other agreement with respect to which Borrower is the licensee (a) that prohibits or otherwise restricts Borrower from granting a security interest in Borrower's interest in such license or agreement or any other property, or (b) for which a default under or termination of could interfere with the Bank's right to sell any Collateral.

"**SEC**" shall mean the Securities and Exchange Commission, any successor thereto, and any analogous Governmental Authority.

"**Securities Account**" is any "securities account" as defined in the Code with such additions to such term as may hereafter be made.

"**Subordinated Debt**" is indebtedness incurred by Borrower subordinated to all of Borrower's now or hereafter indebtedness to Bank (pursuant to a subordination, intercreditor, or other similar agreement in form and substance satisfactory to Bank entered into between Bank and the other creditor), on terms acceptable to Bank.

"**Subsidiary**" is, as to any Person, a corporation, partnership, limited liability company or other entity of which shares of stock or other ownership interests having ordinary voting power (other than stock or such other ownership interests having such power only by reason of the happening of a contingency) to elect a majority of the board of directors or other managers of such corporation, partnership or other entity are at the time owned, or the management of which is otherwise controlled, directly or indirectly through one or more intermediaries, or both, by such Person. Unless the context otherwise requires, each reference to a Subsidiary herein shall be a reference to a Subsidiary of Borrower.

"**Termination Fee**" is defined in Section 2.4(b).

"**Trademarks**" means any trademark and servicemark rights, whether registered or not, applications to register and registrations of the same and like protections, and the entire goodwill of the business of Borrower connected with and symbolized by such trademarks.

"**Tranche A**" is defined in Section 2.1.1(a).

"**Tranche A Growth Capital Advance**" is defined in Section 2.1.1(a).

"**Tranche B**" is defined in Section 2.1.1(a).

"**Tranche B Draw Period**" is the period commencing on the Positive FDA Review Date and ending on the earlier of (i) June 30, 2015 and (ii) the occurrence of an Event of Default; provided, however, that the Tranche B Draw Period shall not commence if on the date of the occurrence of the Positive FDA Review Date an Event of Default has occurred and is continuing.

"**Tranche B Growth Capital Advance**" is defined in Section 2.1.1(a).

"**Transfer**" is defined in Section 7.1.

"**Warrant**" is that certain Warrant to Purchase Stock dated as of the Effective Date executed by Borrower in favor of Bank.

[Signature page follows.**]**

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed as of the Effective Date.

BORROWER:

CLEARSIDE BIOMEDICAL, INC.

By /s/ Daniel H. White
Name: Daniel H. White
Title: President & CEO

BANK:

SILICON VALLYY BANK

By /s/ Ryan Roller
Name: Ryan Roller
Title: Vice President

EXHIBIT A

COLLATERAL DESCRIPTION

The Collateral consists of all of Borrower's right, title and interest in and to the following personal property:

All goods, Accounts (including health-care receivables), Equipment, Inventory, contract rights or rights to payment of money, leases, license agreements, franchise agreements, General Intangibles (except as provided below), commercial tort claims, documents, instruments (including any promissory notes), chattel paper (whether tangible or electronic), cash, deposit accounts, fixtures, letters of credit rights (whether or not the letter of credit is evidenced by a writing), securities, and all other investment property, supporting obligations, and financial assets, whether now owned or hereafter acquired, wherever located; and

all Borrower's Books relating to the foregoing, and any and all claims, rights and interests in any of the above and all substitutions for, additions, attachments, accessories, accessions and improvements to and replacements, products, proceeds and insurance proceeds of any or all of the foregoing.

Notwithstanding the foregoing, the Collateral does not include: (a) more than 65% of the presently existing and hereafter arising issued and outstanding shares of capital stock owned by Borrower of any Foreign Subsidiary which shares entitle the holder thereof to vote for directors or any other matter; or (b) any Intellectual Property; provided, however, the Collateral shall include all Accounts and all proceeds of Intellectual Property. If a judicial authority (including a U.S. Bankruptcy Court) would hold that a security interest in the underlying Intellectual Property is necessary to have a security interest in such Accounts and such property that are proceeds of Intellectual Property, then the Collateral shall automatically, and effective as of the Effective Date, include the Intellectual Property to the extent necessary to permit perfection of Bank's security interest in such Accounts and such other property of Borrower that are proceeds of the Intellectual Property.

Pursuant to the terms of a certain negative pledge arrangement with Bank, Borrower has agreed not to encumber any of its Intellectual Property without Bank's prior written consent.

EXHIBIT B

COMPLIANCE CERTIFICATE

TO: SILICON VALLEY BANK
FROM: CLEARSIDE BIOMEDICAL, INC.

Date: _____

The undersigned authorized officer of CLEARSIDE BIOMEDICAL, INC. ("Borrower") certifies that under the terms and conditions of the Loan and Security Agreement between Borrower and Bank (the "Agreement"):

(1) Borrower is in complete compliance for the period ending with all required covenants except as noted below; (2) there are no Events of Default; (3) all representations and warranties in the Agreement are true and correct in all material respects on this date except as noted below; provided, however, that such materiality qualifier shall not be applicable to any representations and warranties that already are qualified or modified by materiality in the text thereof; and provided, further that those representations and warranties expressly referring to a specific date shall be true, accurate and complete in all material respects as of such date; (4) Borrower, and each of its Subsidiaries, has timely filed, or obtained extensions for filing, all required tax returns and reports, and Borrower has timely paid all foreign, federal, state and local taxes, assessments, deposits and contributions owed by Borrower except as otherwise permitted pursuant to the terms of Section 5.9 of the Agreement; and (5) no Liens have been levied or claims made against Borrower or any of its Subsidiaries relating to unpaid employee payroll or benefits of which Borrower has not previously provided written notification to Bank.

Attached are the required documents supporting the certification. The undersigned certifies that these are prepared in accordance with GAAP consistently applied from one period to the next except as explained in an accompanying letter or footnotes. The undersigned acknowledges that no borrowings may be requested at any time or date of determination that Borrower is not in compliance with any of the terms of the Agreement, and that compliance is determined not just at the date this certificate is delivered. Capitalized terms used but not otherwise defined herein shall have the meanings given them in the Agreement.

Please indicate compliance status by circling Yes/No under "Complies" column.

Reporting Covenants	**Required**	**Complies**
Monthly financial statements with Compliance Certificate	Monthly within 30 days	Yes No
Annual financial statement (CPA Audited) + CC	FYE within 120 days	Yes No
10-Q, 10-K and 8-K	Within 5 days after filing with SEC	Yes No
A/R & A/P Agings, Deferred Revenue report, current backlog report	Monthly within 30 days	Yes No
Annual Budget and Projections	FYE within 45 days*	Yes No

***** and as soon as possible after any updates thereto

Other Matters

Have there been any amendments of or other changes to the capitalization table of Borrower and to the Operating Documents of Borrower or any of its Subsidiaries? If yes, provide copies of any such amendments or changes with this Compliance Certificate. Yes No

The following are the exceptions with respect to the certification above: (If no exceptions exist, state "No exceptions to note.")

CLEARSIDE BIOMEDICAL, INC.

By: _____
Name: _____
Title: _____

BANK USE ONLY

Received by: _____
AUTHORIZED SIGNER

Date: _____

Verified: _____
AUTHORIZED SIGNER

Date: _____

Compliance Status: Yes No

EXHIBIT C – LOAN PAYMENT/ADVANCE REQUEST FORM

DEADLINE FOR SAME DAY PROCESSING IS NOON PACIFIC TIME*

Fax To: Date: 4/14/2015

LOAN PAYMENT:

CLEARSIDE BIOMEDICAL, INC.

From Account # _____ To Account # _____
(Deposit Account #) (Loan Account #)

Principal $ _____ and/or Interest $ _____

Authorized Signature: _____ Phone Number: _____
Print Name/Title: _____

LOAN ADVANCE:

Complete *Outgoing Wire Request* section below if all or a portion of the funds from this loan advance are for an outgoing wire.

From Account # New Loan _____ To Account # _____
(Loan Account #) (Deposit Account #)

Amount of Advance $ 4,000,000.00

All Borrower's representations and warranties in the Loan and Security Agreement are true, correct and complete in all material respects on the date of the request for an advance; provided, however, that such materiality qualifier shall not be applicable to any representations and warranties that already are qualified or modified by materiality in the text thereof; and provided, furture that those representations and warranties expressly referring to a specific date shall be true, accurate and complete in all material respects as of such date:

Authorized Signature: /s/ Charles Deignan Phone Number: 678-270-4005
Print Name/Title: Charles Deignan / CFO

OUTGOING WIRE REQUEST:

Complete only if all or a portion of funds from the loan advance above is to be wired.
Deadline for same day processing is noon, Pacific Time

Beneficiary Name: _____ Amount of Wire: $ _____
Beneficiary Bank: _____ Account Number: _____
City and State: _____

Beneficiary Bank Transit (ABA) #: _____ Beneficiary Bank Code (Swift, Sort, Chip, etc.): _____
(For International Wire Only)

Intermediary Bank: _____ Transit (ABA) *#:* _____

For Further Credit to: _____

Special Instruction: _____

By signing below, I (we) acknowledge and agree that my (our) funds transfer request shall be processed in accordance with and subject to the terms and conditions set forth in the agreements(s) covering funds transfer service(s), which agreements(s) were previously received and executed by me (us).

Authorized Signature: _____ 2nd Signature (if required): _____

Print Name/Title: _____ Print Name/Title: _____

Telephone #: _____ Telephone #: _____

* Unless otherwise provided for an Advance bearing interest at LIBOR.

EXHIBIT D

BORROWING RESOLUTIONS

CORPORATE BORROWING CERTIFICATE

BORROWER: CLEARSIDE BIOMEDICAL, INC. **DATE: Apr 14, 2015**
BANK: Silicon Valley Bank

I hereby certify as follows, as of the date set forth above:

1. I am the Secretary, Assistant Secretary or other officer of Borrower. My title is as set forth below.

2. Borrower's exact legal name is set forth above. Borrower is a corporation existing under the laws of the State of Delaware.

3. Attached hereto are true, correct and complete copies of Borrower's Certificate of Incorporation (including amendments), as filed with the Secretary of State of the state in which Borrower is incorporated as set forth above. Such Certificate of Incorporation have not been amended, annulled, rescinded, revoked or supplemented, and remain in full force and effect as of the date hereof.

4. The following resolutions were duly and validly adopted by Borrower's Board of Directors at a duly held meeting of such directors (or pursuant to a unanimous written consent or other authorized corporate action). Such resolutions are in full force and effect as of the date hereof and have not been in any way modified, repealed, rescinded, amended or revoked, and Silicon Valley Bank ("Bank") may rely on them until Bank receives written notice of revocation from Borrower.

RESOLVED, that **any one** of the following officers or employees of Borrower, whose names, titles and signatures are below, may act on behalf of Borrower:

Name	Title	Signature	Authorized to Add or Remove Signatories
Daniel White	CEO	/s/ Daniel White	☒
Charles Deignan	CFO/Secretary	/s/ Charles Deignan	☒
			☐
			☐

RESOLVED FURTHER, that **any one** of the persons designated above with a checked box beside his or her name may, from time to time, add or remove any individuals to and from the above list of persons authorized to act on behalf of Borrower.

RESOLVED FURTHER, that such individuals may, on behalf of Borrower:

Borrow Money. Borrow money from Bank.

Execute Loan Documents. Execute any loan documents Bank requires.

Grant Security. Grant Bank a security interest in any of Borrower's assets.

Negotiate Items. Negotiate or discount all drafts, trade acceptances, promissory notes, or other indebtedness in which Borrower has an interest and receive cash or otherwise use the proceeds.

Apply for Letters of Credit. Apply for letters of credit from Bank.

Enter Derivative Transactions. Execute spot or forward foreign exchange contracts, interest rate swap agreements, or other derivative transactions.

Issue Warrants. Issue warrants for Borrower's capital stock.

Further Acts. Designate other individuals to request advances, pay fees and costs and execute other documents or agreements (including documents or agreement that waive Borrower's right to a jury trial) they believe to be necessary to effect these resolutions.

RESOLVED FURTHER, that all acts authorized by the above resolutions and any prior acts relating thereto are ratified.

5. The persons listed above are Borrower's officers or employees with their titles and signatures shown next to their names.

By: /s/ Charles A. Deignan
Name: Charles A. Deignan
Title: CFO/Secretary

****If the Secretary, Assistant Secretary or other certifying officer executing above is designated by the resolutions set forth in paragraph 4 as one of the authorized signing officers, this Certificate must also be signed by a second authorized officer or director of Borrower.*

I, the President & CEO of Borrower, hereby certify as to paragraphs 1 through 5 above, as of the date set forth above.

By: /s/ Daniel H. White
Name: Daniel H. White
Title: President & CEO