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

FORM 10-K

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the fiscal year ended September 30, 2020

□ TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the transition period from to

Commission File Number: 001-37759

OUTLOOK THERAPEUTICS, INC.

(Exact name of registrant as specified in its charter)

Delaware (State or other jurisdiction of incorporation or organization) 38-3982704 (I.R.S. Employer Identification No.)

4260 U.S. Route 1

Monmouth Junction, New Jersey (Address of principal executive offices) 08852

X

(Zip Code)

(609) 619-3990 (Registrant's telephone number, including area code)

Securities registered pursuant to Section 12(b) of the Act:

Title of each classTrading Symbol(s)Name of each exchange on which registeredCommon StockOTLKThe Nasdaq Stock Market LLCSeries A WarrantsOTLKWThe Nasdaq Stock Market LLC

Securities Registered Pursuant to Section 12(g) of the Act: None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes 🗆 No 🗵

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes 🗆 No 🗵

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period than the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes \boxtimes No \square

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§ 232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes 🗵 No 🗆

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See the definition of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act. Large accelerated filer
Accelerated filer
Accelerated filer

Large accelerated filer		Accelerated filer
Non-accelerated filer	\boxtimes	Smaller reporting company
		Emerging growth company

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act.

Indicate by check mark whether the registrant has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report.

Indicate by check mark whether registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes 🗆 No 🖾

The aggregate market value of the registrant's common stock, held by non-affiliates of the registrant as of March 31, 2020 (which is the last business day of registrant's most recently completed second fiscal quarter) based upon the closing market price of such stock on The Nasdaq Capital Market on that date, was approximately \$20.4 million. As of December 18, 2020, the registrant had outstanding 127,183,109 shares of common stock, par value \$0.01 per share.

DOCUMENTS INCORPORATED BY REFERENCE

None

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In this report, unless otherwise stated or as the context otherwise requires, references to "Outlook Therapeutics," "Outlook," "the Company," "we," "us," "our" and similar references refer to Outlook Therapeutics, Inc. (formerly known as Oncobiologics, Inc.) and its consolidated subsidiaries. The Outlook logo, Oncobiologics logo, LYTENAVA and other trademarks or service marks of Outlook Therapeutics, Inc. appearing in this report are the property of Outlook Therapeutics, Inc. This report also contains registered marks, trademarks and trade names of other companies. All other trademarks, registered marks and trade names appearing in this report are the property of their respective holders.

Convenience translations between Swiss Francs, or CHF, and U.S. dollars provided herein are based on the noon buying rate in New York City for cable transfers in foreign currencies as certified for customs purposes by the Federal Reserve Bank of New York on September 30, 2020, or CHF 0.9188 = \$1.00. We do not represent that CHF were, could have been, or could be, converted into U.S. dollars at such rate or at any other rate.

CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS AND INDUSTRY DATA

This Annual Report on Form 10-K contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. Forward-looking statements are based on our management's beliefs and assumptions and on information currently available to our management. All statements other than statements of historical facts are "forward-looking statements" for purposes of these provisions, including those relating to future events or our future financial performance and financial guidance. In some cases, you can identify forward-looking statements by terminology such as "may," "might," "will," "should," "expect," "plan," "anticipate," "project," "believe," "estimate," "predict," "potential," "intend," "continue," the negative of terms like these or other comparable terminology, in connection with any discussion of future operating or financial performance. These statements are only predictions. All forward-looking statements included in this Annual Report on Form 10-K are based on information available to us on the date hereof, and we assume no obligation to update any such forward-looking statements can be affected by inaccurate assumptions we might make or by known or unknown risks, uncertainties and other factors. We discuss many of these risks, uncertainties and other factors in this Annual Report on Form 10-K in greater detail in Item 1A under the heading "Risk Factors." We caution investors that our business and financial performance are subject to substantial risks and uncertainties.

This Annual Report on Form 10-K also contains estimates, projections and other information concerning our industry, our business, and the markets for certain diseases, including data regarding the estimated size of those markets, and the incidence and prevalence of certain medical conditions. Information that is based on estimates, forecasts, projections, market research or similar methodologies is inherently subject to uncertainties and actual events or circumstances may differ materially from events and circumstances reflected in this information. Unless otherwise expressly stated, we obtained this industry, business, market and other data from reports, research surveys, studies and similar data prepared by market research firms and other third parties, industry, medical and general publications, government data and similar sources.

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SELECTED RISKS AFFECTING OUR BUSINESS

Investing in our common stock involves numerous risks, including the risks described in "Part I, Item 1A. Risk Factors" of this Annual Report on Form 10-K, any one of which could materially adversely affect our business, financial condition, results of operations, and prospects. These risks include, among others, the following:

- We have incurred significant losses and negative cash flows from operations since our inception and expect to continue to incur significant losses and negative cash flows from operations for at least the next 12 months;
- Our independent registered public accounting firm has indicated that our recurring losses, negative cash flows from operations and accumulated deficit raise substantial doubt about our ability to continue as a going concern;
- We have never generated any revenue from product sales and may never be profitable;
- We will need to raise substantial additional funding to complete the development of our product candidate pipeline. This additional funding may not be available on acceptable terms or at all. Failure to obtain this necessary capital when needed may force us to delay, limit or terminate our product development efforts or other operations;
- Raising additional capital may cause dilution to our securityholders, restrict our operations or require us to relinquish rights to our technologies or product candidates;
- We are highly dependent on the success of ONS-5010, our only product candidate in active development, and if ONS-5010 does not
 successfully complete clinical development or receive regulatory approval, or is not successfully commercialized, our business may
 be harmed;
- We may not be successful in our efforts to enter into a strategic partnership for ONS-5010;
- Due to our limited resources and access to capital, we have, and will continue to need to, prioritize development of certain product candidates; and these decisions may prove to have been wrong and may harm our business. We may not be entitled to forgiveness of our recently received Paycheck Protection Program, or PPP, loan, and our application for the PPP loan could in the future be determined to have been impermissible or could result in damage to our reputation;
- Clinical drug development is a lengthy and expensive process and we may encounter substantial delays in our clinical trials or may
 fail to demonstrate safety and efficacy to the satisfaction of applicable regulatory authorities;
- If product liability lawsuits are brought against us, we may incur substantial liabilities and may be required to limit commercialization of our current or future product candidates, and our existing insurance coverage may not be sufficient to satisfy any liability that may arise;
- The development and commercialization of pharmaceutical products is subject to extensive regulation, and we may not obtain regulatory approvals for ONS-5010 in any of the indications for which we plan to develop it, or any future product candidates, on a timely basis or at all;
- Any delays in the commencement or completion, or termination or suspension, of our planned or future clinical trials could result in increased costs to us, delay or limit our ability to generate revenue and adversely affect our commercial prospects;
- We face intense competition and rapid technological change and the possibility that our competitors may develop therapies that are similar, more advanced or more effective than ours. Other products may be approved and successfully commercialized before ours, which may adversely affect our financial condition and our ability to successfully commercialize our product candidates;
- We currently have no marketing and sales organization. If we are unable to establish sales and marketing capabilities in jurisdictions for which we choose to retain commercialization rights, we may be unable to generate any revenue and will depend on the efforts of our licensing partners, if any;
- We rely on third parties to conduct our preclinical and clinical trials and perform other tasks for us. If these third parties do not
 successfully carry out their contractual duties, meet expected deadlines or comply with regulatory requirements, we may not be able
 to obtain regulatory approval for or commercialize our product candidates and our business could be harmed;
- We currently engage single source suppliers for clinical trial services and multiple source suppliers for future drug substance manufacturing, fill-finish manufacturing and product testing of ONS-5010. The loss of any of these suppliers, or any future single source suppliers, could harm our business;

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- If we infringe or are alleged to infringe intellectual property rights of third parties, our business could be harmed. Third-party claims of intellectual property infringement may prevent or delay our development and commercialization efforts;
- We may become involved in lawsuits to protect or enforce any future patents, which could be expensive, time-consuming and unsuccessful;
- If we are unable to obtain and maintain effective patent rights for our product candidates or any future product candidates, we may not be able to prevent competitors from using technologies we consider important in our successful development and commercialization of our product candidates, resulting in loss of any potential competitive advantage our patents may have otherwise afforded us;
- If we are unable to maintain effective proprietary rights for our product candidates or any future product candidates, we may not be able to compete effectively in our markets;
- If we fail to comply with our obligations in the agreements under which we license intellectual property and other rights from third parties or otherwise experience disruptions to our business relationships with our licensors, we could lose license rights that are important to our business;
- Our business could be adversely affected by the effects of health pandemics or epidemics, including the ongoing COVID-19 global pandemic, in regions where we or third parties on which we rely have significant manufacturing facilities, concentrations of clinical trial sites or other business operations, or materially affect our operations, including at our headquarters in New Jersey and at our clinical trial sites, as well as the business or operations of our manufacturers, contract research organizations ("CROs") or other third parties with whom we conduct business;
- We are highly dependent on the services of our key executives and personnel, and if we are not able to retain these members of our management or recruit additional management, clinical and scientific personnel, our business will suffer;
- The trading price of our securities is likely to be volatile, and purchasers of our securities could incur substantial losses; and
- BioLexis has beneficial ownership of a significant percentage of our common stock, together with its affiliates has the right to
 designate members of our board of directors proportionate to its ownership, and is able to exert significant control over matters
 subject to stockholder approval, preventing new investors from influencing significant corporate decisions.

PART I

Item 1. Business

We are a late clinical-stage biopharmaceutical company working to develop the first ophthalmic formulation of bevacizumab approved by the U.S. Food and Drug Administration, or FDA, for use in retinal indications. Our goal is to launch directly or through a strategic partner as the first and only approved bevacizumab in the United States, United Kingdom, Europe, Japan and other markets for the treatment of wet age-related macular degeneration, or wet AMD, diabetic macular edema, or DME, and branch retinal vein occlusion, or BRVO and we are in active late-stage discussions for the licensing and/or co-development rights to ONS-5010.

ONS-5010 (LYTENAVA (bevacizumab-vikg)), our sole product candidate in active clinical development, is an investigational ophthalmic formulation of bevacizumab, which we are developing to be administered as an intravitreal injection for the treatment of wet AMD and other retinal diseases. Bevacizumab is a full-length, humanized anti-VEGF (Vascular Endothelial Growth Factor) recombinant monoclonal antibody, or mAb, that inhibits VEGF and associated angiogenic activity. The study design for our Phase 3 clinical program to evaluate ONS-5010 as an ophthalmic formulation of bevacizumab was reviewed at an end of Phase 2 meeting with the FDA in April 2018, and we filed our investigational new drug application, or IND, with the FDA in the first quarter of calendar 2019.

Our clinical program for ONS-5010 in wet AMD involves three clinical trials, which we refer to as NORSE ONE, NORSE TWO and NORSE THREE. We reported achieving the anticipated safety and efficacy and positive proof-of-concept topline results from NORSE ONE, a clinical experience study, in August 2020. NORSE TWO is our pivotal Phase 3 clinical trial comparing ONS-5010 to ranibizumab (LUCENTIS) that completed enrollment in July 2020. Topline results are expected in the third calendar quarter of 2021. NORSE THREE is an open-label safety study being conducted to ensure the adequate number of safety exposures to ONS-5010 are available for the initial ONS-5010 Biologics License Application, or BLA, filing with the FDA. Enrollment was completed in October 2020. Accordingly, all three of the clinical trials required for our planned BLA submission for wet AMD in the second half of calendar 2021 have either been completed or are fully enrolled.

In addition, we have received agreements from the FDA on three Special Protocol Assessments, or SPAs, for three additional registration clinical trials for our ongoing Phase 3 program for ONS-5010. These SPAs cover the protocols for NORSE FOUR, a registration clinical trial evaluating ONS-5010 to treat BRVO, and NORSE FIVE and NORSE SIX, two registration clinical trials to evaluate ONS-5010 to treat DME. We intend to initiate these studies in 2021 after submission of our BLA for wet AMD.

Currently, the cancer drug Avastin (bevacizumab) is used off-label for the treatment of wet AMD and other retinal diseases such as DME and BRVO even though Avastin has not been approved by regulatory authorities for use in these diseases. If the ONS-5010 clinical program is successful, it will support our plans to submit for regulatory approval in multiple markets in 2021 including the United States, United Kingdom, Europe and Japan, as well as other markets. Because there are no approved bevacizumab products for the treatment of retinal diseases in such major markets, we are developing ONS-5010 as a standard BLA and not using the biosimilar drug development pathway that would be required if Avastin were an approved drug for the targeted diseases. If approved, we believe ONS-5010 has potential to mitigate risks associated with off-label use of unapproved bevacizumab is currently estimated to account for at least 50% of all wet AMD prescriptions in the United States.

Our Strategy

Our goal is to launch ONS-5010 as the first, and only, approved bevacizumab for ophthalmic use in the United States, United Kingdom, Europe, Japan and other markets. We plan to do this directly or through a strategic partner. In order to achieve this goal, we have adopted a streamlined clinical and regulatory strategy to quickly and efficiently complete the process required to submit a BLA with the FDA at the earliest opportunity. The key elements of our strategy include:

- Leveraging the ophthalmic drug development and commercialization expertise of our leadership team. Members of our executive team have extensive expertise in developing and commercializing treatments for retinal diseases, such as wet AMD. We intend to leverage their collective experience to further the development of, and execute an optimal commercial strategy for, ONS-5010, including licensing rights to ONS-5010 to a strategic partner.
- Engaging with regulatory agencies to establish clear guidelines for potential approval. We have continued our approach to work closely with regulatory authorities to develop and conduct clinical trials that we believe will appropriately support approval of our product candidates if our clinical trials are successful. As an ophthalmic formulation of bevacizumab, we believe ONS-5010 has a well-defined regulatory pathway.
- Conducting and efficiently executing clinical trials inside and outside of the United States to support potential approval. We have designed our ONS-5010 clinical program to take advantage of reduced costs for clinical trials conducted outside of the United States, as appropriate, such as our NORSE ONE study. We intend to further this strategy, in a manner that will support a BLA submission in the United States at the earliest opportunity for ONS-5010.
- Reducing and managing costs to minimize additional investment to complete our development programs. We have made the strategic
 decision to outsource the commercial manufacturing and future clinical trial supply manufacturing for our product candidates. We believe this
 will significantly reduce future overhead costs not directly related to our ONS-5010 program.

Our Product Candidate Portfolio

We are actively developing ONS-5010 (LYTENAVA (bevacizumab-vikg)) for use in the treatment of retina diseases such as wet AMD, DME and BRVO. We continue to hold the developed market commercialization rights for two legacy biosimilar product candidates, but currently have no plans to further develop these assets.

ONS-5010 — Bevacizumab for Ophthalmic Use

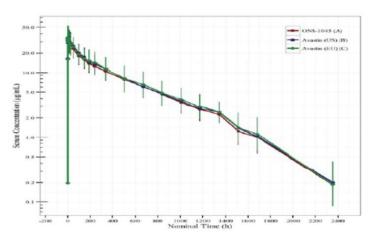
ONS-5010 is an investigational ophthalmic formulation of bevacizumab under development to be administered as an intravitreal injection for the treatment of wet AMD and other retinal diseases. We currently intend to commercialize both vial and pre-filled syringe formulations if approved.

Bevacizumab is a full-length, humanized anti-VEGF recombinant mAb that inhibits VEGF and associated angiogenic (the growth of new blood vessels) activity. With wet AMD, abnormally high levels of VEGF are secreted in the eye. VEGF is a protein that promotes the growth of new abnormal blood vessels. Anti-VEGF injection therapy blocks this growth. Since the advent of anti-VEGF therapy, it has become the standard of care treatment option within the retina community, globally.

Previously, we were developing ONS-5010 as a biosimilar of the cancer drug Avastin for use in oncology indications (ONS-1045). In the ONS-1045 program, our bevacizumab met the primary and secondary endpoints in a three-arm single-dose pharmacokinetic, or PK, Phase 1 clinical trial. All the PK endpoints met the bioequivalency criteria of the geometric mean ratios within 90% confidence interval of 80-125% when compared to both U.S.- and E.U.-sourced Avastin reference products. We are developing ONS-5010 as an ophthalmic formulation of bevacizumab for a BLA filing and not using the biosimilar drug development pathway. The following figure demonstrates the concentration-time profile of ONS-1045, U.S.-licensed Avastin, and E.U.-licensed Avastin as the mean. The vertical line at time zero denotes dosing. These results suggest a high degree of similarity among the three products.



Comparative Potency of ONS-1045 versus Avastin (U.S. and E.U.)



Market Opportunity

Age-related macular degeneration, or AMD, is a common eye condition and a leading cause of vision loss among people age 50 and older. Wet AMD is a form of "late stage" AMD and is also called neovascular AMD. In wet AMD, abnormal blood vessels grow underneath the retina. These vessels can leak fluid and blood, which may lead to swelling and damage of the macula causing vision loss. With wet AMD, abnormally high levels of VEGF are secreted in the eyes. VEGF is a protein that promotes the growth of new abnormal blood vessels. Anti-VEGF injection therapy blocks this growth. Since the advent of anti-VEGF therapy, it has become the standard of care treatment option within the retina community, globally. Wet AMD is a significant disease worldwide, with an estimated prevalence of over 2.9 million patients diagnosed in the United States, European countries and Japan alone in 2020 (GlobalData). Although bevacizumab is not currently FDA-approved for use in treating wet AMD, it is believed that bevacizumab and prescriptions in the United States, where Avastin is repackaged through compounding pharmacies and prescribed off-label. If approved, we believe ONS-5010 has potential to mitigate risks associated with off-label repackaging of bevacizumab.

DME is caused by a complication of diabetes called diabetic retinopathy. Diabetic retinopathy is the most common diabetic eye disease and the leading cause of irreversible blindness in working age Americans. Diabetic retinopathy usually affects both eyes and is caused by ongoing damage to the small blood vessels of the retina. The leakage of fluid into the retina may lead to swelling of the surrounding tissue, including the macula. DME is the most common cause of vision loss in people with diabetic retinopathy. DME can occur at any stage of diabetic retinopathy, although it is more likely to occur in later stages of the disease. There were approximately 8.6 million patients with DME in the United States, European countries and Japan alone in 2020 (GlobalData).

In BRVO, retinal vein occlusions occur when there is a blockage of veins carrying blood with needed oxygen and nutrients away from the nerve cells in the retina. A blockage in the main vein of the retina is referred to as a central retinal vein occlusion, or CRVO, while a blockage in a smaller vein is called a branch retinal vein occlusion, or BRVO. Per the American Academy of Ophthalmology, retinal vein occlusions are the second most common retinal vascular disorder after diabetic retinopathy. There were an estimated 0.3 million patients with BRVO in the United States, European countries and Japan alone in 2020 (GlobalData).

Annual revenue (worldwide) for anti-VEGF therapies is estimated to be \$13.1 billion in 2020 (GlobalData).

Clinical Development Status

The study design for our Phase 3 clinical program to evaluate ONS-5010 as an ophthalmic formulation of bevacizumab was reviewed with the FDA at an end of Phase 2 meeting in April 2018, and we filed our IND with the FDA in the first quarter of calendar 2019. Our registration plans for wet AMD, the initial indication planned for ONS-5010, consists of three clinical trials which we refer to as NORSE ONE, NORSE TWO and NORSE THREE. We reported achieving the anticipated safety and efficacy and positive proof-of-concept topline results from NORSE ONE, a clinical experience study, in August 2020. NORSE TWO is our pivotal Phase 3 clinical trial comparing ONS-5010 to ranibizumab (LUCENTIS) that completed enrollment in July 2020. Topline results are expected in the third calendar quarter of 2021. NORSE THREE is an open-label safety study being conducted to ensure the adequate number of safety exposures to ONS-5010 are available for the initial ONS-5010 BLA filing with the FDA. Enrollment was completed in October 2020. Accordingly, all three of the clinical trials required for our planned BLA submission for wet AMD in the second half of calendar 2021 have either been completed or are fully enrolled.

We have also received agreement from the FDA on three SPAs for three additional registration clinical trials for our ongoing Phase 3 program for ONS-5010. The agreements reached with the FDA on these SPAs cover the protocols for NORSE FOUR, a registration clinical trial to treat BRVO, and NORSE FIVE and NORSE SIX, two registration clinical trials to treat DME. We intend to initiate these studies in 2021 after submission of our BLA for wet AMD.

NORSE ONE

NORSE ONE is designed as a randomized, masked clinical experience trial and serves as the first of our two required registration clinical trials to support our planned BLA filing with the FDA for ONS-5010 for the treatment of wet AMD. A total of 61 treatment naïve and previously treated patients were enrolled in the study at nine sites in Australia and randomized onto treatment arms of ONS-5010 or ranibizumab. The primary endpoint for the study is the difference in proportion of subjects gaining 15 letters of BCVA at Day 330 for ONS-5010 dosed on a monthly basis compared to ranibizumab dosed using the PIER alternative dosing regimen of three monthly doses followed by quarterly dosing.

In August 2020, we reported positive proof-of-concept topline results for ONS-5010 as it achieved anticipated safety and efficacy expectations. In the analysis of treatment naïve patients who had a baseline visual acuity of < 67 letters (20/50 or worse) at study entry, 2 of 4 (50%) patients in the ONS-5010 arm and 4 of 9 (44%) patients in the ranibizumab arm achieved > 15 letters at Day 330. This subgroup is the relevant patient population for our ongoing pivotal clinical trial of ONS-5010. Additionally, in a key secondary endpoint for the relevant patient population, the ONS-5010 patients achieved a mean improvement in BCVA of 8.3 letters.

NORSE TWO

NORSE TWO is a masked, randomized, pivotal Phase 3 clinical trial that serves as the second of our two required clinical trials evaluating ONS-5010 against ranibizumab for wet AMD. Enrollment is complete with a total of 227 primarily treatment naïve patients enrolled at 39 clinical trial sites in the United States. Patients enrolled in the study were randomized to either ONS-5010 or ranibizumab arms and are treated for 11 months. The primary endpoint for the study is the difference in proportion of subjects gaining 15 letters of BCVA at Day 330 for ONS-5010 dosed on a monthly basis compared to ranibizumab dosed using the PIER alternative dosing regimen. We expect to report topline results from the study in the third quarter of calendar 2021.

NORSE THREE

NORSE THREE is an open-label safety study being conducted to ensure the adequate number of safety exposures to ONS-5010 are available for the initial regulatory filings in wet AMD. A total of 195 patients were enrolled in October 2020 with a range of retinal diseases for which an anti-VEGF drug is a therapeutic option, including wet AMD, DME and BRVO. Patients in NORSE THREE will receive three doses of ONS-5010 over three months. Enrollment is now complete.

Commercialization, Sales and Marketing

Our commercialization strategy is to maximize the revenue potential of ONS-5010. Although we are in active late-stage discussions for the licensing and/or co-development rights to ONS-5010, if we are not able to reach agreement, we could potentially market it ourselves if approved as we currently own all of the development and commercialization rights to ONS-5010 and only have an agreement to license rights to our People's Republic of China, or PRC, joint venture when formed for the greater China market (see "—Collaboration and License Agreements—Syntone-Private Placement and PRC Joint Venture"). If approved, we believe that ONS-5010 will be entitled to 12 years regulatory exclusivity granted in the United States against biosimilar competition.

For many years, anti-VEGF therapy has been the standard of care for many ophthalmic diseases, including wet AMD, DME and BRVO. However, although multiple branded drugs have been approved for these indications (e.g., LUCENTIS, EYLEA and BEOVU), they are very expensive. Doctors who wish to treat their retinal patients with a less expensive anti-VEGF drug often use bevacizumab. But because there is no FDA-approved ophthalmic formulation of bevacizumab, doctors must use repackaged bevacizumab (Avastin) provided by compounding pharmacists. Despite clinicians' widespread acceptance and use of bevacizumab to treat ophthalmic diseases such as wet AMD, DME and BRVO, no manufacturer has previously sought approval from FDA of bevacizumab for these purposes.

The repackaged bevacizumab for ophthalmic use that is provided by compounding pharmacies can carry known risks of contamination (including silicone oil droplet contamination from syringes) and inconsistent potency, with potentially severe consequences, as leading retinal societies have reported. For these reasons, the retina community and payors have shown interest in the development of an ophthalmic formulation of bevacizumab that could be an on-label alternative to repackaged bevacizumab from compounding pharmacists.

To meet this retinal market need, we are developing ONS-5010 as an investigational ophthalmic formulation of bevacizumab. If approved, it will provide an FDA-approved and European Agency-approved, viable treatment option across the spectrum of anti-VEGF ophthalmic drugs that treat wet AMD, DME and BRVO. Additionally, if approved, it would avoid the safety, sterility, potency, availability and syringe drawbacks that can occur with repackaged bevacizumab from compounding pharmacies.

Furthermore, if ONS-5010 is approved and commercialized, we expect that it will be priced responsibly compared to other branded anti-VEGF therapies to help mitigate the high cost of treatment for retinal diseases. Both in the United States and globally, the high cost of treating retinal diseases such as wet AMD, DME and BRVO can result in patients receiving an insufficient number of treatments, or potentially no treatment at all. Our commercial strategy for ONS-5010 includes providing an option as a first-line therapy for retinal diseases including step therapy where an anti-VEGF therapy is indicated. Step therapy is a type of prior authorization for drugs that begins treatment for a medical condition with the most preferred drug therapy and progresses to other therapies only if necessary.

By ensuring the consistent availability of safe, sterile and fully potent on-label bevacizumab for intravitreal injection, at a responsible price, ONS-5010, if approved, has the potential to become the anti-VEGF cornerstone of care for retinal diseases. It may also provide synergies with future longacting agents and adjunct therapies for advanced treatment of wet AMD, DME and BRVO. ONS-5010 has the potential, if approved and commercialized, either by us or thorugh a strategic partner, with a responsible pricing strategy, to help lower the aggregate costs of treating retinal diseases for the overall healthcare system.

Collaboration and License Agreements

We enter into collaboration and license agreements in the ordinary course of our business. We have in-licensed certain technology from Selexis SA, or Selexis, that we used to research and develop our product candidates. For product candidates developed using the Selexis technology, we enter into commercial license agreements with Selexis that give us rights to commercialize, file investigational new drugs, or INDs and enter into collaborative arrangements with third parties for the further development and commercialization of such biosimilar product candidates. We have also licensed rights to our inactive biosimilar product candidates (ONS-3010, ONS-1045 and ONS-1050) in other markets and are currently in active late-stage discussions for the licensing and/or co-development rights to ONS-5010.

MTTR — Strategic Partnership Agreement (ONS-5010)

In February 2018, we entered into a strategic partnership agreement with MTTR LLC, or MTTR, to advise on regulatory, clinical and commercial strategy and assist in obtaining approval of ONS-5010, our bevacizumab therapeutic product candidate for ophthalmic indications. In January 2020, we agreed to terminate this arrangement and in connection therewith, following receipt of necessary stockholder approval, in March 2020, we issued an aggregate of 7,244,739 shares of our common stock to the four principals of MTTR (who include two of our named executive officers, Mr. Dagnon and Mr. Evanson) pursuant to individual consulting agreements we entered into with each of them, and paid MTTR a one-time settlement fee of \$110,000. The consulting agreements also include terms setting the respective compensation arrangements of each of the principals, including for Mr. Dagnon and Mr. Evanson, who have been serving as executive officers since November 2018.

We did not pay Mr. Dagnon or Mr. Evanson any direct compensation as consultants or as employees during the year ended September 30, 2019 nor during the period from October 1, 2019 through March 19, 2020. During this time, Mr. Dagnon and Mr. Evanson were compensated directly by MTTR for services provided to us, including as executive officers. We began compensating Mr. Dagnon and Mr. Evanson directly as consultants effective March 19, 2020. Mr. Dagnon and Mr. Evanson directly as consultants effective arrangement. MTTR and its four principals under the strategic partnership agreement and the subsequent individual consulting agreements earned an aggregate \$1,294,089 and \$1,744,933 during the year ended September 30, 2020 and 2019, respectively, which includes monthly consulting fees and expense reimbursement, but excludes stock-based compensation related to restricted stock.

Syntone – Private Placement and PRC Joint Venture

In May 2020, we entered into a stock purchase agreement with Syntone Ventures LLC, or Syntone, pursuant to which we sold and issued, in a private placement in June 2020, 16,000,000 shares of our common stock at a purchase price of \$1.00 per share, for aggregate gross proceeds of \$16.0 million. In connection with the entry into the stock purchase agreement, we entered into a joint venture agreement with Syntone's PRC-based affiliate, pursuant to which we agreed to form a PRC joint venture that will be 80% owned by Syntone's PRC-affiliate and 20% owned by us. Once formed, we intend to enter into a royalty-free license with the PRC joint venture for the development, commercialization and manufacture of ONS-5010 in the greater China market, which includes Hong Kong, Taiwan and Macau.

Selexis — Humira (ONS-3010), Avastin (ONS-5010 and ONS-1045) and Herceptin (ONS-1050)

In October 2011, we entered into a research license agreement with Selexis, whereby we acquired a non-exclusive license to conduct research internally or in collaboration with third parties to develop recombinant proteins from cell lines created in mammalian cells using the Selexis expression technology, or the Selexis Technology. The research license expired on October 9, 2018, and accordingly, we are no longer using the Selexis Technology in our research.

Selexis also granted us a non-transferrable option to obtain a perpetual, non-exclusive, worldwide commercial license under the Selexis Technology to manufacture, or have manufactured, a recombinant protein produced by a cell line developed using the Selexis Technology for clinical testing and commercial sale. We exercised this option in April 2013 and entered into three commercial license agreements with Selexis for ONS-1045 (which covers ONS-5010), and two of our biosimilar product candidates, ONS-3010 and ONS-1050 (which are no longer in active clinical development). We paid an upfront licensing fee to Selexis for each commercial license agreed to pay a fixed milestone payment for each licensed product. In addition, we are required to pay a single-digit royalty on a final product-by-final product and country-by-country basis, based on worldwide net sales of such final products by us or any of our affiliates or sub-licensee during the royalty term. At any time during the term, we have the right to terminate our royalty payment obligation by providing written notice to Selexis and paying Selexis a royalty termination fee.

Commercial License Agreements

On April 11, 2013, following the exercise of our option to enter a commercial license under the Selexis research license, we entered into commercial license agreements with Selexis for each of ONS-1045, ONS-3010 and ONS-1050. Under the

terms of each commercial license agreement, we acquired a non-exclusive worldwide license under the Selexis Technology to use the cell lines developed under the research license and related materials, to manufacture and commercialize licensed and final products, with a limited right to sublicense.

We were required to pay an upfront licensing fee of CHF 65,000 (approximately \$0.1 million) to Selexis for each commercial license and also agreed to pay up to CHF 365,000 (approximately \$0.4 million) in milestone payments for each licensed product. In addition, we are required to pay a single-digit royalty on a final product-by-final product and country-by-country basis, based on worldwide net sales of such final products by us or any of our affiliates or sublicensees during the royalty term. The royalty term for each final product in each country is the period commencing from the first commercial sale of the applicable final product in the applicable country and ending on the expiration of the specified patent coverage. At any time during the term, we have the right to terminate our royalty payment obligation by providing written notice to Selexis and paying Selexis a royalty termination fee of CHF 1,750,000 (approximately \$1.8 million). The initiation of our Phase 3 clinical program for ONS-5010 in fiscal 2019 triggered a CHF 65,000 (approximately \$0.1 million) milestone payment to Selexis under the commercial license agreement, which we paid in November 2019. As of September 30, 2020, we have paid Selexis a gagregate of approximately \$0.4 million under the commercial license agreements.

Each of our commercial agreements with Selexis will expire in its entirety upon the expiration of all applicable Selexis patent rights. The licensed patent rights consist of two patent families. The first patent family relates to methods of transferring cells, and is filed in the United States, Australia, Canada, Europe, Japan and Singapore. This patent family will begin to expire worldwide in 2022. The second patent family claims DNA compositions of matter useful for having protein production increasing activity. This patent family is filed in the United States, Australia, Canada, China, Europe, Hong Kong, Israel, India, Japan, South Korea, Russia, Singapore and South Africa. This patent family will begin to expire worldwide in 2025. Either party may terminate the related agreement in the event of an uncured material breach by the other party or in the event the other party becomes subject to specified bankruptcy, winding up or similar circumstances.

Either party may also terminate the related agreement under designated circumstances if the Selexis Technology infringes third-party intellectual property rights. In addition, we have the right to terminate each of the commercial agreements at any time for our convenience; however, with respect to the agreements relating to ONS-3010 and ONS-1045, this right is subject to the consent of Laboratories Liomont, S.A. de C.V., or Liomont (a licensing partner in Mexico for ONS-3010 and ONS-1045) pursuant to a corresponding letter we executed in conjunction with the standby agreement entered into between Selexis and Liomont on November 11, 2014. The standby agreement permits Liomont to assume the license under the applicable commercial agreement for Mexico upon specified triggering events involving our bankruptcy, insolvency or similar circumstances.

Ex-U.S. Collaboration and License Agreements

In addition to pursuing potential strategic collaborations and partnerships for ONS-5010 for which we remain in active discussions, we have entered into strategic collaborations for our legacy biosimilar drug product candidates that are no longer in active clinical development. Currently, we have a joint participation agreement in place for ONS-3010 with Zhejiang Huahai Pharmaceutical Co., Ltd., or Huahai, whereby we share any future post-Phase 1 development costs with Huahai, and proportionately share the revenues from commercialization of ONS-3010 in the United States, Canada, European Union, or E.U., Japan, Australia and New Zealand. We could also be required to form a joint venture to further develop and commercialization ONS-3010 with Huahai in the agreed countries, if so, requested by Huahai. However, we do not have any other development and commercialization agreements for the United States or for major ex-U.S. markets, such as the E.U. and Japan.

For emerging markets opportunities, in 2012 and 2013, we established early country-specific partnerships for ONS-3010 and ONS-1045 in China with Huahai, in India with IPCA Laboratories Limited, or IPCA, and in Mexico with Liomont, and in September 2017 we entered into an agreement with BioLexis Pte. Ltd., or BioLexis, our controlling stockholder, providing for the license of rights to ONS-3010 and ONS-1045 in emerging markets excluding China, India and Mexico. To date, these agreements have collectively provided an aggregate of \$29.0 million in payments as of September 30, 2020.

Until such time as we may enter into a strategic partnership for ONS-5010, aside from our joint participation agreement in place for ONS-3010 with Huahai, whereby we agreed to share post-Phase 1 clinical development costs, and proportionately share the revenues from commercialization of ONS-3010 in the United States, Canada, E.U. and Japan, among other markets, and under which we could be required to form a joint venture with Huahai for ONS-3010 if so requested by Huahai, we do not have any commercial license or development agreements for the United States or for major ex-U.S. markets, such as the E.U. or Japan. We currently have collaboration and license agreements for smaller ex-U.S. markets and, collectively, such agreements have provided an aggregate of \$29.0 million in payments as of September 30, 2020 for our most advanced biosimilar product candidates. Our contracts include agreements with IPCA (for ONS-3010, ONS-1045 and ONS-1050 in India and other regional markets), Liomont (for ONS-3010 and ONS-1045 in Mexico), Huahai (for ONS-3010 and ONS-1045 in China) and BioLexis (for ONS-3010 and ONS-1045 in emerging markets excluding China, India and Mexico). We have also agreed to license ONS-5010 to our PRC-joint venture with Syntone when formed, which is discussed above. Our arrangements with these partners for our biosimilar product candidates generally include a strategic license for a defined territory for agreed biosimilar product candidates and may also include agreements to assist with research and development to assist our contract counterparty in establishing their own mAb research, development and manufacturing capabilities. Under our existing strategic licensing agreements, we generally received an upfront payment upon execution, and have the ability to earn additional regular milestone payments and the right to receive royalties (generally a mid-single digit to low-teens percentage rate) based on net sales in the agreed territory. Our existing agreements to assist with research and development also included an upfront payment upon execution, and we have the ability to earn additional regular milestone payments, and the right to receive royalties (generally a mid-single digit to low-teens percentage rate) based on net sales in the agreed territory.

Generally, our agreements expire on a product-by-product basis on the date of the expiration of the royalty revenue term for all products in the territory. The royalty revenue term is 10 years from the date of first commercial sale and any renewal is subject to good faith negotiation. The license term for the agreed territory is perpetual. Either party may terminate the agreement in its entirety or with respect to a particular product if the other party materially breaches the agreement, subject to specified notice and cure periods. In addition, we have the right to terminate the agreement in connection with any interference, opposition or challenge of our patent rights. If the agreement is terminated due to our breach, our contract counterparty is generally free to use all applicable technology and know-how that we have provided under the agreement.

As noted above, our collaboration agreements with Huahai also includes a joint participation agreement, which provides for the co-funding of development of ONS-3010 in the United States, Canada, E.U., Japan, Australia and New Zealand and the proportionate sharing of the revenues from commercialization of ONS-3010 in the agreed countries, and also provides for the formation of a joint venture with Huahai to further develop and commercialize ONS-3010 with Huahai in the agreed countries, if so requested by Huahai.

In the event Huahai funds its proportionate share of development costs incurred after completion of the "Phase-3 Ready Package," Huahai would be entitled to retain its 51% value ownership, with us entitled to retain our 49% value ownership, of ONS-3010 in the agreed countries. Similarly, revenues from the commercialization of ONS-3010 in the agreed countries (including major markets such as the United States and the E.U., among others), would also be shared based on such proportional ownership interests. In the event that Huahai does not fund its proportionate share of such development costs, the joint participation agreement provides for a proportionate adjustment to our respective value ownership interests based on our respective investments in such development costs, which would increase our value ownership interest in ONS-3010.

Throughout the term of the joint participation agreement, we and our affiliates are prohibited from, directly or indirectly, conducting or having conducted or funding any discovery, research, development, regulatory, manufacturing or commercialization activity, alone or in collaboration with a third party, of any biosimilar product having the same reference product as the ONS-3010 compound or corresponding products, for use in the United States, Canada, E.U., Japan, Australia and New Zealand, other than ONS-3010 with Huahai pursuant to the joint participation agreement.

Unless terminated early upon mutual agreement of the parties, or due to a material breach of either party that is uncured, the joint participation agreement will terminate upon entry into a mutually acceptable collaboration agreement between us and Huahai for ongoing development and commercialization of ONS-3010 in the agreed countries, or we and Huahai enter into an agreed license with a third party for such ongoing development and commercialization of ONS-3010 in the agreed

countries. If the joint participation agreement is terminated for cause due to our breach, we could be required to refund Huahai any amounts funded by Huahai to develop ONS-3010, as well as pay Huahai a 6% royalty on net sales made by us or an affiliate, as well as 25% of revenues we receive from a sublicensee for commercial sales of ONS-3010 until the aggregate of such payments is equal to 10 times the amount Huahai funded for the development of ONS-3010.

Furthermore, if we were to file a voluntary petition in bankruptcy, or have an involuntary petition filed that we could not dismiss within 120 days, then Huahai would be granted an exclusive license to continue the development and commercialization of ONS-3010 in the agreed countries.

As of September 30, 2020, we have received an aggregate of \$5.0 million of payments from IPCA under our various agreements, an aggregate of \$3.0 million of payments from Liomont under our various agreements, an aggregate of \$16.0 million of payments from Huahai under our various agreements, \$10.0 million of which were pursuant to the joint participation agreement, and an aggregate of \$5.0 million from BioLexis under our joint development and licensing agreement.

Manufacturing

We are working with FujiFilm Diosynth Biotechnologies, or Fuji, and Ajinomoto Bio-pharma Services, or AjiBio, to provide product manufacturing in current Good Manufacturing Practices, or cGMP, manufacturing facilities. We have also executed a supply agreement for a best-in-class pre-filled ophthalmic syringe, which we believe will provide both ease-of-use for clinicians and add to ONS-5010's safety profile over the current unapproved therapies that have caused problems related to syringe malfunction, contamination, etc. We will screen other contract manufacturers to meet our clinical, commercial and regulatory supply requirements as needed. For a discussion of risks related to our sources and availability of supplies, please see "Risk Factors—Previously, we manufactured bulk drug substance for preclinical and clinical supplies of our product candidates in our in-house facility. Our business could be harmed if our new contract manufacturer is unable to manufacture our product candidates at the necessary quantity or quality levels,." and "Risk Factors—We currently engage single source suppliers for clinical trial services and multiple source suppliers for future drug substance manufacturing, fill-finish manufacturing and product testing of ONS-5010. The loss of any of these suppliers, or any future single source suppliers, could harm our business."

Competition

Competition in the area of pharmaceutical research and development is intense and significantly depends on scientific and technological factors. These factors include the availability of patent and other protection for technology and products, the ability to commercialize technological developments and the ability to obtain regulatory approval for testing, manufacturing and marketing. Our competitors include major pharmaceutical and specialized biotechnology companies, many of which have financial, technical and marketing resources significantly greater than ours. In addition, many biotechnology companies have formed collaborations with large, established companies to support research, development and commercialization of products that may be competitive with ours, and we may also compete against other biotechnology companies in our efforts to find a potential strategic partner for ONS-5010. Academic institutions, governmental agencies and other public and private research organizations are also conducting research activities and seeking patent protection and may commercialize products on their own or through joint ventures. We are aware of certain other products manufactured or under development by competitors that are used for the treatment of the health conditions that we have targeted for product development. We can provide no assurance that developments by others will not render our technology obsolete, noncompetitive or harm our development strategy, that we will be able to keep pace with new technological developments, that our technology will be able to supplant established products and methodologies in the therapeutic areas that are targeted by us or that we will be able to enter into a strategic partnership arrangement for ONS-5010. The foregoing factors could have a material adverse effect on our business, prospects, financial condition and results of operations. These companies, as well as academic institutions, governmental agencies and private research organizations, also compete with us in recrui

We will encounter competition from existing firms that offer competitive solutions in ocular diseases. These competitive companies could develop products that are superior to, or have greater market acceptance, than the products being

developed by us. We will have to compete against other biotechnology and pharmaceutical companies with greater market recognition and greater financial, marketing and other resources.

Wet-AMD Market

AMD is a medical condition that usually affects older adults and generally results in a loss of vision. AMD occurs in "dry" (non-exudative) and "wet" (exudative) forms. Wet AMD is the advanced form of macular degeneration that involves the formation of abnormal and leaky blood vessels in the back of the eye behind the retina, through a process known as choroidal neovascularization. While the wet form accounts for approximately 15% of all AMD cases, according to the National Eye Institute, it is responsible for 90% of severe vision loss associated with AMD. The National Eye Institute also estimates that the prevalence of wet AMD among adults 40 years or older in the United States is approximately 1.75 million people. In addition, more than 200,000 new cases are diagnosed annually in North America.

Competitive Landscape

Off-label use of bevacizumab (Avastin) is estimated to be at least 50% of the overall market in the United States. The current FDA approved market leaders for the treatment of wet AMD are VEGF inhibitors, including LUCENTIS, EYLEA and BEOVU. Annual revenue (worldwide) for anti-VEGF therapies is estimated to be \$13.1 billion in 2020 (GlobalData). Bevacizumab, LUCENTIS, EYLEA and BEOVU are all administered via frequent intravitreal injections directly into the eye. We are developing ONS-5010 as an approved bevacizumab for the treatment of wet AMD, as well as DME and BRVO.

In addition to the other treatments used in patients with wet AMD, there are various other companies with product candidates in Phase 1, 2 and 3 clinical trials for the treatment of wet AMD. Programs currently in Phase 2 or Phase 3 clinical trials include, but are not limited to:

- Abicipar Pegol, a VEGF targeting DARPin molecule being developed by Allergan plc;
- X-82, an oral tyrosine kinase inhibitor being developed by Tyrogenex, Inc.;
- ALG-1001, an integrin targeting peptide being developed by Allegro Ophthalmics LLC;
- Zimura, a C-3 inhibitor being developed by Ophthotech Corporation;
- RG7716, a bispecific antibody to both VEGF-A and Ang2 being developed by Hoffman-La Roche AG;
- OPT-302, an inhibitor of VEGF-C and VEGF-D being developed by Opthea Limited; and
- PAN-90806, a selective inhibitor of VEGF being developed by PanOptica Inc.

All of these product candidates in clinical development, with the exception of X-82 and PAN-90806, use an intravitreal route of administration much like the current standards of care. We believe that ONS-5010 has potential competitive advantages through the familiarity of patients and physicians in using off-label Avastin. We also believe we have reduced the risk in our clinical program by leveraging our prior work in developing a biosmilar drug product candidate for Avastin as a treatment for cancer. However, clinical trial data from other clinical programs may negatively impact our ability to garner future financing or business collaborations, combinations or transactions with other pharmaceutical and biotechnology companies.

Intellectual Property

Our commercial success depends in part on our ability to avoid infringing the proprietary rights of third parties, our ability to obtain and maintain proprietary protection for our technologies where applicable and to prevent others from infringing our proprietary rights. We seek to protect our proprietary technologies by, among other methods, evaluating relevant

patents, establishing defensive positions, monitoring E.U. oppositions and pending intellectual property rights, preparing litigation strategies in view of the U.S. legislative framework and filing U.S. and international patent applications on technologies, inventions and improvements that are important to our business. As of November 23, 2020, we own two U.S. patent, nine foreign patents, five pending U.S. non-provisional applications, and 41 pending international applications that were nationalized from seven Patent Cooperation Treaty, or PCT, applications, which relate to formulations developed for ONS-3010 and ONS-5010/ONS-1045, methods of antibody purification, methods for purifying antibodies to separate isoforms, methods of use, methods of reducing high molecular weight species, and modulating afucosylated species as well as efficiently determining the amino acid sequence of antibodies. Our first PCT application was nationalized in April 2016 in Australia, Canada, China, Europe, Hong Kong, India, Japan, Mexico and the United States. If granted, patents issuing from these nine applications are expected to expire in 2034, absent any adjustments or extensions. Our second PCT application was nationalized in July 2017 in Europe and the United States. If granted, patents issuing from these two applications are expected to expire in 2036, absent any adjustments or extensions. Our third PCT application was nationalized in June 2018 in Australia, Canada, China, Europe, India, Japan, Mexico and the United States. If granted, patents issuing from these eight applications are expected to expire in 2036, absent any adjustments or extensions. Our fourth PCT application was nationalized in July 2018 in Australia, Canada, China, Europe, India, Japan, Mexico and the United States. If granted, patents issuing from these eight applications are expected to expire in 2037, absent any adjustments or extensions. Our fifth PCT application was nationalized in August 2018 in Australia, Canada, China, Europe, India, Japan, Mexico and the United States. If granted, patents issuing from these eight applications are expected to expire in 2037, absent any adjustments or extensions. Our sixth PCT application was nationalized in August 2018 in Australia, Canada, China, Europe, India, Japan, Mexico and the United States. If granted, patents issuing from these eight applications are expected to expire in 2037, absent any adjustments or extensions. Our seventh PCT application was nationalized in October 2020 in Australia, Brazil, Canada, China, Europe, Israel, Japan, Korea, Mexico, New Zealand, Russian Federation, Singapore, South Africa and the United States. If granted, patents issuing from these fourteen applications are expected to expire in 2039, absent any adjustments or extensions. We also rely on trade secrets, know-how and continuing technological innovation to develop and maintain our proprietary position.

The term of individual patents depends upon the legal term of the patents in countries in which they are obtained. In most countries, including the United States, the patent term is generally 20 years from the earliest date of filing a non-provisional patent application in the applicable country. In the United States, a patent's term may, in certain cases, be lengthened by patent term adjustment, which compensates a patentee for administrative delays by the United States 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.

Regulatory

Government Regulation and Product Approval

The FDA and other regulatory authorities at federal, state, and local levels, as well as in foreign countries, extensively regulate, among other things, the research, development, testing, manufacture, quality control, import, export, safety, effectiveness, labeling, packaging, storage, distribution, record keeping, approval, advertising, promotion, marketing, post-approval monitoring, and post-approval reporting of biologics such as those we are developing. We, along with third-party contractors, will be required to navigate the various preclinical, clinical and commercial approval requirements of the governing regulatory agencies of the countries in which we wish to conduct studies or seek approval or licensure of our product candidates.

The process required by the FDA before biologic product candidates may be marketed in the United States generally involves the following:

- completion of preclinical laboratory tests and animal studies performed in accordance with the FDA's current Good Laboratory Practices, or GLP, regulation;
- submission to the FDA of an IND, which must become effective before clinical trials may begin and must be updated annually or when significant changes are made;

- approval by an independent Institutional Review Board, or IRB, or ethics committee at each clinical site before the trial is commenced;
- performance of adequate and well-controlled human clinical trials to establish the safety, purity and potency of the proposed biologic product candidate for its intended purpose;
- preparation of and submission to the FDA of a BLA after completion of all pivotal clinical trials;
- a determination by the FDA within 60 days of its receipt of a BLA to file the application for review;
- satisfactory completion of an FDA Advisory Committee review, if applicable;
- satisfactory completion of an FDA pre-approval inspection of the manufacturing facility or facilities at which the proposed product is
 produced to assess compliance with cGMP and to assure that the facilities, methods and controls are adequate to preserve the biological
 product's continued safety, purity and potency, and of selected clinical investigation sites to assess compliance with Good Clinical Practices,
 or GCP; and
- FDA review and approval of the BLA to permit commercial marketing of the product for particular indications for use in the United States.

Preclinical and Clinical Development

Prior to beginning the first clinical trial with a product candidate in the United States, we must submit an IND to the FDA. An IND is a request for authorization from the FDA to administer an investigational new drug product to humans. The central focus of an IND submission is on the general investigational plan and the protocol(s) for clinical studies. The IND also includes results of animal and in vitro studies assessing the toxicology, pharmacokinetics, pharmacology, and pharmacodynamic characteristics of the product; chemistry, manufacturing, and controls information; and any available human data or literature to support the use of the investigational product. An IND must become effective before human clinical trials may begin. The IND automatically becomes effective 30 days after receipt by the FDA, unless the FDA, within the 30-day time period, raises safety concerns or questions about the proposed clinical trial. In such a case, the IND may be placed on clinical hold and the IND sponsor and the FDA must resolve any outstanding concerns or questions before the clinical trial can begin. Submission of an IND therefore may or may not result in FDA automatization to begin a clinical trial.

Clinical trials involve the administration of the investigational product to human subjects under the supervision of qualified investigators in accordance with GCPs, which include the requirement that all research subjects provide their informed consent for their participation in any clinical study. Clinical trials are conducted under protocols detailing, among other things, the objectives of the study, the parameters to be used in monitoring safety and the effectiveness criteria to be evaluated. A separate submission to the existing IND must be made for each successive clinical trial conducted during product development and for any subsequent protocol amendments. Furthermore, an independent IRB for each site proposing to conduct the clinical trial must review and approve the plan for any clinical trial and its informed consent form before the clinical trial begins at that site and must monitor the study until completed. Regulatory authorities, the IRB or the sponsor may suspend a clinical trial at any time on various grounds, including a finding that the subjects are being exposed to an unacceptable health risk or that the trial is unlikely to meet its stated objectives. Some studies also include oversight by an independent group of qualified experts organized by the clinical study sponsor, known as a data safety monitoring board, which provides authorization for whether or not a study may move forward at designated check points based on access to certain data from the study and may halt the clinical trial if it determines that there is an unacceptable safety risk for subjects or other grounds, such as no demonstration of efficacy. There are also requirements governing the reporting of ongoing clinical studies and clinical study results to public registries.

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For purposes of BLA approval, human clinical trials are typically conducted in three sequential phases that may overlap.

- Phase 1 The investigational product is initially introduced into healthy human subjects or patients with the target disease or condition. These studies are designed to test the safety, dosage tolerance, absorption, metabolism and distribution of the investigational product in humans, the side effects associated with increasing doses, and, if possible, to gain early evidence on effectiveness.
- Phase 2 The investigational product is administered to a limited patient population with a specified disease or condition to evaluate the preliminary efficacy, optimal dosages and dosing schedule and to identify possible adverse side effects and safety risks. Multiple Phase 2 clinical trials may be conducted to obtain information prior to beginning larger and more expensive Phase 3 clinical trials.
- Phase 3 The investigational product is administered to an expanded patient population to further evaluate dosage, to provide statistically
 significant evidence of clinical efficacy and to further test for safety, generally at multiple geographically dispersed clinical trial sites. These
 clinical trials are intended to establish the overall risk/benefit ratio of the investigational product and to provide an adequate basis for product
 approval.

In some cases, the FDA may require, or companies may voluntarily pursue, additional clinical trials after a product is approved to gain more information about the product. These so- called Phase 4 studies may be made a condition to approval of the BLA. Concurrent with clinical trials, companies may complete additional animal studies and develop additional information about the biological characteristics of the product candidate and must finalize a process for manufacturing the product in commercial quantities in accordance with cGMP requirements. The manufacturing process must be capable of consistently producing quality batches of the product candidate and, among other things, must develop methods for testing the identity, strength, quality and purity of the final product, or for biologics, the safety, purity and potency. Additionally, appropriate packaging must be selected and tested, and stability studies must be conducted to demonstrate that the product candidate does not undergo unacceptable deterioration over its shelf life.

BLA Submission and Review

Assuming successful completion of all required testing in accordance with all applicable regulatory requirements, the results of product development, nonclinical studies and clinical trials are submitted to the FDA as part of a BLA requesting approval to market the product for one or more indications. The BLA must include all relevant data available from pertinent preclinical and clinical studies, including negative or ambiguous results as well as positive findings, together with detailed information relating to the product's chemistry, manufacturing, controls, and proposed labeling, among other things. The submission of a BLA requires payment of a substantial application user fee to FDA, unless a waiver or exemption applies.

Once a BLA has been submitted, the FDA's goal is to review standard applications within ten months after it accepts the application for filing, or, if the application qualifies for priority review, six months after the FDA accepts the application for filing. In both standard and priority reviews, the review process is often significantly extended by FDA requests for additional information or clarification. The FDA reviews a BLA to determine, among other things, whether a product is safe, pure and potent and the facility in which it is manufactured, processed, packed, or held meets standards designed to assure the product's continued safety, purity and potency. The FDA may convene an advisory committee to provide clinical insight on application review questions. Before approving a BLA, the FDA will typically inspect the facility or facilities where the product is manufactured. The FDA will not approve an application unless it determines that the manufacturing processes and facilities are in compliance with cGMP requirements and adequate to assure consistent production of the product within GCP. If the FDA determines that the application, manufacturing process or manufacturing fracesses on a determines that the application. Notwithstanding the submission and often will request additional testing or information. Notwithstanding the submission of any requested additional information, the FDA ultimately may decide that the application does not satisfy the regulatory criteria for approval.

After the FDA evaluates a BLA and conducts inspections of manufacturing facilities where the investigational product and/or its drug substance will be produced, the FDA may issue an approval letter or a Complete Response letter. An approval letter authorizes commercial marketing of the product with specific prescribing information for specific

indications. A Complete Response letter will describe all of the deficiencies that the FDA has identified in the BLA, except that where the FDA determines that the data supporting the application are inadequate to support approval, the FDA may issue the Complete Response letter without first conducting required inspections, testing submitted product lots, and/or reviewing proposed labeling. In issuing the Complete Response letter, the FDA may recommend actions that the applicant might take to place the BLA in condition for approval, including requests for additional information or clarification. The FDA may delay or refuse approval of a BLA if applicable regulatory criteria are not satisfied, require additional testing or information and/or require post-marketing testing and surveillance to monitor safety or efficacy of a product.

If regulatory approval of a product is granted, such approval will be granted for particular indications and may entail limitations on the indicated uses for which such product may be marketed. For example, the FDA may approve the BLA with a Risk Evaluation and Mitigation Strategy, or REMS, to ensure the benefits of the product outweigh its risks. A REMS is a safety strategy to manage a known or potential serious risk associated with a product and to enable patients to have continued access to such medicines by managing their safe use, and could include medication guides, physician communication plans, or elements to assure safe use, such as restricted distribution methods, patient registries and other risk minimization tools. The FDA also may condition approval on, among other things, changes to proposed labeling or the development of adequate controls and specifications. Once approved, the FDA may withdraw the product approval if compliance with pre- and post-marketing requirements is not maintained or if problems occur after the product reaches the marketplace. The FDA may require one or more Phase 4 post-market trials and surveillance to further assess and monitor the product's safety and effectiveness after commercialization and may limit further marketing of the product based on the results of these post-marketing studies.

Post-Approval Requirements

Any products manufactured or distributed by us pursuant to FDA approvals are subject to pervasive and continuing regulation by the FDA, including, among other things, requirements relating to record-keeping, reporting of adverse experiences, periodic reporting, product sampling and distribution, and advertising and promotion of the product. After approval, most changes to the approved product, such as adding new indications or other labeling claims, are subject to prior FDA review and approval. There also are continuing user fee requirements, under which FDA assesses an annual program fee for each product identified in an approved BLA. Biologic manufacturers and their subcontractors are required to register their establishments with the FDA and certain state agencies and are subject to periodic unannounced inspections by the FDA and certain state agencies for compliance with cGMP, which impose certain procedural and documentation requirements upon us and our third-party manufacturers. Changes to the manufacturing process are strictly regulated, and, depending on the significance of the change, may require prior FDA approval before being implemented. FDA manufacturers that we may decide to use. Accordingly, manufacturers must continue to expend time, money and effort in the area of production and quality control to maintain compliance with cGMP and other aspects of regulatory compliance.

The FDA may withdraw 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 studies to assess new safety risks; or imposition of distribution restrictions or other restrictions under a REMS program. Other potential consequences include, among other things:

- restrictions on the marketing or manufacturing of a product, complete withdrawal of the product from the market or product recalls;
- fines, warning letters or holds on post-approval clinical studies;
- refusal of the FDA to approve pending applications or supplements to approved applications, or suspension or revocation of existing product approvals;
- product seizure or detention, or refusal of the FDA to permit the import or export of products; or

• injunctions or the imposition of civil or criminal penalties.

The FDA closely regulates the marketing, labeling, advertising and promotion of biologics. A company can make only those claims relating to safety and efficacy, purity and potency that are approved by the FDA 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. Failure to comply with these requirements can result in, among other things, adverse publicity, warning letters, corrective advertising and potential civil and criminal penalties. Physicians may prescribe legally available products for uses that are not described in the product's labeling and that differ from those tested by us and approved by the FDA. Such off-label uses are common across medical specialties. Physicians may believe that such off-label uses are the best treatment for many patients in varied circumstances. The FDA does not regulate the behavior of physicians in their choice of treatments. The FDA does, however, restrict manufacturer's communications on the subject of off-label use of their products.

Biosimilars and Reference Product Exclusivity

The Patient Protection and Affordable Care Act, as amended by the Health Care and Education Reconciliation Act, or collectively, the ACA, signed into law in 2010, includes a subtitle called the Biologics Price Competition and Innovation Act of 2009, or BPCIA, which created an abbreviated approval pathway for biological products that are biosimilar to or interchangeable with an FDA-approved reference biological product. To date, a number of biosimilars have been licensed under the BPCIA, and numerous biosimilars have been approved in Europe. The FDA has issued several guidance documents outlining an approach to review and approval of biosimilars.

Biosimilarity, which requires that there be no clinically meaningful differences between the biological product and the reference product in terms of safety, purity, and potency, can be shown through analytical studies, animal studies, and a clinical study or studies. Interchangeability requires that a product is biosimilar to the reference product and the product must demonstrate that it can be expected to produce the same clinical results as the reference product in any given patient and, for products that are administered multiple times to an individual, the biologic and the reference biologic may be alternated or switched after one has been previously administered without increasing safety risks or risks of diminished efficacy relative to exclusive use of the reference biologic. Complexities associated with the larger, and often more complex, structures of biological products, as well as the processes by which such products are manufactured, pose significant hurdles to implementation of the abbreviated approval pathway that are still being worked out by the FDA.

Under the BPCIA, an application for a biosimilar product may not be submitted to the FDA until four years following the date that the reference product was first licensed by the FDA. In addition, the approval of a biosimilar product may not be made effective by the FDA until 12 years from the date on which the reference product was first licensed. During this 12-year period of exclusivity, another company may still market a competing version of the reference product if the FDA approves a full BLA for the competing product containing that applicant's own preclinical data and data from adequate and well-controlled clinical trials to demonstrate the safety, purity and potency of its product. The BPCIA also created certain exclusivity periods for biosimilars approved as interchangeable products.

Other U.S. Healthcare Laws and Compliance Requirements

Although we currently do not have any products on the market, our current and future arrangements with healthcare professionals, principal investigators, consultants, customers and third-party payors expose us to broadly applicable healthcare regulation and enforcement by the federal government and the states and foreign governments in which we conduct our business. These laws include, without limitation, state and federal anti-kickback, fraud and abuse, false claims, privacy and security and physician sunshine laws and regulations.

The federal Anti-Kickback Statute prohibits, among other things, any person or entity from knowingly and willfully offering, soliciting, receiving or providing remuneration, directly or indirectly, in cash or in kind, either to induce or award the referral of an individual, for an item or service or the purchasing, recommending or ordering of a good or service, for which payment may be made under federal healthcare programs such as the Medicare and Medicaid programs. The federal Anti-Kickback Statute is subject to evolving interpretations. In the past, the government has enforced the federal Anti-Kickback Statute to reach large settlements with healthcare companies based on, in certain cases, sham consulting and

other financial arrangements with physicians. Further, the Patient Protection and Affordable Care Act, as amended by the Health Care and Education Reconciliation Act, or collectively, the Affordable Care Act, among other things, amends the intent requirement of the federal Anti-Kickback Statute and the criminal statutes governing healthcare fraud. A person or entity no longer needs to have actual knowledge of these statutes or specific intent to violate them in order to commit a violation. In addition, the Affordable Care Act provides 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 civil False Claims Act or federal civil monetary penalties statute.

Additionally, the federal false claims and civil monetary penalties laws, including the civil False Claims Act prohibit, among other things, knowingly presenting or causing the presentation of a false, fictitious or fraudulent claim for payment to the U.S. government, or making a false statement to avoid, decrease, or conceal an obligation to pay money to the federal government. Actions under the civil False Claims Act may be brought by the Attorney General or as a qui tam action by a private individual in the name of the government. The federal government has used the civil False Claims Act, and the accompanying threat of significant liability, in its investigation and prosecution of pharmaceutical and biotechnology companies throughout the country, for example, in connection with the promotion of products for unapproved uses and other illegal sales and marketing practices.

The federal Health Insurance Portability and Accountability Act of 1996, or HIPAA, created additional federal criminal statutes that prohibit, among other actions, knowingly and willfully executing, or attempting to execute, a scheme to defraud any healthcare benefit program, including private thirdparty 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.

HIPAA, as amended by the Health Information Technology for Economic and Clinical Health Act, or HITECH, and their implementing regulations, imposes requirements regarding the privacy and security of individually identifiable health information, including mandatory contractual terms, for covered entities, or certain healthcare providers, health plans, and healthcare clearinghouses, and their business associates that provide services to the covered entity that involve individually identifiable health information and their subcontractors that use, disclose or otherwise process individually identifiable health information. HITECH also increased the civil and criminal penalties that may be imposed against covered entities and business associates and gave state attorneys general new authority to file civil actions for damages or injunctions in federal courts to enforce HIPAA.

In addition, there has been a recent trend of increased federal and state regulation of payments made to physicians and other healthcare providers. The Affordable Care Act, among other things, via the Physician Payments Sunshine Act, imposes annual reporting requirements on certain manufacturers of drugs, devices, biologics, and medical supplies for which payment is available under Medicare, Medicaid, or the Children's Health Insurance Program, with specific exceptions, for payments made by them to physicians (defined to include doctors, dentists, optometrists, podiatrists and chiropractors) and teaching hospitals, as well as ownership and investment interests held by physicians and their immediate family members. Beginning in 2022, applicable manufacturers will also be required to report information related to payments and other transfers of value provided in the previous year to physician assistants, nurse practitioners, clinical nurse specialists, certified registered nurse anesthetists, and certified nurse midwives.

Certain states also impose restrictions on pharmaceutical manufacturer marketing practices and/or require the tracking and reporting of gifts, compensation and other remuneration to physicians. Certain states and local governments require the registration of pharmaceutical sales representatives. Additionally, analogous state and foreign laws and regulations, such as state anti-kickback and false claims laws, 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 laws may also apply that require pharmaceutical or companies to comply with the pharmaceutical industry's voluntary compliance guidelines and the relevant compliance guidance promulgated by the federal government or otherwise restrict payments that may be made to healthcare providers or other potential referral sources. In addition, certain states require drug manufacturers to report information related to payments and other transfers of value to physicians and other healthcare providers or marketing expenditures or drug pricing. In addition, state and local laws may require the registration of pharmaceutical sales representatives. We may also be subject to 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.

The shifting commercial compliance environment and the need to build and maintain robust systems to comply with different compliance and/or reporting requirements in multiple jurisdictions increase the possibility that a healthcare company may violate one or more of the requirements. If our operations are found to be in violation of any of such laws or any other governmental regulations that apply to us, we may be subject to significant penalties, including, without limitation, civil, criminal and administrative penalties, damages, fines, disgorgement, additional reporting requirements and oversight if we become subject to a corporate integrity agreement or similar agreement to resolve allegations of non-compliance with these laws, the curtailment or restructuring of our operations, exclusion from participation in federal and state healthcare programs and individual imprisonment, any of which could adversely affect our ability to operate our business and our financial results.

Healthcare Reform

The Affordable Care Act has had, and is expected to continue to have, a significant impact on the healthcare industry. The Affordable Care Act was designed to expand coverage for the uninsured while at the same time containing overall healthcare costs. With regard to pharmaceutical products, among other things, the Affordable Care Act expanded and increased industry rebates for drugs covered under Medicaid programs and made changes to the coverage requirements under the Medicare prescription drug benefit. There remain judicial, Congressional and executive branch challenges to certain aspects of the Affordable Care Act, and we expect there will be additional challenges and amendments to the Affordable Care Act in the future. While Congress has not passed comprehensive repeal legislation, it has enacted laws that modify certain provisions of the Affordable Care Act such as removing or delaying penalties, starting January 1, 2019, for not complying with the Affordable Care Act's individual mandate to carry health insurance, delaying the implementation of certain Affordable Care Act-mandated fees, and increasing the point-of-sale discount that is owed by pharmaceutical manufacturers who participate in Medicare Part D. Additionally, on December 15, 2018, a Texas U.S. District Court Judge ruled that the Affordable Care Act is unconstitutional in its entirety because the individual mandate was repealed by Congress. Further, on December 18, 2019, the U.S. Court of Appeals for the 5th Circuit upheld the District Court ruling that the individual mandate was unconstitutional and remanded the case back to the District Court to determine whether the remaining provisions of the ACA are invalid as well. On March 2, 2020, the United States Supreme Court granted the petitions for writs of certiorari and held oral arguments on November 10, 2020. Accordingly, we continue to evaluate the effect that the Affordable Care Act has on our business. Other legislative changes have been proposed and adopted in the United States since the Affordable Care Act was enacted. For example, through the process created by the Budget Control Act of 2011, there are automatic reductions of Medicare payments to providers up to 2% per fiscal year, which went into effect in April 2013 and, due to subsequent legislative amendments, will remain in effect through 2030 unless additional Congressional action is taken. However, the Coronavirus Aid, Relief and Economic Security Act, or CARES Act, which was signed into law in March 2020 and is designed to provide financial support and resources to individuals and businesses affected by the COVID-19 pandemic, suspended the 2% Medicare sequester from May 1, 2020 through December 31, 2020, and extended the sequester by one year, through 2030. 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. In addition, there has been heightened governmental scrutiny recently over the manner in which drug manufacturers set prices for their marketed products, which have resulted in several Congressional inquiries and proposed and enacted federal and state legislation designed to, among other things, bring more transparency to product pricing, review the relationship between pricing and manufacturer patient programs, and reform government program reimbursement methodologies for drug products. At the federal level, the Trump administration's budget proposals for fiscal year 2021 includes a \$135 billion allowance to support legislative proposals seeking to reduce drug prices, increase competition, lower out-of-pocket drug costs for patients, and increase patient access to lower-cost generic and biosimilar drugs. In addition, the Trump administration previously released a "Blueprint" to lower drug prices and reduce out of pocket costs of drugs that contains additional proposals to increase manufacturer competition, increase the negotiating power of certain federal healthcare programs, incentivize manufacturers to lower the list price of their products and reduce the out of pocket costs of drug products paid by consumers. The Department of Health and Human Services, or HHS, has solicited feedback on some of these measures and implemented others under its existing authority. On July 24, 2020 and September 13, 2020, President Trump announced several executive orders related to prescription drug pricing that seek to implement several of the administration's proposals. The FDA also released a final rule on September 24, 2020 providing

guidance for states to build and submit importation plans for drugs from Canada. Further, on November 20, 2020, HHS finalized a regulation removing safe harbor protection for price reductions from pharmaceutical manufacturers to plan sponsors under Part D, either directly or through pharmacy benefit managers, unless the price reduction is required by law. The rule also creates a new safe harbor for price reductions reflected at the point-ofsale, as well as a safe harbor for certain fixed fee arrangements between pharmacy benefit managers and manufacturers. The likelihood of implementation of any of the other Trump administration reform initiatives is uncertain, particularly in light of the recent U.S. presidential election. In the coming years, additional legislative and regulatory changes could be made to governmental health programs that could significantly impact pharmaceutical companies and the success of our product candidates. At the state level, legislatures have increasingly passed legislation and implemented regulations designed to control pharmaceutical and biological product pricing, including price or patient reimbursement constraints, discounts, restrictions on certain product access and marketing cost disclosure and transparency measures, and, in some cases, designed to encourage importation from other countries and bulk purchasing. The Affordable Care Act, as well as other federal, state and foreign healthcare reform measures that have been and may be adopted in the future, could harm our future revenues. Further, it is also possible that additional governmental action is taken in response to the COVID-19 pandemic.

International Regulation

In addition to regulations in the United States, foreign regulations also govern clinical trials, commercial sales and distribution of product candidates within their jurisdiction. The regulatory approval process varies from country to country and the time to approval may be longer or shorter than that required for FDA approval. In the European Union, the approval of a biosimilar for marketing is based on an opinion issued by the European Medicines Agency and a decision issued by the European Commission. However, substitution of a biosimilar for the innovator is a decision that is made at the local (national) level on a country-by-country basis. Additionally, a number of European countries do not permit the automatic substitution of biosimilars for the reference product. Many countries also have published their own legislation outlining a regulatory pathway for the development and approval of biosimilars. In some cases, countries have either adopted European guidance or are following guidance issued by the World Health Organization. Although similarities are apparent across these various regulatory guidance, there is also the potential for additional country-specific requirements.

Pharmaceutical Coverage, Pricing and Reimbursement

In the United States and other countries, sales of any products for which we receive regulatory approval for commercial sale will depend in part on the availability of coverage and the adequacy of reimbursement from third-party payors, including government health administrative authorities, managed care organizations, private health insurers and other organizations. Third-party payors are increasingly examining the medical necessity and cost effectiveness of drug products and services in addition to safety and efficacy and, accordingly, significant uncertainty exists as to the reimbursement status of newly drug products. A payor's decision to provide coverage for a drug product does not imply that an adequate reimbursement rate will be approved. Further, there is no uniform policy for coverage and reimbursement in the United States. Third-party payors often rely upon Medicare coverage policy and payment limitations in setting their own reimbursement rates, but also have their own methods and approval process apart from Medicare determinations. As such, one payor's determination to provide coverage for a drug product does not assure that other payors will also provide coverage for the drug product. Adequate third-party reimbursement may not be available to enable us to realize an appropriate return on our investment in product development. Obtaining and maintaining adequate reimbursement for our product candidates, once approved, may be difficult. We may be required to conduct expensive pharmacoeconomic studies to justify coverage and reimbursement or the level of reimbursement compared to existing approved biologics and other therapies. There may be significant delays in obtaining coverage and reimbursement for newly approved drugs in the United States, 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. In addition, the U.S. government, state legislatures and foreign governments have continued implementing cost-containment programs, including price controls, restrictions on coverage and reimbursement and requirements for substitution of generic products. Adoption of price controls and cost-containment measures and adoption of more restrictive policies in jurisdictions with existing controls and measures could further limit our net revenue and results. Decreases in third-party reimbursement for our product candidates or a decision by a third-party payor to not cover our product candidates could reduce physician utilization of our products and have a material adverse effect on our sales, results of operations and financial condition.

Employees and Human Capital Resources

As of September 30, 2020, we had eight full-time employees, four of whom were primarily engaged in research and development activities and three of whom have a Ph.D. degree. We also have two part-time consultants, who serve as executive officers. None of our employees are represented by a labor union or covered by a collective bargaining agreement.

Our human capital resources objectives include, as applicable, identifying, recruiting, retaining, incentivizing and integrating our existing and new employees, advisors and consultants. The principal purposes of our equity and cash incentive plans are to attract, retain and reward personnel through the granting of stock-based and cash-based compensation awards, in order to increase stockholder value and the success of our company by motivating such individuals to perform to the best of their abilities and achieve our objectives.

Corporate Information

We initially incorporated in January 2010 in New Jersey as Oncobiologics, Inc., and in October 2015, we reincorporated in Delaware by merging with and into a Delaware corporation. In November 2018, we changed our name to Outlook Therapeutics, Inc. Our headquarters are located at 4260 U.S. Route 1, Monmouth Junction, New Jersey, 08512, and our telephone number at that location is (609) 619-3990. Our website address is www.outlooktherapeutics.com. The information contained on, or that can be accessed through, our website is not part of, and is not incorporated by reference into this Annual Report on Form 10-K.

Item 1A. Risk Factors

You should consider carefully the risks and uncertainties described below, together with all of the other information in this Annual Report on Form 10-K. If any of the following risks are realized, our business, financial condition, results of operations and prospects could be adversely affected. The risks described below are not the only risks facing our company. Risks and uncertainties not currently known to us or that we currently deem to be immaterial also may adversely affect our business, financial condition, results of operations and/or prospects.

Risks Related to Our Financial Condition and Capital Requirements

We have incurred significant losses and negative cash flows from operations since our inception and expect to continue to incur significant losses and negative cash flows from operations for at least the next 12 months.

We are a late clinical-stage biopharmaceutical company and we have incurred net losses in each year since our inception in January 5, 2010, including net losses of \$35.2 million and \$34.5 million for the years ended September 30, 2020 and 2019, respectively.

We have devoted substantially all of our financial resources to identify, develop and manufacture our product candidates, including conducting, among other things, analytical characterization, process development and manufacture, formulation and clinical trials, regulatory filing and communication activities and providing general and administrative support for these operations. To date, none of our product candidates have been approved for sale and we have financed our operations primarily through the sale of equity securities and debt financings, as well as to a limited degree, payments under our co-development and license agreements. The amount of our future net losses will depend, in part, on our ability to generate revenue from product sales, the rate of our future expenditures and our ability to obtain funding through equity or debt financing or our ability to enter into and receive funding under strategic licensing or co-development collaborations.

We expect to continue to incur significant expenses and operating losses for at least the next 12 months. We anticipate that our expenses may increase substantially if and as we:

- continue the clinical development of our lead product candidate, ONS-5010;
- advance ONS-5010 into additional clinical trials;

- change or add contract manufacturing providers, clinical research service providers, testing laboratories, device suppliers, legal service providers or other vendors or suppliers;
- seek regulatory and marketing approvals for ONS-5010 in the United States and other markets if we successfully complete clinical trials;
- establish a sales, marketing and distribution infrastructure to commercialize any products for which we may obtain marketing approval and for which we retain such rights;
- seek to identify, assess, acquire or develop other product candidates that may be complementary to ONS-5010;
- make upfront, milestone, royalty or other payments under any license agreements;
- seek to create, maintain, protect and expand our intellectual property portfolio;
- engage in litigation, including patent litigation, with respect to our product candidates;
- seek to attract and retain skilled personnel;
- · create additional infrastructure to support our operations as a public company and any future commercialization efforts; and
- experience any delays or encounter issues with any of the above, including but not limited to failed clinical trials, conflicting results, safety
 issues or regulatory challenges that may require longer follow-up of existing studies, additional major studies or additional supportive studies
 in order to pursue marketing approval.

Our failure to become and remain profitable would decrease our value and could impair our ability to raise capital, maintain our research and development efforts, expand our business or continue our operations. A decline in our value could also cause you to lose all or part of your investment.

Our independent registered public accounting firm has indicated that our recurring losses, negative cash flows from operations and accumulated deficit raise substantial doubt about our ability to continue as a going concern.

As described in their audit report, our auditors have included an explanatory paragraph that states that we have incurred recurring losses and negative cash flows from operations and have an accumulated deficit at September 30, 2020 of \$289.7 million, which raises substantial doubt about our ability to continue as a going concern. Our consolidated financial statements do not include any adjustments that might result from the outcome of this uncertainty. If we cannot continue as a viable entity, our securityholders may lose some or all of their investment in our company.

We may not be entitled to forgiveness of our Paycheck Protection Program, or PPP, loan, and our application for the PPP loan could in the future be determined to have been impermissible or could result in damage to our reputation.

On May 4, 2020, we received proceeds of \$0.9 million from a loan under the Paycheck Protecion Program, or PPP, of the Coronavirus Aid, Relief, and Economic Security Act, the CARES Act, which we used to maintain payroll and make lease and utility payments. The PPP loan matures on May 2, 2022 and bears annual interest at a rate of 1% per annum. Commencing October 15, 2021, we are required to pay the lender equal monthly payments of principal and interest as required to fully amortize by May 2, 2022 any principal amount outstanding on the PPP loan as of October 15, 2021. A portion of the PPP loan may be forgiven upon documentation of expenditures in accordance with the Small Business Administration, or SBA, requirements and in compliance with the CARES Act. We will be required to repay any portion of the outstanding principal that is not forgiven, along with accrued interest, in accordance with the amortization schedule described above, and we cannot provide any assurance that we will be eligible for loan forgiveness or that any amount of the PPP loan will ultimately be forgiven by the SBA.

To obtain the PPP loan, we were required to certify, among other things, that the current economic uncertainty made the request necessary to support our ongoing operations. We made this certification in good faith after analyzing, among other things, our financial situation and access to alternative forms of capital, and believe that we satisfied all eligibility criteria, and that our receipt of the PPP loan is consistent with the broad objectives of the PPP. However, recent guidance stated that it is unlikely that a public company with substantial market value and access to capital markets will be able to make the required certification in good faith. The lack of clarity regarding loan eligibility under the PPP has resulted in significant media coverage and controversy with respect to public companies applying for and receiving loans. If, despite our good-faith belief that we satisfy all eligibility requirements for the PPP loan, we could be subject to penalties, including significant civil, criminal and administrative penalties, and be required to repay the PPP loan in its entirety if we were later determined to have violated any of the laws or governmental regulations that apply to us in connection with the loan, such as the False Claims Act, or it is otherwise determined that we were ineligible to receive the PPP loan. In addition, our receipt of the PPP loan may result in adverse publicity and damage to our reputation, and a review or audit by the SBA or other government entity or claims under the False Claims Act could consume significant financial and management resources.

We have never generated any revenue from product sales and may never be profitable.

Although we have received upfront and milestone payments from our license and collaboration agreements for our inactive biosimilar programs, we have no products approved for commercialization and have never generated any revenue from product sales. Our ability to generate revenue and achieve profitability depends on our ability, alone or with strategic collaboration partners, to successfully complete the development of, and obtain the regulatory and marketing approvals necessary to commercialize, ONS-5010 for the treatment of wet age related macular degeneration, or wet AMD, and our other targeted indications, and as appropriate, any of our other product candidates. We cannot predict when we will begin generating revenue from product sales, as this depends heavily on our success in many areas, including but not limited to:

- completing clinical development of ONS-5010 for the treatment of wet AMD and the other targeted indications, and any other product candidates we may develop in the future;
- obtaining regulatory and marketing approvals for ONS-5010 and any other product candidates for which we or our partners complete clinical trials;
- retaining our manufacturing partner for ONS-5010 and any approved product candidates to support clinical development, regulatory
 requirements and the market demand for any such approved product candidates;
- launching and commercializing ONS-5010 and any other product candidates for which we or our partners obtain regulatory and marketing approval;
- obtaining third-party coverage and adequate reimbursements for our products;
- obtaining market acceptance of ONS-5010 and any other product candidates for which we obtain regulatory and marketing approval as viable treatment options;
- negotiating favorable terms in any collaboration, licensing or other arrangements into which we may enter;
- maintaining, protecting and expanding our portfolio of intellectual property rights, including patents, trade secrets and know-how; and
- attracting, hiring and retaining qualified personnel.

Even if ONS-5010 or one or more of our other product candidates is approved for commercialization, we anticipate incurring significant costs to commercialize any such product. Our expenses could increase beyond our expectations if we are required by the U.S. Food and Drug Administration, or the FDA, the European Medicines Agency, or the EMA, other regulatory agencies, domestic or foreign, or by any unfavorable outcomes in intellectual property litigation filed against

us, to change our manufacturing processes or assays or to perform clinical, preclinical or other types of studies in addition to those that we currently anticipate. In cases where we are successful in obtaining regulatory approvals to market one or more of our product candidates, our revenue will be dependent, in part, upon:

- the size of the markets in the territories for which we gain regulatory approval;
- the number of competitors in such markets;
- the market acceptance of our products;
- the accepted price for the product;
- the ability to obtain coverage and adequate reimbursement for the product;
- the quality and performance of our products, including the relative safety and efficacy; and
- whether we own, or have partnered, the commercial rights for that territory.

If the market for ONS-5010 or any other product candidates we may develop in the future, or our share of that market, is not as large as we expect, the number of indications approved by regulatory authorities is narrower than we expect or the target population for treatment is narrowed by competition, physician choice or treatment guidelines, we may not generate significant revenue from sales of such products to become profitable. If we are unable to successfully complete development and obtain regulatory approval for ONS-5010, our business will be harmed.

We will need to raise substantial additional funding to complete the development of our product candidate pipeline. This additional funding may not be available on acceptable terms or at all. Failure to obtain this necessary capital when needed may force us to delay, limit or terminate our product development efforts or other operations.

Developing product candidates is an expensive, risky and lengthy process. We are currently advancing ONS-5010 through clinical development. Our expenses may increase in connection with our ongoing activities, particularly as we continue the research and development of, continue and initiate clinical trials of, and seek marketing approval for, ONS-5010.

As of September 30, 2020, our cash balance was \$12.5 million. We expect that our current cash resources and anticipated proceeds from the sale of New Jersey net operating losses, or NOLs, and research and development credits, along with the \$10.0 million of cash proceeds from our November 2020 sale of an unsecured promissory note, after taking into account repayment of \$3.6 million of debt, will be sufficient to fund our operations into March 2021. We will require substantial additional capital to complete the clinical development of, obtain regulatory approvals for, and commercialize ONS-5010. Although we are in active discussions with strategic partners for ONS-5010, there is no guarantee that we will be successful in reaching any such agreement, nor that such agreement, if successful, will cover the anticipated development costs for ONS-5010. Even if we secure funding, our estimates of our requirements may be inaccurate. Our operating plan may also change as a result of many factors currently unknown to us, and we may need to seek additional funds sooner than planned, through public or private equity or debt financings, third-party funding, marketing and distribution arrangements, as well as through other collaborations, strategic alliances and licensing arrangements, or a combination of these approaches. Even if we believe we have sufficient funds for our current or future operating plans, we may seek additional capital if market conditions are favorable or if we have specific strategic considerations.

Any additional fundraising efforts may divert our management from their day-to-day activities, which may adversely affect our ability to develop and commercialize our product candidates. In addition, we cannot guarantee that future financing will be available in sufficient amounts or on terms acceptable to us, if at all. Moreover, the terms of any financing may negatively impact the holdings or the rights of our stockholders, and the issuance of additional securities, whether equity or debt, by us or the possibility of such issuance may cause the market price of our securities to decline. The incurrence of indebtedness could result in increased fixed payment obligations and we may be required to agree to certain restrictive covenants, such as limitations on our ability to incur additional debt, limitations on our ability to acquire, sell or license

intellectual property rights and other operating restrictions that could adversely impact our ability to conduct our business. We may be required to relinquish rights to some of our technologies or product candidates or otherwise agree to terms unfavorable to us, in order to obtain necessary funding, any of which may harm our business, operating results and prospects. Even if we believe we have sufficient funds for our current or future operating plans, we may seek additional capital if market conditions are favorable or for specific strategic considerations. If we are unable to obtain funding on a timely basis, we may be required to expand our operations or otherwise capitalize on our business opportunities, as desired, which could harm our business, financial condition and results of operations.

Raising additional capital may cause dilution to our securityholders, restrict our operations or require us to relinquish rights to our technologies or product candidates.

Until such time, if ever, as we can generate product revenues, we expect to finance our cash needs through a combination of equity and debt financings, as well as selectively continuing to enter into collaborations, strategic alliances and licensing arrangements. We do not currently have any committed external source of funds and are in active late-stage discussions for the licensing and/or co-development rights to ONS-5010, although there is no guarantee that we will be able to reach any such agreement. 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 securityholder. Debt 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, and may be secured by all or a portion of our assets.

If we secure development funds for ONS-5010 or any future product candidate through entering into collaborations, strategic alliances or licensing arrangements with third parties, we may have to relinquish additional 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 when needed, we may be required to delay, limit, reduce or terminate our product development or future commercialization efforts or grant rights to develop and market product candidates that we would otherwise prefer to develop and market ourselves, terminate product development or future commercialization efforts or to cease operations altogether.

Risks Related to the Discovery and Development of Our Product Candidates

We are highly dependent on the success of ONS-5010, our only product candidate in active development, and if ONS-5010 does not successfully complete clinical development or receive regulatory approval, or is not successfully commercialized, our business may be harmed.

We currently have no products that are approved for commercial sale and may never be able to develop marketable products. We expect that a substantial portion of our efforts and expenditures in the foreseeable future will be devoted to the advancement of ONS-5010, our only product candidate in active development, through clinical trials and the regulatory approval process. If we are not successful in securing a strategic partner for ONS-5010, we also expect that we will need to devote significant effort to the commercialization of ONS-5010 following regulatory approval, if received. We cannot assure you that we will be able to successfully complete the necessary clinical trials and/or obtain regulatory approval and develop sufficient commercial capabilities for ONS-5010 if and when necessary. Accordingly, our business currently depends heavily on the successful completion of clinical development and subsequent regulatory approval and commercialization of ONS-5010.

We cannot be certain that ONS-5010 will receive regulatory approval or be successfully commercialized even if we receive regulatory approval in our targeted markets. The research, testing, manufacturing, labeling, approval, sale, marketing and distribution of products are, and will remain, subject to extensive regulation by the FDA and other regulatory authorities in the United States and other countries that each have differing regulations. We are not permitted to market ONS-5010 in the United States until we receive approval from the FDA, or in any foreign country until we receive the requisite approvals from the appropriate authorities in such countries for marketing authorization.

There can be no assurance that our ongoing clinical trial of ONS-5010 for wet AMD will produce results sufficient for us to receive regulatory approval. We have not submitted a biologics license application, or BLA, for any product candidate to the FDA or any comparable application to any other regulatory authority. Obtaining approval from the FDA or similar regulatory approval is an extensive, lengthy, expensive and inherently uncertain process, and the FDA or other foreign regulatory authorities may delay, limit or deny approval of ONS-5010 for many reasons, including:

- we may not be able to demonstrate that ONS-5010 is effective as a treatment for any of our currently targeted indications to the satisfaction of the FDA or other relevant regulatory authorities;
- the relevant regulatory authorities may require additional pre-approval studies or clinical trials, which would increase our costs and prolong our development timelines;
- the results of our clinical trials may not meet the level of statistical or clinical significance required by the FDA or other relevant regulatory authorities for marketing approval;
- the FDA or other relevant regulatory authorities may disagree with the number, design, size, conduct or implementation of our clinical trials;
- the FDA or other relevant regulatory authorities may not find the data from nonclinical studies or clinical trials sufficient to demonstrate that
 the clinical and other benefits of these products outweigh their safety risks;
- the FDA or other relevant regulatory authorities may disagree with our interpretation of data or significance of results from the nonclinical studies and clinical trials of ONS-5010 and any future product candidate, or may require that we conduct additional trials;
- the FDA or other relevant regulatory authorities may require development of a risk evaluation and mitigation strategy, or REMS, or its equivalent, as a condition of approval;
- the FDA or other relevant regulatory authorities may require additional post-marketing studies, which would be costly;
- the FDA or other relevant regulatory authorities may identify deficiencies in the manufacturing processes or facilities of our third-party manufacturers; or
- the FDA or other relevant regulatory authorities may change their approval policies or adopt new regulations.

Due to our limited resources and access to capital, we have, and will continue to need to, prioritize development of certain product candidates; and these decisions may prove to have been wrong and may harm our business.

Because we have limited resources and access to capital to fund our operations, we must decide which product candidates to pursue and the amount of resources to allocate to each. We are currently focusing only on one active development program, ONS-5010, and are no longer actively developing ONS-3010, ONS-1045 or the other biosimilar product candidates in our pipeline. We currently do not intend to actively develop such biosimilar product candidates absent additional development or licensing partners. Our decisions concerning the allocation of research, collaboration, management and financial resources toward particular product candidates or therapeutic areas may not lead to the development of viable commercial products and may divert resources away from better opportunities. Similarly, our potential decisions to delay, terminate or collaborate with third parties in respect to certain product development programs may also prove not to be optimal and could cause us to miss valuable opportunities. If we make incorrect determinations regarding the market potential of our product candidates or misread trends in the pharmaceutical industry, our business, financial condition and results of operations could be harmed.

Clinical drug development is a lengthy and expensive process and we may encounter substantial delays in our clinical trials or may fail to demonstrate safety and efficacy to the satisfaction of applicable regulatory authorities.

ONS-5010, our only product candidate in active development, will require extensive clinical testing before we are prepared to submit an application for regulatory approval. Before obtaining marketing approval from regulatory authorities for the sale of our product candidates, we and any collaboration partners must conduct clinical trials to demonstrate the safety and efficacy of the product candidates in humans.

We cannot guarantee that any clinical trials will be conducted as planned or completed on schedule, if at all. For example, enrollment in the NORSE ONE and NORSE TWO studies was delayed from our original expectations. We could experience similar enrollment delays in the remaining NORSE trials (FOUR, FIVE and SIX) when we commence them. A failure of one or more clinical trials can occur at any stage of testing, and our future clinical trials may not be successful. Events that may prevent successful or timely completion of clinical development include but are not limited to:

- inability to generate sufficient preclinical, toxicology or other in vivo or in vitro data to support the initiation of human clinical trials;
- delays in reaching a consensus with regulatory agencies on study design;
- delays in reaching agreement on acceptable terms with prospective contract research organizations, or CROs, and clinical trial sites, the terms
 of which can be subject to extensive negotiation and may vary significantly among different CROs and clinical trial sites;
- delays in obtaining required IRB approval at each clinical trial site;
- imposition of a clinical hold by regulatory agencies, after review of an investigational new drug, or IND, application or amendment or equivalent filing, or an inspection of our clinical trial operations or trial sites, or as a result of adverse events reported during a clinical trial;
- further delays in recruiting suitable patients to participate in our clinical trials;
- · difficulty collaborating with patient groups and investigators;
- failure by our CROs, other third parties or us to adhere to clinical trial requirements;
- failure to perform in accordance with the FDA's good clinical practice, or GCP, requirements or applicable regulatory guidelines in other countries;
- delays in having subjects complete participation in a study or return for post-treatment follow-up, or subjects dropping out of a study;
- occurrence of adverse events associated with the product candidate that are viewed to outweigh its potential benefits;
- changes in regulatory requirements and guidance that require amending or submitting new clinical protocols;
- the cost of clinical trials of our product candidates being greater than we anticipate;
- clinical trials of our product candidates producing negative or inconclusive results, which may result in us deciding or regulators requiring us
 to conduct additional clinical trials or abandon product development programs; and

 delays in manufacturing, testing, releasing, validating or importing/exporting and/or distributing sufficient stable quantities of our product candidates for use in clinical trials or the inability to do any of the foregoing.

Any inability to successfully complete preclinical studies and clinical development could result in additional costs to us or impair our ability to generate revenue. In addition, if we make manufacturing or formulation changes to our product candidates, we may need to conduct additional clinical trials to bridge our modified product candidates to earlier versions.

The results of previous clinical trials may not be predictive of future results, and the results of our current and planned clinical trials may not satisfy the requirements of the FDA, EMA or other foreign regulatory agencies.

Clinical failure can occur at any stage of clinical development. Clinical trials may produce negative or inconclusive results, and we or any of our current and future collaborators may decide, or regulators may require us, to conduct additional clinical or preclinical testing. We will be required to demonstrate with substantial evidence through well controlled clinical trials that our product candidates are as safe and effective for use in a specific patient population before we can seek regulatory approvals for their commercial sale. Success in early clinical trials does not mean that future larger registration clinical trials will be successful because product candidates in later-stage clinical trials may fail to demonstrate equivalent safety and efficacy to the satisfaction of the FDA, EMA and other foreign regulatory agencies despite having progressed through initial clinical trials. Product candidates that have shown promising results in early clinical trials may still fail in subsequent confirmatory clinical trials. Similarly, 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. A number of companies in the pharmaceutical industry, including those with greater resources and experience than us, have suffered significant setbacks in advanced clinical trials, even after obtaining promising results in earlier clinical trials.

In addition, the design of a clinical trial can determine whether its results will support approval of a product and flaws in the design of a clinical trial may not become apparent until the clinical trial is well advanced. We may be unable to design and execute a clinical trial to support regulatory approval. In some instances, there can be significant variability in safety or efficacy results between different trials of the same product candidate due to numerous factors, including but not limited to changes in trial protocols, differences in size and type of the patient populations, adherence to the dosing regimen and the rate of dropout among clinical trial participants.

Further, our product candidates may not be approved even if they achieve their primary endpoints in Phase 3 clinical trials or registration trials. The FDA, EMA and other foreign regulatory agencies may disagree with our trial design and our interpretation of data from preclinical studies and clinical trials. In addition, any of these regulatory authorities may change the requirements for the approval of a product candidate even after reviewing and providing comments or advice on a protocol for a Phase 3 clinical trial that has the potential to result in FDA or other agencies' approval. We initially intend to seek approval for ONS-5010 for the treatment of wet AMD. Any of the regulatory authorities may approve a product candidate for fewer indications than we request or may grant approval contingent on the performance of costly post-marketing clinical trials.

Our product candidates may cause undesirable side effects or have other properties that could delay or prevent their regulatory approval, limit the commercial profile of an approved label or result in significant negative consequences following marketing approval, if granted.

As with most pharmaceutical products, use of our product candidates could be associated with side effects or adverse events, which can vary in severity and frequency. Side effects or adverse events associated with the use of our product candidates may be observed at any time, including in clinical trials or when a product is commercialized. Undesirable side effects caused by our product candidates could cause us or regulatory authorities to interrupt, delay or halt clinical trials and could result in a more restrictive label or the delay or denial of regulatory approval by the FDA or other foreign authorities. Results of our trials could reval a high and unacceptable severity and prevalence of side effects, toxicity or other safety issues, and could require us to perform additional studies or halt development or sale of these product candidates or expose us to product liability lawsuits that will harm our business. In such an event, we may be required by regulatory agencies to conduct additional animal or human studies regarding the safety and efficacy of our product candidates that we have not planned or anticipated or our studies could be suspended or terminated, and the FDA or comparable foreign regulatory authorities could order us to cease further development of or deny or withdraw approval of

our product candidates for any or all targeted indications. There can be no assurance that we will resolve any issues related to any product-related adverse events to the satisfaction of the FDA or any other regulatory agency in a timely manner, if ever, which could harm our business, prospects and financial condition.

Additionally, product quality characteristics have been shown to be sensitive to changes in process conditions, manufacturing techniques, equipment or sites and other related considerations, and as such, any manufacturing process changes we implement prior to or after regulatory approval could impact product safety.

Additionally, if one or more of our product candidates receives marketing approval, and we or others later identify undesirable side effects caused by such products, a number of potentially significant negative consequences could result, including but not limited to:

- · regulatory authorities may withdraw approvals of such product;
- regulatory authorities may require additional warnings on the label;
- we may be required to create a REMS plan, which could include a medication guide outlining the risks of such side effects for distribution to
 patients, a communication plan for healthcare providers and/or other elements to assure safe use;
- we could be sued and held liable for harm caused to patients; and
- our reputation may suffer.

Any of these events could prevent us from achieving or maintaining market acceptance of the particular product candidate, if approved, and could significantly harm our business, results of operations and prospects.

If we receive approval, regulatory agencies including the FDA, EMA and other foreign regulatory agency regulations require that we report certain information about adverse medical events if those products may have caused or contributed to those adverse events. The timing of our obligation to report would be triggered by the date we become aware of the adverse event as well as the nature of the event. We may fail to report adverse events we become aware of within the prescribed timeframe. We may also fail to appreciate that we have become aware of a reportable adverse event, especially if it is not reported to us as an adverse event or if it is an adverse event that is unexpected or removed in time from the use of our products. If we fail to comply with our reporting obligations, the FDA, EMA or other foreign regulatory agencies could take action including but not limited to criminal prosecution, the imposition of civil monetary penalties, seizure of our products or delay in approval or clearance of future products.

If product liability lawsuits are brought against us, we may incur substantial liabilities and may be required to limit commercialization of our current or future product candidates, and our existing insurance coverage may not be sufficient to satisfy any liability that may arise.

Drug-related side effects could affect patient recruitment for clinical trials, the ability of enrolled patients to complete our studies or result in potential product liability claims. We currently carry product liability insurance in the amount of \$10.0 million per product candidate and we are required to maintain product liability insurance pursuant to certain of our license agreements. We may not be able to maintain insurance coverage at a reasonable cost or in sufficient amounts to protect us against losses due to liability. A successful product liability claim or series of claims brought against us could negatively impact our results of operations and business. In addition, regardless of merit or eventual outcome, product liability claims may result in impairment of our business reputation, withdrawal of clinical trial participants, costs due to related litigation, distraction of management's attention from our primary business, initiation of investigations by regulators, substantial monetary awards to patients or other claimants, the inability to commercialize our product candidates and decreased demand for our product candidates, if approved for commercial sale. Furthermore, we may also not be able to take advantage of limitations on product liability lawsuits that apply to generic drug products, which could increase our exposure to liability for products deemed to be dangerous or defective.



Failure to obtain regulatory approval in any targeted jurisdiction would prevent us from marketing our products to a larger patient population and reduce our commercial opportunities.

Neither we nor any collaboration partners have initiated marketing efforts in any jurisdiction. In order to market our products in Europe, the United States and other jurisdictions, we and any collaboration partners must obtain separate regulatory approvals and comply with numerous and varying regulatory requirements. The EMA is responsible for the regulation and recommendation for approval of human medicines in the E.U. This procedure results in a single marketing authorization that is valid in all E.U. countries, as well as in Iceland, Liechtenstein and Norway. The time required to obtain approval abroad may differ from that required to obtain FDA approval. The foreign regulatory approval process may include all of the risks associated with obtaining FDA approval and we may not obtain foreign regulatory approvals on a timely basis, if at all. Approval by the FDA does not ensure approval by regulatory authorities in other countries, and approval by one foreign regulatory authority does not ensure approval by regulatory approvals or by the FDA. We or any collaboration partners may not be able to file for regulatory approvals and may not receive necessary approvals to commercialize our products within Europe, the United States or in other jurisdictions. Failure to obtain these approvals would harm our business, financial condition and results of operations.

Even if we obtain regulatory approval for a product candidate, our products will remain subject to regulatory scrutiny.

If ONS-5010, or any other product candidates we may pursue, are approved, they will be subject to ongoing regulatory requirements for manufacturing, labeling, packaging, storage, advertising, promotion, sampling, record-keeping, conduct of post-marketing studies and submission of safety, efficacy and other post-market information, including both federal and state requirements in the United States and requirements of comparable foreign regulatory authorities.

Manufactures and manufacturing facilities are required to comply with extensive FDA, and comparable foreign regulatory authority, requirements, including ensuring that quality control and manufacturing procedures conform to current Good Manufacturing Practices, or cGMP, regulations. As such, our current and future manufacturing partners will be subject to continual review and inspections to assess compliance with cGMP and adherence to commitments made in any non-disclosure agreement, BLA or marketing authorization application. Accordingly, we and our collaborators and suppliers must continue to expend time, money and effort in all areas of regulatory compliance, including manufacturing, production and quality control.

Any regulatory approvals that we or any collaboration partners receive for our product candidates may be subject to limitations on the approved indicated uses for which the product may be marketed or to the conditions of approval or may contain requirements for potentially costly additional clinical trials and surveillance to monitor the safety and efficacy of the product candidate. We will be required to report certain adverse reactions and production problems, if any, to the FDA and comparable foreign regulatory authorities. Any new legislation addressing drug safety issues could result in delays in product development or commercialization or increased costs to assure compliance. We will have to comply with requirements concerning advertising and promotion for our products. Promotional communications with respect to prescription drugs are subject to a variety of legal and regulatory restrictions and must be consistent with the information in the product's approved label. As such, we are not allowed to promote our products for indications or uses for which they do not have approval. If our product labeling or manufacturing process. We could also be asked to conduct post-marketing clinical trials to verify the safety and efficacy of our products in general or in specific patient subsets. An unsuccessful post-marketing study or failure to complete such a study could result in the withdrawal of marketing approval.

If a regulatory agency discovers previously unknown problems with an approved product, such as adverse events of unanticipated severity or frequency or problems with our manufacturing facilities or disagrees with the promotion, marketing or labeling of a product, such regulatory agency may impose restrictions on that product or us, including requiring withdrawal of the product from the market. If we fail to comply with applicable regulatory requirements, a regulatory agency or enforcement authority may, among other things:

• issue untitled and warning letters;

- impose civil or criminal penalties;
- suspend or withdraw regulatory approval;
- suspend any of our ongoing clinical trials;
- refuse to approve pending applications or supplements to approved applications submitted by us;
- impose restrictions on our operations, including closing our manufacturing facilities; or
- seize or detain products or require a product recall.

Any government investigation of alleged violations of law could require us to expend significant time and resources in response and could generate negative publicity. Any failure to comply with ongoing regulatory requirements may significantly and adversely affect our ability to commercialize and generate revenue from our products. If regulatory sanctions are applied or if regulatory approval is withdrawn, the value of our company and our operating results will be negatively impacted.

The development and commercialization of pharmaceutical products is subject to extensive regulation, and we may not obtain regulatory approvals for ONS-5010 in any of the indications for which we plan to develop it, or any future product candidates, on a timely basis or at all.

The clinical development, manufacturing, labeling, packaging, storage, recordkeeping, advertising, promotion, export, import, marketing, distribution, adverse event reporting, including the submission of safety and other post-marketing information and reports, and other possible activities relating to ONS-5010, as well as any other product candidate that we may develop in the future, are subject to extensive regulation. Marketing approval of biologics in the United States requires the submission of a BLA to the FDA and we are not permitted to market any product candidate in the United States until we obtain approval from the FDA of the BLA for that product. A BLA must be supported by extensive clinical and preclinical data, as well as extensive information regarding pharmacology, chemistry, manufacturing and controls.

FDA approval of a BLA is not guaranteed, and the review and approval process is an expensive and uncertain process that may take several years. The FDA also has substantial discretion in the approval process. The number and types of preclinical studies and clinical trials that will be required for BLA approval varies depending on the product candidate, the disease or the condition that the product candidate is designed to treat and the regulations applicable to any particular product candidate. Despite the time and expense associated with preclinical studies and clinical trials, failure can occur at any stage. The results of preclinical and early clinical trials of ONS-5010 or any future product candidates may not be predictive of the results of our later-stage clinical trials.

Clinical trial failure may result from a multitude of factors including flaws in trial design, dose selection, placebo effect, patient enrollment criteria and failure to demonstrate favorable safety or efficacy traits, and failure in clinical trials can occur at any stage. Companies in the biopharmaceutical industry frequently suffer setbacks in the advancement of clinical trials due to lack of efficacy or adverse safety profiles, notwithstanding promising results in earlier trials. Based upon negative or inconclusive results, we may decide, or regulators may require us, to conduct additional clinical trials or preclinical studies. In addition, data obtained from clinical trials are susceptible to varying interpretations, and regulators may not interpret our data as favorably as we do, which may further delay, limit or prevent marketing approval.

The FDA could delay, limit or deny approval of a product candidate for many reasons, including because they:

- may not deem our product candidate to be adequately safe and effective;
- may not agree that the data collected from clinical trials are acceptable or sufficient to support the submission of a BLA or other submission or to obtain regulatory approval, and may impose requirements for additional preclinical studies or clinical trials;

- may determine that adverse events experienced by participants in our clinical trials represents an unacceptable level of risk;
- may determine that population studied in the clinical trial may not be sufficiently broad or representative to assure safety in the full population for which we seek approval;
- may not accept clinical data from trials which are conducted at clinical facilities or in countries where the standard of care is potentially different from that of the United States;
- may disagree regarding the formulation, labeling and/or the specifications;
- may not approve the manufacturing processes or facilities associated with our product candidate;
- · may change approval policies or adopt new regulations; or
- may not accept a submission due to, among other reasons, the content or formatting of the submission.

Generally, public concern regarding the safety of pharmaceutical products could delay or limit our ability to obtain regulatory approval, result in the inclusion of unfavorable information in our labeling, or require us to undertake other activities that may entail additional costs. We have not obtained FDA approval for any product. This lack of experience may impede our ability to obtain FDA approval in a timely manner, if at all, for ONS-5010.

If we experience delays in obtaining approval or if we fail to obtain approval of ONS-5010, our commercial prospects will be harmed and our ability to generate revenues will be materially impaired which would adversely affect our business, prospects, financial condition and results of operations.

Any delays in the commencement or completion, or termination or suspension, of our planned or future clinical trials could result in increased costs to us, delay or limit our ability to generate revenue and adversely affect our commercial prospects.

Any delays in the commencement or completion, or termination or suspension, of our planned or future clinical trials could result in increased costs to us, delay or limit our ability to generate revenue and adversely affect our commercial prospects. Before we can initiate clinical trials in the United States in any distinct indication, we must submit the results of preclinical and/or other studies to the FDA along with other information, including information about chemistry, manufacturing and controls and our proposed clinical trial protocol, as part of an IND or similar regulatory filing.

Before obtaining marketing approval from the FDA for the sale of a product candidate in any indication, we must conduct extensive clinical studies to demonstrate its safety and efficacy. Clinical testing is expensive, time consuming and uncertain as to outcome. In addition, we expect to rely in part on preclinical, clinical and quality data generated by CROs, and other third parties for regulatory submissions for ONS-5010. While we have or will have agreements governing these third parties' services, we have limited influence over their actual performance. If these third parties do not make data available to us, or, if applicable, make regulatory submissions in a timely manner, in each case pursuant to our agreements with them, our development programs may be significantly delayed and we may need to conduct additional studies or collect additional data independently. In either case, our development costs would increase.

The FDA may require us to conduct additional studies for a product candidate before it allows us to initiate clinical trials under any IND, which could lead to additional delays and increase the costs of our development programs. Any such delays in the commencement or completion of our planned or future clinical trials could significantly affect our product development costs. We do not know whether planned trials will begin on time or be completed on schedule, if at all. The commencement and completion of clinical trials can be delayed for a number of reasons, including delays related to:

• the FDA disagreeing as to the design or implementation of our clinical studies;

- obtaining FDA authorizations to commence a trial or reaching a consensus with the FDA on trial design;
- any failure or delay in reaching an agreement with CROs and clinical trial sites, the terms of which can be subject to extensive negotiation and may vary significantly among different CROs and trial sites;
- obtaining approval from one or more IRBs;
- IRBs refusing to approve, suspending or terminating the trial at an investigational site, precluding enrollment of additional subjects, or withdrawing their approval of the trial;
- changes to clinical trial protocol;
- clinical sites deviating from trial protocol or dropping out of a trial;
- manufacturing sufficient quantities of product candidate or obtaining sufficient quantities of combination therapies for use in clinical trials;
- subjects failing to enroll or remain in our trial at the rate we expect, or failing to return for post-treatment follow-up, including as a result of the ongoing COVID-19 global pandemic;
- subjects choosing an alternative treatment, or participating in competing clinical trials;
- lack of adequate funding to continue the clinical trial;
- subjects experiencing severe or unexpected drug-related adverse effects;
- occurrence of serious adverse events in trials of the same class of agents conducted by other companies;
- selection of clinical end points that require prolonged periods of clinical observation or analysis of the resulting data;
- a facility manufacturing our product candidates or any of their components being ordered by the FDA to temporarily or permanently shut down due to violations of current good manufacturing practice, or cGMP, regulations or other applicable requirements, or infections or crosscontaminations of product candidates in the manufacturing process;
- any changes to our manufacturing process that may be necessary or desired;
- third-party clinical investigators losing the licenses or permits necessary to perform our clinical trials, not performing our clinical trials on our anticipated schedule or consistent with the clinical trial protocol, good clinical practices, or GCP, or other regulatory requirements;
- · third-party contractors not performing data collection or analysis in a timely or accurate manner; or
- third-party contractors becoming debarred or suspended or otherwise penalized by the FDA or other government or regulatory authorities for violations of regulatory requirements, in which case we may need to find a substitute contractor, and we may not be able to use some or all of the data produced by such contractors in support of our marketing applications.

We could also encounter delays if a clinical trial is suspended or terminated by us, by the IRBs of the institutions in which such trials are being conducted, by a Data Safety Monitoring Board for such trial or by the FDA.

Such authorities may impose such a suspension or termination due to a number of factors, including failure to conduct the clinical trial in accordance with regulatory requirements or our clinical protocols, inspection of the clinical trial operations or trial site by the FDA resulting in the imposition of a clinical hold, unforeseen safety issues or adverse side effects, failure to demonstrate a benefit from using a pharmaceutical, changes in governmental regulations or administrative actions or lack of adequate funding to continue the clinical trial. In addition, changes in regulatory requirements and policies may occur, and we may need to amend clinical trial protocols to comply with these changes. Amendments may require us to resubmit our clinical trial protocols to IRBs for reexamination, which may impact the costs, timing or successful completion of a clinical trial.

Any delays in completing our clinical trials will increase our costs, slow down our development and approval process and jeopardize our ability to commence product sales and generate revenues which may harm our business, financial condition and prospects significantly.

If we experience delays or difficulties in enrolling patients in our planned clinical trials, our receipt of necessary regulatory approval could be delayed or prevented.

We may not be able to initiate or continue our planned clinical trials if we are unable to identify and enroll a sufficient number of eligible patients to participate in these trials as required by the FDA. Some of our competitors may have ongoing clinical trials for product candidates that would treat the same indications as ONS-5010 or any future product candidates we may develop, and patients who would otherwise be eligible for our clinical trials may instead enroll in clinical trials of our competitors' product candidates. Patient enrollment is also affected by other factors, including:

- severity of the disease under investigation;
- our ability to recruit clinical trial investigators of appropriate competencies and experience;
- invasive procedures required to obtain evidence of the product candidate's performance during the clinical trial;
- availability and efficacy of approved medications for the disease under investigation;
- eligibility criteria defined in the protocol for the trial in question;
- the size of the patient population required for analysis of the trial's primary endpoints;
- perceived risks and benefits;
- efforts to facilitate timely enrollment in clinical trials;
- reluctance of physicians to encourage patient participation in clinical trials;
- the ability to monitor patients adequately during and after treatment;
- our ability to obtain and maintain patient consents; and
- · proximity and availability of clinical trial sites for prospective patients.

These factors can be exacerbated by other situations, such as the ongoing COVID-19 global pandemic, which impacted enrollment in our NORSE 2 clinical trial. Our inability to enroll a sufficient number of patients for our clinical trials would result in significant delays or may require us to abandon one or more clinical trials altogether. Enrollment delays in our clinical trials may result in increased development costs, which would cause the value of our company to decline and limit our ability to obtain additional financing.

Adverse side effects or other safety risks associated with ONS-5010 or any future product candidate could delay or preclude approval, cause us to suspend or discontinue clinical trials, abandon further development, limit the commercial profile of an approved label, or result in significant negative consequences following marketing approval, if any.

As is the case with pharmaceuticals generally, it is likely that there may be side effects and adverse events associated with a product candidate in planned clinical trials. Results of our clinical trials could reveal a high and unacceptable severity and prevalence of side effects or unexpected characteristics. Undesirable side effects caused by a product candidate could result in the delay, suspension or termination of clinical trials by us or the FDA for a number of reasons. If we elect or are required to delay, suspend or terminate any clinical trial, the commercial prospects of ONS-5010 or any future product candidate will be harmed and our ability to generate product revenues from this product candidate will be delayed or eliminated. Serious adverse events observed in clinical trials could hinder or prevent market acceptance of ONS-5010 or any future product candidate. Any of these occurrences may harm our business, prospects, financial condition and results of operations significantly.

Moreover, if ONS-5010 or any future product candidate. is associated with undesirable side effects in clinical trials or have characteristics that are unexpected, we may elect to abandon or limit its development to more narrow uses or subpopulations in which the undesirable side effects or other characteristics are less prevalent, less severe or more acceptable from a risk-benefit perspective, which may limit the commercial expectations, if approved. We may also be required to modify our study plans based on findings in our clinical trials. Many biologics that initially showed promise in early stage testing have later been found to cause side effects that prevented further development. In addition, regulatory authorities may draw different conclusions or require additional testing to confirm these determinations.

It is possible that as we test a product candidate in larger, longer and more extensive clinical trials including for additional indications, or as the use of ONS-5010 or any future product candidate becomes more widespread following regulatory approval, illnesses, injuries, discomforts and other adverse events that were observed in earlier trials, as well as conditions that did not occur or went undetected in previous trials, will be reported by patients. If such side effects become known later in development or upon approval, if any, such findings may harm our business, financial condition and prospects significantly.

In addition, if ONS-5010 or any future product candidate. receives marketing approval, and we or others later identify undesirable side effects, a number of potentially significant negative consequences could result, including:

- · regulatory authorities may withdraw approval of such product;
- we may be required to recall a product or change the way such product is administered to patients;
- regulatory authorities may require additional warnings on the label, such as a "black box" warning or a contraindication, or issue safety alerts, Dear Healthcare Provider letters, press releases or other communications containing warnings or other safety information about the product;
- we may be required to implement a REMS, or create a medication guide outlining the risks of such side effects for distribution to patients;
- additional restrictions may be imposed on the marketing or promotion of the particular product or the manufacturing processes for the product or any component thereof;
- we could be sued and held liable for harm caused to patients;
- such product could become less competitive; and
- our reputation may suffer.

Any of these events could prevent us from achieving or maintaining market acceptance of ONS-5010 or any future product candidate, if approved, and could significantly harm our business, results of operations and prospects.

Risks Related to Commercialization of Our Product Candidates

We face intense competition and rapid technological change and the possibility that our competitors may develop therapies that are similar, more advanced or more effective than ours. Other products may be approved and successfully commercialized before ours, which may adversely affect our financial condition and our ability to successfully commercialize our product candidates.

We expect to enter highly competitive pharmaceutical markets. Successful competitors in the pharmaceutical markets have demonstrated the ability to effectively discover, obtain patents, develop, test and obtain regulatory approvals for products, as well as an ability to effectively commercialize, market and promote approved products. Numerous companies, universities and other research institutions are engaged in developing, patenting, manufacturing and marketing of products competitive with those that we are developing. Many of these potential competitors are large, experienced pharmaceutical companies that enjoy significant competitive advantages, such as substantially greater financial, research and development, manufacturing, personnel and marketing resources. These companies also have greater brand recognition and more experience in conducting preclinical testing and clinical trials of product candidates and obtaining FDA and other regulatory approvals of products.

We have competitors both in the United States and internationally, including major multinational pharmaceutical companies, specialty pharmaceutical companies and biotechnology companies. Some of the pharmaceutical and biotechnology companies we expect to compete with include, for example, Novartis, which currently markets LUCENTIS and Regeneron, with their product Eylea, both of which have been approved for use in patients with wet AMD. Furthermore, the cancer drug Avastin, sold by Roche, is used off-label in wet AMD patients although it has not been approved for use in these patients. Our ONS-5010 is being developed as an approved alternative to the use of off-label Avastin as well as the much more expensive approved therapies. In addition, these companies and other, smaller, biotechnology and pharmaceutical companies are also developing new treatments for wet AMD and are at various stages of pre-clinical and clinical development.

Many of our competitors have substantially greater financial, technical and other resources, such as larger research and development staff and experienced marketing and manufacturing organizations. Additional mergers and acquisitions in the pharmaceutical industry may result in even more resources being concentrated in our competitors. As a result, these companies may obtain regulatory approval more rapidly than we are able to and may be more effective in selling and marketing their products. Smaller or early-stage companies may also prove to be significant competitors, particularly through collaborative arrangements with large, established companies, and we also compete against such companies for resources from and in securing parterning arrangements with, such large, established companies. Our competitors may succeed in developing, acquiring or licensing on an exclusive basis, products that are more effective or less costly than any product candidate that we may develop; they may also obtain patent protection that could block our products; and they may obtain regulatory approval, product commercialization and market penetration earlier than we do. Product candidates developed by our competitors may regulatory approval, product candidates uneconomical, less desirable or obsolete, and we may not be successful in marketing our product candidates against competitors.

We expect additional companies to seek approval to manufacture and market anti-VEGF therapies for ophthalmic indications. If other anti-VEGF therapies are approved and successfully commercialized before ONS-5010, we may never achieve significant market share for this product, our revenue would be reduced and, as a result, our business, prospects and financial condition could be harmed.

The commercial success of any current or future product candidate will depend upon the degree of market acceptance by physicians, patients, third-party payors and others in the medical community.

Even with the requisite approvals from the FDA and comparable foreign regulatory authorities, the commercial success of ONS-5010 or any other product candidates we may pursue will depend in part on the medical community, patients and third-party payors accepting our product candidates as medically useful, cost-effective and safe. Even though we expect

that ONS-5010 will be priced responsibly, if approved, there is no guarantee that ONS-5010 or any other product that we bring to the market directly or through a strategic partner will gain market acceptance by physicians, patients, third-party payors and others in the medical community. The degree of market acceptance of any of our product candidates, if approved for commercial sale, will depend on a number of factors, including but not limited to:

- the safety and efficacy of the product in clinical trials, and potential advantages over competing treatments;
- the publication of unfavorable safety or efficacy data concerning our product by third-parties;
- the prevalence and severity of any side effects, including any limitations or warnings contained in a product's approved labeling;
- the clinical indications for which approval is granted;
- recognition and acceptance of our product candidates over our competitors' products;
- prevalence of the disease or condition for which the product is approved;
- the cost of treatment, particularly in relation to competing treatments;
- the willingness of the target patient population to try our therapies and of physicians to prescribe these therapies;
- the strength of marketing and distribution support and timing of market introduction of competitive products;
- the extent to which the product is approved for inclusion on formularies of hospitals and managed care organizations;
- publicity concerning our products or competing products and treatments;
- the extent to which third-party payors provide coverage and adequate reimbursement for ONS-5010, or any other product candidates we may pursue, if approved;
- · our ability to maintain compliance with regulatory requirements; and
- labeling or naming imposed by FDA or other regulatory agencies.

Even if ONS-5010 or any other product candidate we may develop in the future displays an equivalent or more favorable efficacy and safety profile in preclinical and clinical trials, market acceptance of the product candidate will not be fully known until after it is launched and may be negatively affected by a potential poor safety experience and the track record of other product candidates. Our efforts, or those of any strategic licensing partner, to educate the medical community and third-party payors on the benefits of our product candidates may require significant resources, may be underresourced compared to large well-funded pharmaceutical entities and may never be successful. If ONS-5010 or any other product candidates we may develop in the future are approved but fail to achieve an adequate level of acceptance by physicians, patients, third-party payors and others in the medical community, we will not be able to generate sufficient revenue to become or remain profitable.

Even if ONS-5010 is approved, off-label repackaging of Avastin at compounding pharmacies may continue, which could have a material adverse effect on our business and financial condition.

It is currently estimated that Avastin accounts for at least 50% of wet AMD prescriptions in the United States, notwithstanding that such use is off-label and requires repackaging at a compounding pharmacy. Even if ONS-5010 is approved for use as a treatment for wet AMD, there is no guarantee that we will be effective in reducing the off-label use of Avastin and other drugs in the United States or other major markets where we plan to seek regulatory approval and

commercialize ONS-5010, directly or through a strategic partner, if approved. If we are not successful in reducing off-label use of Avastin or other drugs with ONS-5010, our business and financial condition could be adversely affected.

We currently have no marketing and sales organization. If we are unable to establish sales and marketing capabilities in jurisdictions for which we choose to retain commercialization rights, we may be unable to generate any revenue.

We currently have no marketing or sales organization. We do not yet have any products approved for sale, and we, as a company, have no experience selling and marketing any pharmaceutical products. To successfully commercialize any products, we will need to develop these capabilities, either on our own or with others. If ONS-5010 receives regulatory approval and we are not able to secure a strategic licensing partner who will commercialize such product, we may need to establish our own sales and marketing organization with technical expertise and supporting distribution capabilities to commercialize ONS-5010 or any other product candidates that are approved in major markets where we may choose to retain commercialization rights. Doing so will be expensive, difficult and time-consuming. Any failure or delay in the development of our internal sales, marketing and distribution capabilities would adversely impact the commercialization of our products. Further, given our lack of prior experience in marketing and selling our products, our initial estimate of the size of the required sales force may be materially more or less than the size of the sales force actually required to hire substantially more sales representatives and medical support liaisons to adequately support the commercialization of ONS-5010 or we may incur excess costs as a result of hiring more sales representatives than necessary. With respect to certain geographical markets, we may enter into collaborations with other entities to utilize their local marketing and distribution capabilities, but we may be unable to enter into such agreements on favorable terms, if at all. If our future collaboration partners do not commit sufficient resources to commercialize our future products, if any, and we are unable to establish sales and marketing capabilities or any approved product, whether on our own or through collaborations, our results of operations will be negatively impacted.

We may need to enter into alliances with other companies that can provide capabilities and funds for the development and commercialization of product candidates. If we are unsuccessful in forming or maintaining these alliances on favorable terms, our business could be harmed.

Because we are a late clinical-stage biopharmaceutical company, we have found it necessary to enter into alliances with other companies. For example, we entered into a strategic partnership agreement for consulting services for ONS-5010, pursuant to which we paid a monthly fee prior to terminating such arrangement. We have also entered into service agreements for clinical trials, and co-development and license agreements for our biosimilar product candidates, and are in active discussions with strategic partners for ONS-5010. In the future, we may also find it necessary to form other alliances or joint ventures with major pharmaceutical companies to jointly develop and/or commercialize the inactive biosimilar product candidates in our pipeline and any other product candidates that we may develop. In such alliances, we would expect our collaboration partners to provide substantial capabilities in regulatory affairs, as well as sales and marketing. We may not be successful in entering into any such alliances, including reaching agreement or approval of a product candidate is delayed or sales of an approved product are disappointing. We may also have disagreements from time to time with our collaboration partners regarding our rights and obligations under such arrangements. For example, one of our contract counterparties for our former biosimilar program recently filed a complaint claiming breach. See Item 3. "Legal Proceedings." If we are not able to secure or maintain such alliances, we may not have the capabilities necessary to continue or complete development of our product candidates and not we the capabilities necessary to continue or complete development of our product and able as a successful matching. For example, one of our contract counterparties for our former biosimilar program recently filed a complaint claiming breach. See Item 3. "Legal Proceedings." If we are not able to secure or maintain such alliances, we may not have the capabilities necessary to continue or complete development of our product

In addition to commercialization capabilities, we may depend on our alliances with other companies to provide substantial additional funding for development and potential commercialization of our product candidates. We may not be able to obtain funding on favorable terms from these alliances, and even if so, we may underestimate our development costs, and such fund may not be sufficient to develop a particular product candidate internally or to bring it to market. Failure to bring ONS-5010, or any other product candidates we may develop in the future, to market will prevent us from generating sales revenue and this will substantially harm our business. Furthermore, any delay in entering into these alliances could

delay the development and commercialization of our product candidates and reduce their competitiveness even if they reach the market. As a result, our business and operating results may be harmed.

The third-party coverage and reimbursement status of newly approved products is uncertain. Failure to obtain or maintain adequate coverage and reimbursement for new or current products could limit our ability to market those products and decrease our ability to generate revenue.

Pricing, coverage and reimbursement of ONS-5010, or any other product candidates we may develop in the future, if approved, may not be adequate to support our commercial infrastructure. Our per-patient prices may not be sufficient to recover our development costs and potentially achieve profitability. The availability of coverage and adequacy of reimbursement by governmental and private payors are essential for most patients to be able to afford expensive treatments such as ours, if approved. Accordingly, sales of our product candidates will depend substantially, both domestically and abroad, on the extent to which the costs of ONS-5010 and any of our other product candidates will be paid for by third-party payors such as health maintenance, managed care organizations, pharmacy benefit and similar healthcare management organizations, private health insurers and other third-party payors. If coverage and reimbursement are not available, or are available only at insufficient levels, we may not be able to successfully commercialize our product candidates. Coverage decisions may depend upon clinical and economic standards that disfavor new drug products when more established or lower cost therapeutic alternatives are already available or subsequently become available. Even if coverage is provided, the approved reimbursement amount may not be adequate to allow us to realize a return on our investment.

There is significant uncertainty related to third-party payor coverage and reimbursement of newly approved products. In the United States, third-party payors play an important role in determining the extent to which new drugs and biologics will be covered and reimbursed. The Medicare program covers certain individuals aged 65 or older or those who are disabled or suffering from end-stage renal disease. The Medicaid program, which varies from state to state, covers certain individuals and families who have limited financial means and/or certain disabilities. The Medicare and Medicaid programs increasingly are used as models for how third-party payors develop their coverage and reimbursement policies for drugs and biologics. It is difficult to predict at this time what third-party payors will decide with respect to the coverage and reimbursement for our biosimilar product candidates, if approved. In addition, in the United States, no uniform policy of coverage and reimbursement for biologics exists among third-party payors. Therefore, coverage and reimbursement for biologics can differ significantly from payor. As a result, the process for seeking favorable coverage determinations often is time-consuming and costly and may 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 obtained. Our inability to promptly obtain coverage and profitable reimbursement rates from third-party payors for any approved products that we develop could have an adverse effect on our operating results, our ability to raise capital needed to commercialize products and our overall financial condition.

Outside the United States, pharmaceutical businesses are generally subject to extensive governmental price controls and other market regulations. We believe the increasing emphasis on cost-containment initiatives in the E.U., Canada and other countries has and will continue to put pressure on the pricing and usage of our product candidates. In many countries, the prices of medical products are subject to varying price control mechanisms as part of national health systems. Other countries allow companies to fix their own prices for medical products but monitor and control company profits. Additional foreign price controls or other changes in pricing regulation could restrict the amount that we are able to charge for our product candidates. Accordingly, in markets outside the United States, the reimbursement for our products may be reduced compared with the United States and may be insufficient to generate commercially reasonable revenue and profits.

Moreover, increasing efforts by governmental and third-party payors in the United States and abroad to control healthcare costs may cause such organizations to limit both coverage and the level of reimbursement for new products approved and, as a result, they may not cover or provide adequate payment for ONS-5010, or any other product candidates we may develop in the future. We expect to experience pricing pressures in connection with the sale of ONS-5010, or any other product candidates we may develop in the future, if approved, due to the trend toward managed healthcare, the increasing influence of health maintenance organizations and additional legislative changes.

Risks Related to Our Reliance on Third Parties

We rely on third parties to conduct our preclinical and clinical trials and perform other tasks for us. If these third parties do not successfully carry out their contractual duties, meet expected deadlines or comply with regulatory requirements, we may not be able to obtain regulatory approval for or commercialize our product candidates and our business could be harmed.

We have relied upon and plan to continue to rely upon CROs to monitor and manage data for our ongoing clinical development programs. We rely on these parties for execution of our preclinical and clinical trials and we can only control certain aspects of their activities. Nevertheless, we are responsible for ensuring that each of our studies is conducted in accordance with the applicable protocol, legal, regulatory and scientific requirements and standards and our reliance on the CROs does not relieve us of our regulatory responsibilities. We and our CROs and other vendors are required to comply with cGMP, GCP, and Good Laboratory Practices, or GLP, which are regulations and guidelines enforced by the FDA, the Competent Authorities of the Member States of the EEA and comparable foreign regulatory authorities for all of our product candidates in clinical development. Regulatory authorities enforce these regulations through periodic inspections of study sponsors, principal investigators, study sites and other contractors. If we, any of our CROs, service providers or investigators fail to comply with applicable regulatory authorities may require us to perform additional preclinical and clinical trials before approving our marketing applications. We cannot assure you that upon inspection by a given regulatory authority, such regulatory authority will determine that any of our clinical trials comply with GCP requirements. In addition, our clinical trials must be conducted with products produced under cGMP regulations. Failure to comply by any of the participating parties or ourselves with these regulations or any other participating parties violate federal or state fraud and abuse or false claims laws and regulations or healthcare privacy and security laws.

If any of our relationships with any of these third-party CROs terminate, we may not be able to enter into arrangements with alternative CROs or do so on commercially reasonable terms. In addition, our CROs are not our employees, and except for remedies available to us under our agreements with such CROs, we cannot control whether or not they devote sufficient time and resources to our on-going preclinical and clinical programs. If CROs do not successfully carry out their contractual duties or obligations or meet expected deadlines, if they need to be replaced or if the quality or accuracy of the data they obtain is compromised due to the failure to adhere to our protocols, regulatory requirements or for other reasons, our clinical trials may be extended, delayed or terminated and we may not be able to obtain regulatory approval for or successfully commercialize our product candidates. CROs may also generate higher costs than anticipated. As a result, our results of operations and the commercial prospects for our product candidates would be harmed, our costs could increase and our ability to generate revenue could be delayed.

Changing or adding additional CROs involves additional cost and requires management time and focus. In addition, there is a natural transition period when a new CRO commences work. As a result, delays may occur, which can negatively impact our ability to meet our desired clinical development timelines. We may encounter challenges or delays in the future and these delays or challenges may have an adverse effect on our business, financial condition and prospects.

Previously, we manufactured bulk drug substance for preclinical and clinical supplies of our product candidates in our in-house facility. Our business could be harmed if our new contract manufacturer is unable to manufacture our product candidates at the necessary quantity or quality levels.

We no longer have the infrastructure or capability internally to manufacture supplies of ONS-5010, or any other product candidate, for use in clinical development, and we lack the resources and the capability to manufacture any product candidates on a clinical or commercial scale. If we are unable to manufacture or have manufactured sufficient supplies of ONS-5010 or any other product candidates, our development efforts would be delayed, which would adversely affect our business and prospects. We have selected FUJIFILM Diosynth Biotechnologies to manufacture and supply us with our product candidates for future clinical development, as well as to establish commercial supplies of our product candidates. If our need for contract manufacturing services increases during a period of industry-wide production capacity shortage, we may not be able to produce our product candidates on a timely basis or on commercially viable terms. Any significant

delay or discontinuation in the supply of a product candidate for an ongoing clinical trial due to the need to replace a third-party manufacturer could considerably delay completion of our clinical trials, product testing and potential regulatory approval of our product candidates, which could harm our business and results of operations.

Reliance on third-party manufacturers 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 and the possible termination or nonrenewal of the agreement by the third party at a time that is costly or inconvenient for us. In addition, third-party manufacturers may not be able to comply with cGMP 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 fines, injunctions, civil penalties, delays, suspension or withdrawal of approvals, license revocation, seizures or recalls of products, operating restrictions and criminal prosecutions, any of which could adversely affect supplies of ONS-5010 or any other product candidates that we may develop. Any failure or refusal to supply the components for our product candidates that we may develop could delay, prevent or impair our clinical development or commercialization efforts. If our contract manufacturers were to breach or terminate their manufacturing arrangements with us, the development or commercialization of the affected products or product candidates could be delayed, which could have an adverse effect on our business. Any change in our manufacturers could be costly because the commercial terms of any new arrangement could be less favorable and because the expenses relating to the transfer of necessary technology and processes could be significant.

If ONS-5010 or any of our product candidates are approved, we may need to enter into agreements with another third party for contract manufacturing in order to produce the quantities necessary to meet anticipated market demand. If we are unable to build and stock our product candidates in sufficient quantities to meet the requirements for the launch of these candidates or to meet future demand, our revenue and gross margins could be adversely affected. Although we believe that we will not have any material supply issues, we cannot be certain that we will be able to obtain long-term supply arrangements for our product candidates or materials used to produce them on acceptable terms, if at all. If we are unable to arrange for third-party manufacturing, or to do so on commercially reasonable terms, we may not be able to complete development of our product candidates or market them.

Any adverse developments affecting the manufacture of ONS-5010 could substantially increase our costs and limit supply for such product candidate.

The process of manufacturing our ONS-5010 and our other monoclonal antibody product candidates is complex, highly regulated and subject to several risks, including but not limited to:

- failure to establish contracts with contract manufacturing organization, or CMOs, and device vendors where applicable;
- product loss due to contamination, equipment failure or improper installation or operation of equipment or vendor or operator error;
- infringing intellectual property rights of third parties relating to manufacturing and quality testing;
- failure to achieve or maintain compliance with FDA's requirements for acceptance of the applicable manufacturing facilities; and
- labor shortages, natural disasters and power failures.

Even minor deviations from normal manufacturing processes for any of our product candidates could result in reduced production yields, product defects and other supply disruptions. In addition, if we require a change in CMO, this will add time along with financial and personnel resources to change manufacturing sites. If microbial, viral or other contaminations are discovered in our product candidates or in our manufacturing facilities, our facilities may need to be closed for an extended period of time to investigate and remedy the contamination.

Any adverse developments affecting manufacturing operations for our product candidates may result in shipment delays, inventory shortages, lot failures, withdrawals or recalls or other interruptions in the supply of our product candidates. We may also have to take inventory write-offs and incur other charges and expenses for product candidates that fail to meet specifications, undertake costly remediation efforts or seek more costly manufacturing alternatives.

We may depend on third parties for the commercialization of ONS-5010, and failure to commercialize in those markets could harm our business and operating results.

We are in active late-stage discussions for the licensing and/or co-development rights to ONS-5010. We may not be successful in reaching agreements with such parties on terms that are as favorable to our company as we would anticipate. We do not have in place any licensing agreements for commercialization of ONS-5010 and have only agreed to license ONS-5010 to our PRC-joint venture once formed, for commercialization in greater China. Our current arrangements are for our inactive biosimilar product candidates, and aside from one U.S. arrangement for ONS-3010, are for smaller ex-U.S. markets where we would not otherwise intend to commercialization arrangement fails to exercise commercially reasonable efforts to market and sell our approved products in their respective licensed jurisdictions or are otherwise ineffective in doing so, our business will be harmed and we may not be able to adequately remedy the harm through negotiation, litigation, arbitration or termination of the license agreements.

Moreover, any disputes with our collaboration partners concerning the adequacy of their commercialization efforts will substantially divert the attention of our senior management from other business activities and will require us to incur substantial legal costs to fund litigation or arbitration proceedings.

In the event that any of our license agreements terminate, we may need to find another partner in those markets to commercialize and in certain instances, manufacture any product candidates. Further, upon any such termination, our contract counterparties may still have the right to commercialize these product candidates in such markets, which may affect our ability to commercialize in the same markets.

Our reliance on third parties requires us to share our trade secrets, which increases the possibility that a competitor will discover them or that our trade secrets will be misappropriated or disclosed.

Because we expect to rely on third parties to manufacture our current and any future product candidates, and we expect to continue to collaborate with third parties on the development of our current and any future product candidates, we must, at times, share trade secrets with them. We also conduct joint research and development programs that may require us to share trade secrets under the terms of our collaboration or similar agreements. For example, under our joint participation arrangement with Huahai, we are obligated to share with Huahai certain information relating to the development of ONS-3010, including reports from nonclinical studies and clinical trials. We seek to protect our proprietary technology in part by entering into confidentiality agreements and, if applicable, material transfer agreements, consulting agreements or other similar agreements with our advisors, employees, CROs, third-party contractors and consultants prior to beginning research or disclosing proprietary information. These agreements typically limit the rights of the third parties to use or disclose our confidential information, including our trade secrets. Despite the contractual provisions employed when working with third parties, the need to share trade secrets and other confidential information increases the risk that such trade secrets become known by our competitors, are inadvertently incorporated into the technology of others, or are disclosed or used in violation of these agreements. Any disclosure, either intentional or unintentional, by our employees, the employees of third parties with whom we share our facilities or third-party consultants and vendors that we engage to perform research, clinical trials or manufacturing activities, or misappropriation by third parties (such as through a cybersecurity breach) of our trade secrets or proprietary information could enable competitors to duplicate or surpass our technological achievements, thus eroding our competitive position in our market. Further, adequate remedies may not exist in the event of unauthorized use or disclosure. Given that our proprietary position is based, in part, on our know-how and trade secrets, a competitor's discovery of our trade secrets or other unauthorized use or disclosure would impair our competitive position and may have an adverse effect on our business and results of operations.

In addition, these agreements typically restrict the ability of our advisors, employees, third-party contractors and consultants to publish data potentially relating to our trade secrets, although our agreements may contain certain limited



publication rights. Policing unauthorized use of our or our licensors' intellectual property is difficult, expensive and time-consuming, and we may be unable to determine the extent of any unauthorized use. Moreover, 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. Despite our efforts to protect our trade secrets, our competitors may discover our trade secrets, either through breach of our agreements with third parties, independent development or publication of information by any of our third-party collaborators. A competitor's discovery of our trade secrets would impair our competitive position and have an adverse impact on our business.

We are required to co-fund the development of, and proportionately share in the revenue from, the commercialization of ONS-3010 in the United States, Canada, E.U., Japan, Australia and New Zealand under a joint participation agreement with Huahai. We may also be required to form a joint venture to further co-develop and commercialize ONS-3010 with Huahai in the agreed countries, if so requested by Huahai.

We currently have a joint participation arrangement with Huahai that provides for the co-funding of the development of ONS-3010 in the United States, Canada, E.U., Japan, Australia and New Zealand and the proportionate sharing of the revenue from commercialization of ONS-3010 in such countries. In the event we were to restart the active development of this program, we could also be required to further co-develop and commercialize ONS-3010 with Huahai in the agreed countries pursuant to a joint venture, if so requested by Huahai, as contemplated by our joint participation agreement. Under the joint participation agreement, assuming Huahai funds its proportionate share of development costs incurred after completion of the "Phase-3 Ready Package" for ONS-3010, we will have a 49% value ownership interest with Huahai having a 51% value ownership interest in ONS-3010. Accordingly, our share of any potential revenues from the successful commercialization of ONS-3010 in the agreed countries, including major markets such as the United States and E.U., would also be in proportion to such ownership interests. While we anticipate that we will each act in accordance with the terms of our agreement for the joint development and commercialization of ONS-3010, we cannot control Huahai, nor can we predict with any certainty that our interests will be aligned and that we will successfully collaborate.

We currently engage single source suppliers for clinical trial services and multiple source suppliers for future drug substance manufacturing, fillfinish manufacturing and product testing of ONS-5010. The loss of any of these suppliers, or any future single source suppliers, could harm our business.

Our ONS-5010 product candidate is fill-finished by Ajinomoto Bio-Pharma Services, Inc., or Ajinomoto. As such, we are heavily dependent on Ajinomoto for supplying us with sufficient supply of ONS-5010. Additionally, we selected FUJIFILM Diosynth Biotechnologies to conduct all future manufacturing of ONS-5010 bulk drug substance. Although we believe that there are alternate sources for these services, we cannot assure you that identifying and establishing new relationships would not result in significant delay in the development of ONS-5010. Additionally, we may not be able to enter into a arrangements with alternative vendors on commercially reasonable terms, or at all. A delay in the development of ONS-5010 or having to enter into a new agreement with a different third party on less favorable terms than we have with our current suppliers could negatively impact our business.

Risks Related to Intellectual Property

If we infringe or are alleged to infringe intellectual property rights of third parties, our business could be harmed. Third-party claims of intellectual property infringement may prevent or delay our development and commercialization efforts.

Our commercial success depends in large part on avoiding infringement of the patents and proprietary rights of third parties. There have been many lawsuits and other proceedings involving patent and other intellectual property rights in the pharmaceutical industry, including patent infringement lawsuits, interferences, oppositions and reexamination proceedings before the U.S. Patent and Trademark Office, or USPTO, and corresponding foreign patent offices. Numerous U.S. and foreign issued patents and pending patent applications, which are owned by third parties, exist in the fields in which we are developing product candidates. As the pharmaceutical industry expands and more patents are issued, the risk increases that our product candidates may be subject to claims of infringement of the patent rights of third parties.

Our research, development and commercialization activities may infringe or otherwise violate or be claimed to infringe or otherwise violate patents owned or controlled by other parties.

Third parties may assert that we are employing their proprietary technology without authorization. There may be third-party patents or patent applications with claims to compositions, formulations, methods of manufacture or methods for treatment related to the use or manufacture of our product candidates. We have conducted patent searches for third-party patents with respect to our lead product candidate, and are not aware of third-party patent families with claims that, if valid and enforceable, could be construed to cover such product candidates or their respective methods of manufacture or use. We cannot guarantee that any of our analyses are complete and thorough, nor can we be sure that we have identified each and every patent and pending application in the United States and abroad that is relevant or necessary to the commercialization of our product candidates. Moreover, because patent applications can take many years to issue, there may be currently pending patent applications that may later result in issued patents covering our product candidates. The existence of any patent with valid and enforceable claims covering one or more of our product candidates could cause substantial delays in our ability to introduce a candidate into the U.S. market if the term of such patent extends beyond our desired product launch date.

There may also be patent applications that have been filed but not published and if such applications issue as patents, they could be asserted against us. For example, in most cases, a patent filed today would not become known to industry participants for at least 18 months given patent rules applicable in most jurisdictions that do not require publication of patent applications until 18 months after filing. Moreover, we may face claims from non-practicing third-party entities that have no relevant product revenue and against whom our own patent portfolio may have no deterrent effect. In addition, the scope of patent claims is subject to interpretation by the courts, and the interpretation is not always uniform. If we are sued for patent infringement, we would need to demonstrate that our product candidates, products or methods either do not infringe the asserted patent claims or that the claims are invalid and/or unenforceable, and we may not be successful.

Proving that a patent is invalid or unenforceable is difficult. For example, in the United States, proving invalidity requires a showing of clear and convincing evidence to overcome the presumption of validity enjoyed by issued patents. In proceedings before courts in the E.U., the burden of proving invalidity of a patent also usually rests on the party alleging invalidity. Even if we are successful in litigation, we may incur substantial costs and the time and attention of our management and scientific personnel could be diverted, which could harm our business. In addition, we may not have sufficient resources to bring these actions to a successful conclusion.

Third parties could bring claims against us that would cause us to incur substantial expenses and, if successful against us, could cause us to pay substantial monetary damages. The outcome of intellectual property litigation is subject to uncertainties that cannot be adequately quantified in advance. If a patent infringement suit were brought against us, we could be forced to stop or delay research, development, manufacturing or sales of the product or product candidate that is the subject of the suit. Ultimately, we could be prevented from commercializing a product or be forced to cease some aspect of our business operations if, as a result of actual or threatened patent infringement claims, we choose or are required to seek licenses from third parties, these licenses may not be available on acceptable terms or at all. Even if we are able to obtain a license, the license may obligate us to pay substantial license fees or royalties or both, and the rights granted to us might be nonexclusive, which could result in our competitors gaining access to the same intellectual property.

Parties making claims against us may obtain injunctive or other equitable relief, which could effectively block our ability to further develop and commercialize one or more of our product candidates. Defense of these claims, regardless of their merit, would likely involve substantial litigation expense and would likely be a substantial diversion of employee resources from our business. In the event of a successful claim of infringement against us, we may, in addition to being blocked from the market, have to pay substantial monetary damages, including treble damages and attorneys' fees for willful infringement, pay royalties, redesign our infringing products or obtain one or more licenses from third parties, which may be impossible or require substantial time and monetary expenditure.

In addition to infringement claims against us, we may become a party to other patent litigation and other proceedings, including interference, derivation or post-grant proceedings declared or granted by the USPTO and similar proceedings in

foreign countries, regarding intellectual property rights with respect to our current or future products. An unfavorable outcome in any such proceedings could require us to cease using the related technology or to attempt to license rights to it from the prevailing party or could cause us to lose valuable intellectual property rights. Our business could be harmed if the prevailing party does not offer us a license on commercially reasonable terms, if any license is offered at all. Litigation or other proceedings may fail and, even if successful, may result in substantial costs and distract our management and other employees. We may also become involved in disputes with others regarding the ownership of intellectual property rights.

Third parties may submit applications for patent term extensions in the United States or other jurisdictions where similar extensions are available and/or Supplementary Protection Certificates in the E.U. states (including Switzerland) seeking to extend certain patent protection that, if approved, may interfere with or delay the launch of one or more of our product candidates.

The cost to us of any patent litigation or other proceeding, even if resolved in our favor, could be substantial. Patent litigation and other proceedings may fail, and even if successful, may result in substantial costs and distract our management and other employees. Uncertainties resulting from the initiation and continuation of patent litigation or other proceedings could impair our ability to compete in the marketplace.

So called "submarine" patents may be granted to our competitors that may significantly alter our launch timing expectations, reduce our projected market size, cause us to modify our product or process or block us from the market altogether.

The term "submarine" patent has been used in the pharmaceutical industry and in other industries to denote a patent issuing from a U.S. application with an effective filing date prior to June 8, 1995 that was not published, publically known or available prior to its grant. Submarine patents add substantial risk and uncertainty to our business. Submarine patents may be issued to our competitors covering our product candidates and thereby cause significant market entry delay, defeat our ability to market our product candidates or cause us to abandon development and/or commercialization of a product candidate.

The issuance of one or more submarine patents may harm our business by causing substantial delays in our ability to introduce a candidate into the U.S. market.

We may not identify relevant patents or may incorrectly interpret the relevance, scope or expiration of a patent, which might adversely affect our ability to develop and market our products.

We cannot guarantee that any of our patent searches or analyses, including but not limited to the identification of relevant patents, the scope of patent claims or the expiration of relevant patents, are complete and thorough, nor can we be certain that we have identified each and every patent and pending application in the United States and abroad that is relevant to or necessary for the commercialization of our product candidates in any jurisdiction.

The scope of a patent claim is determined by an interpretation of the law, the written disclosure in a patent and the patent's prosecution history. Our interpretation of the relevance or the scope of a patent or a pending application may be incorrect, which may negatively impact our ability to market our products or pipeline candidates. We may incorrectly determine that our products are not covered by a third party patent. Further, we may conclude that a well-informed court or other tribunal would find the claims of a relevant third-party patent to be invalid based on prior art, enablement, written description, or other ground, and that conclusion may be incorrect, which may negatively impact our ability to market our products or pipeline molecules.

Many patents may cover a marketed product, including but not limited to the composition of the product, methods of use, formulations, cell line constructs, vectors, growth media, production processes and purification processes. The identification of all patents and their expiration dates relevant to the production and sale of a reference product is extraordinarily complex and requires sophisticated legal knowledge in the relevant jurisdiction. It may be impossible to identify all patents in all jurisdictions relevant to a marketed product. We may not identify all relevant patents, or incorrectly determine their expiration dates, which may negatively impact our ability to develop and market our products.

Our failure to identify and correctly interpret relevant patents may negatively impact our ability to develop, market and commercialize our products.

We may become involved in lawsuits to protect or enforce any future patents, which could be expensive, time-consuming and unsuccessful.

We have issued patents and when and if we do obtain additional issued patents, we may discover that competitors are infringing these patents. Expensive and time-consuming litigation may be required to enforce our patents. If we or one of our collaboration partners were to initiate legal proceedings against a third party to enforce a patent covering one of our product candidates, the defendant could counterclaim that the patent covering our product candidate is invalid and/or unenforceable. In patent litigation in the United States, defendant counterclaims alleging invalidity and/or unenforceability are commonplace. Grounds for a validity challenge could be an alleged failure to meet any of several statutory requirements, including but not limited to lack of novelty, obviousness or non-enablement. Grounds for an unenforceability assertion could include an allegation that someone involved in the prosecution of the patent withheld relevant or material information related to the patentability of the invention from the USPTO or made a misleading statement during prosecution. The outcome following legal assertions of invalidity and unenforceability is unpredictable, and there is a risk that a court will decide that a patent of ours is invalid or unenforceable, in whole or in part, and that we do not have the right to stop the other party from using the invention at issue. There is also a risk that, even if the validity of such patents is upheld, the court will construe the patent's claims narrowly and decide that we do not have the right to stop the other party from using the invention at issue on the grounds that our patent claims do not cover the invention. An adverse outcome in a litigation or proceeding involving our patents could limit our ability to assert our patents against those parties or other competitors and may curtail or preclude our ability to exclude third parties from making and selling similar or competitive products. Any of these occurrences could adversely affect our competitive business position, business prospects and financial condition. Even if we establish infringement, the court may decide not to grant an injunction against further infringing activity and instead award only monetary damages, which may or may not be an adequate remedy.

Similarly, if we assert trademark infringement claims, a court may determine that the marks we have asserted are invalid or unenforceable, or that the party against whom we have asserted trademark infringement has superior rights to the marks in question. In this case, we could ultimately be forced to cease use of such trademarks.

Furthermore, because of the substantial amount of discovery required in connection with intellectual property litigation, there is a risk that some of our confidential information could be compromised by disclosure during any litigation we initiate to enforce our patents. There could also 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 have a negative impact on the market price of our securities. Moreover, there can be no assurance that we will have sufficient financial or other resources to file and pursue such infringement claims, which typically last for years before they are concluded. Even if we ultimately prevail in such claims, the monetary cost of such litigation and the diversion of the attention of our management and scientific personnel could outweigh any benefit we receive as a result of the proceedings.

We may be subject to claims that our employees, consultants or independent contractors have wrongfully used or disclosed confidential information of third parties or that our employees have wrongfully used or disclosed alleged trade secrets of their former employees.

We employ individuals and retain independent contractors and consultants and members on our board of directors who were previously employed at universities or other pharmaceutical companies, including our competitors or potential competitors. Although we try to ensure that our employees, consultants and independent contractors do not use the proprietary information or know-how of others in their work for us and we are not currently subject to any claims that they have done so, we may in the future be subject to such claims. Litigation may be necessary to defend against these claims. If we fail in defending any such claims, in addition to paying monetary damages, we may lose valuable intellectual property rights or personnel, which could adversely impact our business. Even if we are successful in defending against such claims, litigation could result in substantial costs and be a distraction to management and other employees.

In addition, while we typically require our employees, consultants 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, which may result in claims by or against us asserting ownership of such 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. Even if we are successful in prosecuting or defending against such claims, litigation could result in substantial costs and be a distraction to our senior management and scientific personnel.

If we are unable to obtain and maintain effective patent rights for our product candidates or any future product candidates, we may not be able to prevent competitors from using technologies we consider important in our successful development and commercialization of our product candidates, resulting in loss of any potential competitive advantage our patents may have otherwise afforded us.

While our principal focus in matters relating to intellectual property is to avoid infringing the valid and enforceable rights of third parties, we also rely upon a combination of patents, trade secret protection and confidentiality agreements to protect our own intellectual property related to our product candidates and development programs. Our ability to enjoy any competitive advantages afforded by our own intellectual property depends in large part on our ability to obtain and maintain patents and other intellectual property protection in the United States and in other countries with respect to various proprietary elements of our product candidates, such as, for example, our product formulations and processes for manufacturing our products and our ability to maintain and control the confidentiality of our trade secrets and confidential information critical to our business.

We have sought to protect our proprietary position by filing patent applications in the United States and abroad related to our products that are important to our business. This 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. There is no guarantee that any patent application we file will result in an issued patent having claims that protect our products; and, as a result, we may not be able to effectively prevent others from commercializing competitive products. Additionally, while the basic requirements for patentability are similar across jurisdictions, each jurisdiction has its own specific requirements for patentability. We cannot guarantee that we will obtain identical or similar patent protection covering our products in all jurisdictions where we file patent applications.

The patent positions of biopharmaceutical companies generally are highly uncertain and involve complex legal and factual questions for which legal principles remain unresolved. As a result, the patent applications that we own or license may fail to result in issued patents with claims that cover our product candidates in the United States or in other foreign countries for many reasons. There is no assurance that all potentially relevant prior art relating to our patents and patent applications has been found, considered or cited during patent prosecution, which can be used to invalidate a patent or prevent a patent from issuing from a pending patent application. Even if patents do successfully issue, and even if such patents cover our product candidates, third parties may challenge their validity, enforceability or scope, which may result in such patent claims being narrowed, found unenforceable or invalidated. Furthermore, even if they are unchallenged, our patents and patent applications may not adequately protect our intellectual property, provide exclusivity for our product candidates or prevent others from designing around our claims. Any of these outcomes could impair our ability to prevent competitors from using the technologies claimed in any patents issued to us, which may have an adverse impact on our business.

Patents granted by the European Patent Office may be opposed by any person within nine months from the publication of their grant and, in addition, may be challenged before national courts at any time.

Furthermore, even if they are unchallenged, our patents and patent applications may not adequately protect our intellectual property or prevent others from designing around our claims. If the breadth or strength of protection provided by the patents and patent applications we hold, license or pursue with respect to our product candidates is threatened, it could threaten our ability to prevent third parties from using the same technologies that we use in our product candidates. In addition, recent changes to the patent laws of the United States provide additional procedures for third parties to challenge the validity of issued patents based on patent applications filed after March 15, 2013. If the breadth or strength of protection provided by the patents and patent applications we hold or pursue with respect to our current or future product candidates is challenged, then it could threaten our ability to prevent competitive products from using our proprietary technology. Further, because patent applications in the United States and most other countries are confidential for a period of time,

typically for 18 months after filing, we cannot be certain that we were the first to either (i) file any patent application related to our product candidates or (ii) invent any of the inventions claimed in our patents or patent applications. Furthermore, for applications filed before March 16, 2013 or patents issuing from such applications, an interference proceeding can be provoked by a third party or instituted by the USPTO to determine who was the first to invent any of the subject matter covered by the patent claims of our applications and patents. If third parties have filed such applications after March 15, 2013, a derivation proceeding in the United States can be initiated by such third parties to determine whether our invention was derived from theirs.

In addition to our issued patents, we have patent applications in the United States and other jurisdictions, which are currently pending, directed to various aspects of our product candidates. We cannot offer any assurances about which, if any, patents will be issued, the breadth of any such patent or whether any issued patents will be found invalid and unenforceable or will be threatened or infringed by third parties. Any successful actions by third parties to challenge the validity or enforceability of any patents that may be issued to us could deprive us of the ability to prevent others from using the technologies claimed in such issued patents.

Further, if we encounter delays in regulatory approvals, the period of time during which we could market a product candidate under patent protection could be reduced.

We have filed patent applications directed to our own proprietary formulations and processes for our product candidates when we have believed securing such patents may afford a competitive advantage. For example, the companies that originated Humira and Avastin[®] (AbbVie and Genentech, respectively) own patents directed to formulations for these products. Rather than wait for the expiration of these formulation patents, we have developed our own proprietary formulations for these products that we believe are not covered by valid claims of third-party patents, including AbbVie or Genentech's formulation patents; and we have filed patent applications directed to our formulations. We cannot guarantee that our proprietary formulations, it is uncertain whether issuance of any of our pending patent applications directed to formulations of adalimumab (Humira) and bevacizumab (Avastin[®]) would cover the formulations directed to formulations of adalimumab (Humira) and has filed patent applications directed to formulations of adalimumab (Humira) and has filed patent applications directed to formulations of adalimumab (Humira). We have patents and patent applications directed to aspects of our downstream manufacturing processes for various biosimilars, including ONS-3010. In contrast to our patent applications directed to formulations of ONS-3010, the proprietary technologies embodied in our process-related patent filings, while directed to inventions we believe may provide us with competitive advantage, were not developed by us to avoid third-party patents. As in the case of our formulation patent filings, it is highly uncertain and we cannot predict whether our patent filings on process enhancements will afford us a competitive advantage against third parties.

Obtaining and maintaining our patent protection depends on compliance with various procedural requirements, document submissions, fee payment and other requirements imposed by governmental patent agencies. Our patent protection could be reduced or eliminated for non-compliance with these requirements.

The USPTO and various foreign governmental patent agencies require compliance with a number of procedural, documentary, fee payment and other provisions during the patent process. In many cases, an inadvertent lapse can be cured by payment of a late fee or by other means in accordance with the applicable rules. However, there are situations in which noncompliance can result in abandonment or lapse of a patent or patent application, resulting in partial or complete loss of patent rights in the relevant jurisdiction. In such an event, competitors might be able to enter the market earlier than would otherwise have been the case.

We may not be able to protect our intellectual property rights throughout the world.

Filing, prosecuting, defending and enforcing patents on product candidates in all countries throughout the world would be prohibitively expensive, and our intellectual property rights in some countries outside the United States can be less extensive than those in the United States. In addition, the laws of some foreign countries do not protect intellectual property rights to the same extent as federal and state laws in the United States. Further, licensing partners may choose not to file

patent applications in certain jurisdictions in which we may obtain commercial rights, thereby precluding the possibility of later obtaining patent protection in these countries. Consequently, we may not be able to prevent third parties from practicing our inventions in all countries outside the United States or importing products made using our inventions into the United States or other jurisdictions. Competitors may use our technologies in jurisdictions where we have not obtained patent protection to develop their own products and may also export infringing products to territories where we have patent protection, but the ability to enforce our patents is not as strong as that in the United States. These products may compete with our products and our patents or other intellectual property rights may not be effective or sufficient to prevent them from competing.

Many companies have encountered significant problems in protecting and defending intellectual property rights in foreign jurisdictions. The legal systems of certain countries, particularly certain developing countries, do not favor the enforcement of patents, trade secrets and other intellectual property protection, which could make it difficult for us to stop the infringement of our patents or marketing of competing products in violation of our proprietary rights generally. Proceedings to enforce our patent rights in foreign jurisdictions, whether or not successful, could result in substantial costs and divert our efforts and attention from other aspects of our business, could put our patents at risk of being invalidated or interpreted narrowly and our patent applications at risk of not being approved, and could provoke third parties to assert claims against us. We may not prevail in any lawsuits that we initiate and the damages or other remedies awarded, if any, may not be commercially meaningful. Governments of some foreign countries may force us to license our patents to third parties on terms that are not commercially reasonable or acceptable to us. Accordingly, our efforts to enforce our intellectual property rights around the world may be inadequate to obtain a significant commercial advantage from the intellectual property that we develop or license.

Changes in U.S. patent law could diminish the value of patents in general, thereby impairing our ability to protect our product candidates.

As is the case with other biopharmaceutical companies, our success is heavily dependent on intellectual property, particularly patents. Obtaining and enforcing patents in the biopharmaceutical industry involves both technological and legal complexity. Therefore, obtaining and enforcing biopharmaceutical patents is costly, time-consuming and inherently uncertain. In addition, the United States has recently enacted and is currently implementing wide-ranging patent reform legislation, including the Leahy-Smith America Invents Act, or the America Invents Act, signed into law on September 16, 2011.

As of March 16, 2013, the United States transitioned to a "first-to-file" system for deciding which party should be granted a patent when two or more patent applications claiming the same invention are filed by different parties. A third party that files a patent application in the USPTO before us could therefore be awarded a patent covering an invention of ours even if we had made the invention before it was made by the third party. The change to "first-to-file" from "first-to-invent" is one of the changes to the patent laws of the United States resulting from the America Invents Act. Among some of the other significant changes to the patent laws are changes that limit where a patente may file a patent infringement suit and provide opportunities for third parties to challenge any issued patent in the USPTO via procedures including post-grant and inter partes review. These adversarial actions at the USPTO review patent claims without the presumption of validity afforded to U.S. patents in lawsuits in U.S. federal courts, and use a lower burden of proof than used in litigation in U.S. federal courts. Therefore, it is generally considered easier for a competitor or third party to have a patent invalidated in a Patent Office post-grant review or inter partes review proceeding than invalidated in a litigation in a U.S. federal court. If any of our patents are challenged by a third party in such a USPTO proceeding, there is no guarantee that we or our licensors or collaborators will be successful in defending the patent, which would result in a loss of the challenged patent right. It is not yet clear what, if any, impact the America Invents Act will have on the operation of our business. However, the America Invents Act and its implementation could increase the uncertainties and costs surrounding the prosecution of our patent applications and the enforcement or defense of any issued patents, all of which could harm our business and financial condition.

Further, recent court rulings in cases such as Association for Molecular Pathology v. Myriad Genetics, Inc. (Myriad I); BRCA1- & BRCA2-Based Hereditary Cancer Test Patent Litig., (Myriad II); and Promega Corp. v. Life Technologies Corp. have narrowed the scope of patent protection available in certain circumstances and weakened the rights of patent owners in certain situations.

In addition to increasing uncertainty with regard to our ability to obtain patents in the future, this combination of events has created uncertainty with respect to the value of patents, once obtained. Depending on future actions by the United States Congress, the Federal Courts and the USPTO, the laws and regulations governing patents could change in unpredictable ways that would weaken our ability to obtain new patents or to enforce existing patents and patents that we might obtain in the future.

If we are unable to maintain effective proprietary rights for our product candidates or any future product candidates, we may not be able to compete effectively in our markets.

While we have filed patent applications to protect certain aspects of our own proprietary formulation and process developments, we also rely on trade secret protection and confidentiality agreements to protect proprietary scientific, business and technical information and know-how that is not or may not be patentable or that we elect not to patent. However, confidential information and trade secrets can be difficult to protect. Moreover, the information embodied in our trade secrets and confidential information may be independently and legitimately developed or discovered by third parties without any improper use of or reference to information or trade secrets. We seek to protect the scientific, technical and business information supporting our operations, as well as the confidential information relating specifically to our product candidates by entering into confidentiality agreements with parties to whom we need to disclose our confidential information, such as, our employees, consultants, board members, contractors, potential collaborators and financial investors. However, we cannot be certain that such agreements have been entered into with all relevant parties. We also seek to preserve the integrity and confidentiality of our data and trade secrets by maintaining physical security of our premises and physical and electronic security of our information technology systems, but it is possible that these security measures could be breached. While we have confidence in these individuals, organizations and systems, agreements or security measures may be breached and we may not have adequate remedies for any breach. Our confidential information and trade secrets thus may be one known by our competitors in ways we cannot prove or remedy.

Although we expect all of our employees and consultants to assign their inventions to us, and all of our employees, consultants, advisors and any third parties who have access to our proprietary know-how, information or technology to enter into confidentiality agreements, we cannot provide any assurances that all such agreements have been duly executed. We cannot guarantee that our trade secrets and other confidential proprietary information will not be disclosed or that competitors will not otherwise gain access to our trade secrets or independently develop substantially equivalent information and techniques. For example, any of these parties may breach the agreements and disclose our proprietary information, including our trade secrets, and we may not be able to obtain adequate remedies for such breaches.

Misappropriation or unauthorized disclosure of our trade secrets could impair our competitive position and may harm our business. Additionally, if the steps taken to maintain our trade secrets are deemed inadequate, we may have insufficient recourse against third parties for misappropriating any trade secret. We cannot guarantee that our employees, former employees or consultants will not file patent applications claiming our inventions. Because of the "first-to-file" laws in the United States, such unauthorized patent application filings may defeat our attempts to obtain patents on our own inventions.

We may be subject to claims challenging the inventorship of our patent filings and other intellectual property.

We may in the future be subject to claims that former employees, collaborators or other third parties have an interest in our patent applications or patents we may be granted or other intellectual property as an inventor or co-inventor. For example, we may have inventorship or ownership disputes arise from conflicting obligations of consultants or others who are involved in developing our product candidates. Litigation may be necessary to defend against these and other claims challenging inventorship or ownership. If we fail in defending any such claims, in addition to paying monetary damages, we may lose valuable intellectual property rights, such as exclusive ownership of or right to use valuable intellectual property. Such an outcome could harm our business. Even if we are successful in defending against such claims, litigation could result in substantial costs and be a distraction to management and other employees.

If we fail to comply with our obligations in the agreements under which we license intellectual property and other rights from third parties or otherwise experience disruptions to our business relationships with our licensors, we could lose license rights that are important to our business.

We are party to a non-exclusive worldwide commercial license agreements with Selexis SA, or Selexis, pertaining to clinical testing and sale of its cell line expression technology and we may enter into additional license agreements in the future. Our commercial license agreements with Selexis impose, and we expect that future license agreements will impose, various milestone payments, royalty payments and other obligations on us. If we fail to comply with our obligations under these agreements or if we are subject to a bankruptcy, we may be required to make certain payments to the licensor of our license or the licensor may have the right to terminate the license, in which event we would not be able to develop or market products covered by the license. Additionally, the milestone and other payments associated with these licenses will make it less profitable for us to develop our product candidates.

In the event we breach any of our obligations under these agreements, we may incur significant liability to our licensing partners. Disputes may arise regarding intellectual property subject to a licensing agreement, including but not limited to:

- the scope of rights granted under the license agreement and other interpretation-related issues;
- the extent to which our technology and processes infringe on intellectual property of the licensor that is not subject to the licensing agreement;
- the sublicensing of patents and other rights;
- our diligence obligations under the license agreement and what activities satisfy those diligence obligations;
- the ownership of inventions and know-how resulting from the joint creation or use of intellectual property by our licensors and us and our collaborators; and
- the priority of invention of patented technology.

If disputes over intellectual property and other rights that we have licensed prevent or impair our ability to maintain our current licensing arrangements on acceptable terms, we may be unable to successfully develop and commercialize the affected product candidates and that could harm our business.

We may not be successful in obtaining or maintaining necessary rights to our product candidates through acquisitions and in-licenses.

We currently have rights to certain intellectual property through licenses from third parties, including Selexis, to develop ONS-5010/ONS-1045 and ONS-3010. Because we may find that our programs require the use of proprietary rights held by third parties, the growth of our business may depend in part on our ability to acquire, in-license or use these proprietary rights. We may be unable to acquire or in-license compositions, methods of use, processes or other third-party intellectual property rights from third parties that we identify as necessary for our product candidates. The licensing and acquisition of third-party intellectual property rights is a competitive area, and a number of more established companies are also pursuing strategies to license or acquire third-party intellectual property rights that we may consider attractive. These established companies may have a competitive advantage over us due to their size, financial resources and greater clinical development and commercialization capabilities. In addition, companies that property rights out be a competitor may be unable to use. We also may be unable to license or acquire third-party intellectual property rights on terms that would allow us to make an appropriate return on our investment.

If we are unable to successfully obtain rights to required third party intellectual property rights or maintain the existing intellectual property rights we have, we may have to abandon development of that program and our business and financial condition could suffer.



Risks Related to Our Business Operations

Our business could be adversely affected by the effects of health pandemics or epidemics, including the ongoing COVID-19 global pandemic, in regions where we or third parties on which we rely have significant manufacturing facilities, concentrations of clinical trial sites or other business operations, or materially affect our operations, including at our headquarters in New Jersey, and at our clinical trial sites, as well as the business or operations of our manufacturers, CROs or other third parties with whom we conduct business.

Our business could be adversely affected by the effects of health pandemics or epidemics, including the ongoing COVID-19 global pandemic, which has resulted in travel and other restrictions, including on certain businesses and operations deemed non-essential, to reduce the spread of the disease. As a result of these developments, we implemented work-from-home policies for all our employees. While certain of these restrictions were lifted and phased re-openings occurred, there can be no certainty that such policies will continue, or that new or similar restrictions will not be imposed to address continued spread of disease. These restrictions have impacted not just our headquarters, but also the clinical trial sites where our NORSE TWO and NORSE THREE trials are ongoing, and we experienced enrollment delays in NORSE TWO as a result of the COVID-19 pandemic. The continuing effects of these orders, government-imposed quarantines and our work-from-home policies, including the uncertainty and changing nature of such restrictions, may negatively impact productivity, disrupt our business and could further delay our ONS-5010 clinical programs and timelines, including manufacturing of our product candidate and supply chain, the magnitude of which will depend, in part, on the length and severity of the restrictions and other limitations on our ability to conduct our business in the ordinary course. These and similar, and perhaps more severe, disruptions in our operations could negatively impact our business, operating results and financial condition.

Further, our ongoing clinical trials could be further affected by the COVID-19 outbreak. Patient enrollment and recruitment of NORSE TWO was delayed due to local clinical trial site protocols designed to protect staff and patients from COVID-19 infection, and some patients may not be able to comply with clinical trial protocols if quarantines or other restrictions, which could be reimposed due to the continuing spread of the disease, impede patient movement or interrupt healthcare services. Similarly, our ability to retain principal investigators and site staff who, as healthcare providers, may have heightened exposure to COVID-19, could be disrupted, which would adversely impact our clinical trial operations.

The spread of COVID-19, which has caused a broad impact globally, may also materially adversely affect us economically. While the potential economic impact brought by, and the duration of, the COVID-19 pandemic, may be difficult to assess or predict, it is currently resulting in significant disruption of global financial markets. This disruption, if sustained or recurrent, could make it more difficult for us to access capital, which could in the future negatively affect our liquidity. In addition, a recession or market correction resulting from the spread of COVID-19 could materially affect our business and the value of our common stock.

The COVID-19 pandemic continues to evolve. The ultimate impact of the COVID-19 outbreak or a similar health pandemic or epidemic is highly uncertain and subject to change. We do not yet know the full extent of potential delays or impacts on our business, our clinical trials, healthcare systems or the global economy as a whole. These effects could have a material impact on our operations, and we will continue to monitor the COVID-19 situation closely.

We may not be successful in our efforts to identify, develop or commercialize additional product candidates.

Although a substantial amount of our current effort is focused on the continued clinical testing, potential approval and commercialization of ONS-5010, the long-term success of our business also depends upon our ability to identify, develop and commercialize additional product candidates. Research programs to identify new product candidates require substantial technical, financial and human resources. We may focus our efforts and resources on potential programs or product candidates that ultimately prove to be unsuccessful. Our development efforts may fail to yield additional product candidates suitable for clinical development and commercialization for a number of reasons, including but not limited to the following:

• we may not be successful in identifying potential product candidates that pass our strict screening criteria;

- we may not be able to overcome technological hurdles to development or a product candidate may not be capable of producing commercial quantities at an acceptable cost, or at all;
- we may not be able to assemble sufficient resources to acquire or discover additional product candidates;
- our product candidates may not succeed in preclinical or clinical testing;
- competitors may develop alternatives that render our product candidates obsolete or less attractive or the market for a product candidate may change such that a product candidate may not justify further development.

If any of these events occur, we may be forced to abandon our development efforts for a program or programs or we may not be able to identify, develop or commercialize additional product candidates, which would harm our business and could potentially cause us to cease operations.

We are highly dependent on the services of our key executives and personnel, and if we are not able to retain these members of our management or recruit additional management, clinical and scientific personnel, our business will suffer.

We are highly dependent on the principal members of our management and scientific and technical staff. The loss of service of any of our management or key scientific and technical staff could harm our business and our prospects in the continued development and commercialiazation of ONS-5010 and any future product candidates we may develop. In addition, we are dependent on our continued ability to attract, retain and motivate highly qualified additional management, clinical and scientific personnel. If we are not able to retain our management and to attract, on acceptable terms, additional qualified personnel necessary for the continued development of our business, we may not be able to sustain our operations or grow our product offering beyond ONS-5010.

We may not be able to attract or retain qualified personnel in the future due to the intense competition for qualified personnel among biotechnology, pharmaceutical and other businesses. Our industry has experienced a high rate of turnover of management personnel in recent years. If we are not able to attract, retain and motivate necessary personnel to accomplish our business objectives, we may experience constraints that will significantly impede the achievement of our development objectives, our ability to raise additional capital and our ability to implement our business strategy.

Our future performance will also depend, in part, on our ability to successfully integrate new executive officers into our management team and our ability to develop an effective working relationship among senior management. Our failure to integrate these individuals and create effective working relationships among them and other members of management could result in inefficiencies in the development and commercialization of our product candidates, harming future regulatory approvals, sales of our product candidates and our results of operations. Additionally, we do not currently maintain "key person" life insurance on the lives of our executives or any of our employees.

Healthcare legislative reform measures may harm our business and results of operations.

In the United States, there have been and continue to be a number of legislative initiatives to improve the access to and quality of healthcare, and to contain healthcare costs. For example, in March 2010, the Patient Protection and Affordable Care Act, as amended by the Health Care and Education Reconciliation Act of 2010, or together, the Affordable Care Act, was passed, which substantially changes the way health care is financed by both governmental and private insurers and significantly impacts the U.S. pharmaceutical industry. The Affordable Care Act, among other things, imposes 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, increases the minimum Medicaid rebates owed by manufacturers under the Medicaid Drug Rebate Program, extends the rebate program to individuals enrolled in Medicaid managed care organizations, adds a provision to increase the Medicaid rebate for line extensions or reformulated drugs, establishes annual fees on manufacturers and importers of certain branded prescription drugs and biologic agents, and promotes a new Medicare Part D coverage gap discount program. The Affordable Care Act also expands eligibility for Medicaid programs and introduced 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 remain judicial, Congressional and executive branch challenges to certain aspects of the Affordable Care Act, and we expect there will be additional challenges and amendments to the Affordable Care Act in the future. While Congress has not passed comprehensive repeal legislation, it has enacted laws that modify certain provisions of the Affordable Care Act such as removing or delaying penalties, starting January 1, 2019, for not complying with the Affordable Care Act's individual mandate to carry health insurance, delaying the implementation of certain Affordable Care Act-mandated fees, and increasing the point-of-sale discount that is owed by pharmaceutical manufacturers who participate in Medicare Part D. Additionally, on December 15, 2018, a Texas U.S. District Court Judge ruled that the Affordable Care Act is unconstitutional in its entirety because the individual mandate was repealed by Congress. Further, on December 18, 2019, the U.S. Court of Appeals for the 5th Circuit upheld the District Court ruling that the individual mandate was unconstitutional and remanded the case back to the District Court to determine whether the remaining provisions of the ACA are invalid as well. On March 2, 2020, the United States Supreme Court granted the petitions for writs of certiorari and held oral arguments on November 10, 2020. Accordingly, we continue to evaluate the potential impact of the Affordable Care Act and its possible repeal or replacement on our business.

In addition, other legislative changes have been proposed and adopted in the United States since the Affordable Care Act was enacted. For example, on August 2, 2011, the Budget Control Act of 2011, was signed into law, which, among other things, created measures for spending reductions by Congress. A Joint Select Committee on Deficit Reduction, tasked with recommending a targeted deficit reduction of at least \$1.2 trillion for the years 2012 through 2021, was unable to reach required goals, thereby triggering the legislation's automatic reduction to several government programs. This includes aggregate reductions of Medicare payments to providers up to 2% per fiscal year, which went into effect on April 1, 2013 and, due to subsequent legislative amendments, will stay in effect through 2030 unless additional Congressional action is taken. However, the Coronavirus Aid, Relief and Economic Security Act, or CARES Act, which was signed into law in March 2020 and is designed to provide financial support and resources to individuals and businesses affected by the COVID-19 pandemic, suspended the 2% Medicare sequester from May 1, 2020 through December 31, 2020, and extended the sequester by one year, through 2030. Additionally, on January 2, 2013, President Obama signed into law the American Taxpayer Relief Act of 2012, which among other things, further reduced Medicare payments to certain providers, including physicians, hospitals and cancer treatment centers. In addition, there has been heightened governmental scrutiny recently over the manner in which drug manufacturers set prices for their marketed products, which have resulted in several Congressional inquiries and proposed and enacted federal and state legislation designed to, among other things, bring more transparency to product pricing, review the relationship between pricing and manufacturer patient programs, and reform government program reimbursement methodologies for drug products. At the federal level, the Trump administration's budget proposals for fiscal year 2021 includes a \$135 billion allowance to support legislative proposals seeking to reduce drug prices, increase competition, lower out-of-pocket drug costs for patients, and increase patient access to lower-cost generic and biosimilar drugs. In addition, the Trump administration previously released a "Blueprint" to lower drug prices and reduce out of pocket costs of drugs that contained proposals to increase manufacturer competition, increase the negotiating power of certain federal healthcare programs, incentivize manufacturers to lower the list price of their products and reduce the out of pocket costs of drug products paid by consumers. The Department of Health and Human Services, or HHS, has solicited feedback on some of these measures and, has implemented others under its existing authority. On July 24, 2020 and September 13, 2020, President Trump announced several executive orders related to prescription drug pricing that seek to implement several of the administration's proposals. The FDA also released a final rule on September 24, 2020 providing guidance for states to build and submit importation plans for drugs from Canada. Further, on November 20, 2020, HHS finalized a regulation removing safe harbor protection for price reductions from pharmaceutical manufacturers to plan sponsors under Part D, either directly or through pharmacy benefit managers, unless the price reduction is required by law. The rule also creates a new safe harbor for price reductions reflected at the point-of-sale, as well as a safe harbor for certain fixed fee arrangements between pharmacy benefit managers and manufacturers. The likelihood of implementation of any of the other Trump administration reform initiatives is uncertain, particularly in light of the recent U.S. presidential election. At the state level, legislatures have increasingly passed legislation and implemented regulations designed to control pharmaceutical and biological product pricing, including price or patient reimbursement constraints, discounts, restrictions on certain product access and marketing cost disclosure and transparency measures, and, in some cases, designed to encourage importation from other countries and bulk purchasing.

We expect that the Affordable Care Act, as well as other healthcare reform measures that may be adopted in the future, may result in more rigorous coverage criteria and lower reimbursement, and additional downward pressure on the price that we receive for any approved product. Any reduction in reimbursement from Medicare or other government-funded programs may result in a similar reduction in payments from private payors. The implementation of cost containment measures or other healthcare reforms could result in reduced demand for our product candidates or additional pricing pressures, and may prevent us from being able to generate revenue, attain profitability or commercialize our drugs. Further, it is also possible that additional governmental action is taken in response to the COVID-19 pandemic.

We are subject, directly and indirectly, to federal and state healthcare laws and regulations, including fraud and abuse, false claims, physician payment transparency and health information privacy and security laws. If we are unable to comply or have not fully complied with such laws, we could face substantial penalties.

Our operations are directly and indirectly through our current and future arrangements with healthcare professionals, principal investigators, consultants, customers and third-party payors subject to various federal and state fraud and abuse laws, including without limitation, the federal Anti-Kickback Statute, the civil False Claims Act and physician sunshine laws and regulations. These laws may impact, among other things, our clinical research, proposed sales, marketing and education programs. In addition, we may be subject to patient data privacy and security regulation by both the federal

government and the states in which we conduct our business. The healthcare laws that may affect our ability to operate include but are not limited to:

- the federal Anti-Kickback Statute, which prohibits, among other things, persons and entities from knowingly and willfully soliciting, receiving, offering or paying remuneration, directly or indirectly, in cash or in kind, to induce, reward, or in return for either the referral of an individual for, or the purchase, recommendation, order or furnishing of an item or service reimbursable, in whole or in part, under a federal healthcare program, such as the Medicare and Medicaid programs;
- federal civil and criminal false claims laws and civil monetary penalty laws, including the civil False Claims Act, which can be enforced by
 private individuals through civil whistleblower or qui tam actions, which prohibit, among other things, individuals or entities from knowingly
 presenting or causing to be presented claims for payment from Medicare, Medicaid or other government health programs that are false or
 fraudulent;
- the federal Health Insurance Portability and Accountability Act of 1996, or HIPAA, which created additional federal criminal statutes that
 prohibit, among other things, executing a scheme to defraud any healthcare benefit program and making false statements relating to healthcare
 matters;
- HIPAA, as amended by the Health Information Technology for Economic and Clinical Health Act, and their implementing regulations, which
 imposes certain requirements, including mandatory contractual terms, relating to the privacy, security and transmission of individually
 identifiable health information on health plans, certain healthcare providers, and healthcare clearinghouses, known as covered entities, and
 their business associates that provide services to the covered entity that involve individually identifiable health information and their
 subcontractors that use, disclose or otherwise process individually identifiable health information;
- the federal legislation commonly referred to as the Physician Payments Sunshine Act under the Affordable Care Act, which requires certain manufacturers of drugs, devices, biologies and medical supplies for which payment is available under Medicare, Medicaid, or the Children's Health Insurance Program, with specific exceptions, to report annually to the Centers for Medicare & Medicaid Services information related to payments and other transfers of value made by such manufacturers to physicians (defined to include doctors, dentists, optometrists, podiatrists and chiropractors) and teaching hospitals and ownership and investment interests held by physicians and their immediate family members and applicable group purchasing organizations, and, beginning in 2022, will require applicable manufacturers to report information related to payments and other transfers of value provided in the previous year to physician assistants, nurse practitioners, clinical nurse specialists, certified registered nurse anesthetists, and certified nurse midwives; and
- analogous state and foreign laws and regulations, such as anti-kickback and false claims laws that may apply to items or services reimbursed by any third-party payor, including commercial insurers; state 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 otherwise restrict payments that may be made to healthcare providers and other potential referral sources; state 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 or drug pricing; state and local laws that require the registration of pharmaceutical sales representatives; 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 may not have the same effect, thus complicating compliance efforts.

Because of the breadth of these laws and the narrowness of the statutory exceptions and regulatory safe harbors available, it is possible that some of our business activities could be subject to challenge under one or more of such laws. In addition, recent healthcare reform legislation has strengthened these laws. For example, the Affordable Care Act, among other things, amends the intent requirement of the federal anti-kickback and criminal healthcare fraud statutes. A person or entity no longer needs to have actual knowledge of these statutes or specific intent to violate them in order to commit a violation. Moreover, the Affordable Care Act provides 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 civil False Claims Act.

If our operations are found to be in violation of any of the laws described above or any other governmental regulations that apply to us, we may be subject to significant penalties, including civil, criminal and administrative penalties, damages, fines, exclusion from participation in government healthcare programs, such as Medicare and Medicaid, individual imprisonment, disgorgement, contractual damages, reputational harm, diminished profits and future earnings, additional reporting requirements and oversight if we become subject to a corporate integrity agreement or similar agreement to resolve allegations of non-compliance with these laws, 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. Defending against any such actions can be costly, time-consuming and may require significant financial and personnel resources.

Therefore, even if we are successful in defending against any such actions that may be brought against us, our business may be impaired.

The international aspects of our business expose us to business, regulatory, political, operational, financial and economic risks associated with doing business outside of the United States.

We currently have limited international operations of our own and have a number of international collaborations. Doing business internationally involves a number of risks, including but not limited to:

- multiple, conflicting and changing laws and regulations such as privacy regulations, tax laws, export and import restrictions, employment laws, regulatory requirements and other governmental approvals, permits and licenses;
- failure by us or our collaboration partners to obtain and maintain regulatory approvals for the use of our products in various countries;
- additional potentially relevant third-party patent rights;
- complexities and difficulties in obtaining protection and enforcing our intellectual property;
- difficulties in staffing and managing foreign operations by us or our collaboration partners;
- complexities associated with managing multiple payor reimbursement regimes, government payors or patient self-pay systems by our collaboration partners;
- limits in our or our collaboration partners' ability to penetrate international markets;
- financial risks, such as longer payment cycles, difficulty collecting accounts receivable, the impact of local and regional financial crises on demand and payment for our products and exposure to foreign currency exchange rate fluctuations;
- natural disasters, political and economic instability, including wars, terrorism and political unrest, outbreak of disease, boycotts, curtailment of trade and other business restrictions;
- · certain expenses including, among others, expenses for travel, translation and insurance; and
- regulatory and compliance risks that relate to maintaining accurate information and control over sales and activities that may fall within the purview of the U.S. Foreign Corrupt Practices Act, its books and records provisions or its anti-bribery provisions.

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.

Our third-party suppliers' activities involve the controlled storage, use and disposal of hazardous materials, including the components of our product candidates and other hazardous compounds. We and our suppliers are subject to laws and regulations governing the use, manufacture, storage, handling and disposal of these hazardous materials. In some cases, these hazardous materials and various wastes resulting from their use are stored at our facilities pending their use and disposal. We cannot eliminate the risk of contamination, which could cause an interruption of our commercialization efforts, research, development and manufacturing efforts and business operations, and environmental damage resulting in costly clean-up and liabilities under applicable laws and regulations governing the use, storage, handling and disposal of these materials and specified waste products. Although we believe that the safety procedures utilized by our suppliers for handling and disposing of these materials generally comply with the standards prescribed by these laws and regulations, we cannot guarantee that this is the case or eliminate the risk of accidental contamination or injury from these materials. In such an event, we may be held liable for any resulting damages and such liability could exceed our resources and state or federal or other applicable authorities may curtail our use of certain materials and/or interrupt our business operations. Furthermore, environmental laws and regulations are complex, change frequently and have tended to become more stringent. We cannot predict the impact of such changes and cannot be certain of our future complication. We do not currently carry biological or hazardous waste insurance coverage.

Risks Related to Ownership of Our Securities

The trading price of our securities is likely to be volatile, and purchasers of our securities could incur substantial losses.

The market price of our securities has been and will likely continue to be volatile. The stock market in general and the market in which we operate 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 securities at a profit. The market price of our securities could be subject to wide fluctuations in response to a variety of factors, including but not limited to:

- the success of competitive services, products or technologies;
- adverse results or delays in preclinical or clinical trials;
- any inability to obtain additional funding;
- any delay in filing an IND, BLA or other regulatory submission for ONS-5010, or any of our product candidates when planned, and any
 adverse development or perceived adverse development with respect to the applicable regulatory agency's review of that IND, BLA or other
 regulatory submission;
- the perception of limited market sizes or pricing for ONS-5010 or any of our other product candidates;
- failure to successfully develop and commercialize ONS-5010 or any of our other product candidates;
- post-marketing safety issues relating to our product candidates generally;
- failure to maintain our existing strategic collaborations or enter into new collaborations;
- failure by us or our licensors and strategic collaboration partners to prosecute, maintain or enforce our intellectual property rights;
- changes in laws or regulations applicable to our products;
- any inability to obtain adequate product supply for our product candidates or the inability to do so at acceptable prices;

- adverse regulatory decisions;
- introduction of new products, services or technologies by our competitors;
- failure to meet or exceed financial projections we may provide to the public;
- failure to meet or exceed the financial projections of the investment community;
- the perception of the pharmaceutical industry by the public, legislatures, regulators and the investment community;
- announcements of significant acquisitions, strategic partnerships, joint ventures or capital commitments by us, our strategic collaboration partners or our competitors;
- disputes or other developments relating to proprietary rights, including patents, litigation matters and our ability to obtain patent protection for our technologies;
- · additions or departures of key scientific or management personnel;
- significant lawsuits, including stockholder litigation and litigation filed by us or filed against us pertaining to patent infringement or other violations of intellectual property rights;
- the outcomes of any citizens petitions filed by parties seeking to restrict or limit the approval of our product candidates; if securities or industry analysts do not publish research or reports about our business or if they issue an adverse or misleading opinion regarding our stock;
- changes in the market valuations of similar companies;
- general economic, industry or market conditions;
- sales of our securities by us or our stockholders in the future;
- trading volume of our securities;
- issuance of patents to third parties that could prevent our ability to commercialize our product candidates;
- the loss of one or more employees constituting our leadership team;
- changes in regulatory requirements that could make it more difficult for us to develop our product candidates; and
- the other factors described in this "Risk Factors" section.

In addition, biopharmaceutical companies in particular have experienced extreme price and volume fluctuations that have often been unrelated or disproportionate to the operating performance of these companies. Broad market and industry factors may negatively affect the market price of our securities, regardless of our actual operating performance.

BioLexis has beneficial ownership of a significant percentage of our common stock, has the right, together with an affiliate, to designate members to our board of directors proporationate to its ownership, and is able to exert significant control over matters subject to stockholder approval, which could prevent new investors from influencing significant corporate decisions.

As of September 30, 2020, BioLexis beneficially owns 50,965,058 shares of our common stock, and its affiliate GMS Ventures and Investments, or GMS Ventures, owns an additional 2,460,630 shares of common stock and a warrant to acquire 1,230,315 shares of common stock. Accordingly, BioLexis together with its affiliate GMS Ventures collectively beneficially owned approximately 42.6% of our common stock as of such date. Under an investor rights agreement, as amended, with BioLexis and GMS Ventures, BioLexis also currently has the power to designate members of our board of directors proportionate to its holdings, and two of our eight board members were designated by BioLexis. BioLexis' and GMS Ventures' interests may not coincide with the interests of other securityholders. BioLexis and GMS Ventures have the ability to influence our company through both its ownership position and representation on ur board of directors, which may prevent or discourage unsolicited acquisition proposals or offers for our capital stock that you may believe are in your best interest as one of our securityholders.

Our quarterly operating results may fluctuate significantly or may fall below the expectations of investors or securities analysts, each of which may cause our stock price to fluctuate or decline.

Our quarterly operating results may fluctuate significantly, which makes it difficult for us to predict our future operating results. These fluctuations may occur due to a variety of factors, many of which are out of our control and may be difficult to predict, including but not limited to:

- our ability to successfully develop, market and sell ONS-5010 and any other product candidates;
- the cost of clinical development for ONS-5010 and any other product candidates;
- · the success of competitive products or technologies;
- results of clinical trials of our product candidates or those of our competitors;
- developments or disputes concerning patent applications, issued patents or other proprietary rights;
- the recruitment or departure of key personnel;
- the level of expenses related to any of our product candidates or clinical development programs;
- the results of our efforts to discover, develop, manufacture, acquire or in-license additional product candidates;
- actual or anticipated changes in estimates as to financial results, development timelines or recommendations by securities analysts;
- variations in our financial results or those of companies that are perceived to be similar to us;
- market conditions in the pharmaceutical and biotechnology sectors;
- general economic, industry and market conditions; and
- the other factors described in this "Risk Factors" section.

If our quarterly operating results fall below the expectations of investors or securities analysts, the market price of our securities could decline substantially. Furthermore, any quarterly fluctuations in our operating results may, in turn, cause

the price of our securities to fluctuate substantially. We believe that quarterly comparisons of our financial results are not necessarily meaningful and should not be relied upon as an indication of our future performance.

If securities or industry analysts do not publish research, or publish unfavorable research, about our business, the market price of our securities and trading volume could decline.

The trading market for our securities depends in part on the research and reports that securities or industry analysts publish about us or our business, our market and our competitors. We do not have any control over these analysts. If any analysts who cover us downgrade our securities or change their opinion of our securities, the market price of our securities would likely decline. If one or more of these analysts cease coverage of our company or fail to regularly publish reports on us, we could lose visibility in the financial markets, which could cause the market price of our securities or trading volume to decline.

We are an "emerging growth company" and a "smaller reporting company" and, because we have opted to use the reduced reporting requirements available to us, certain investors may find investing in our securities less attractive.

We are an "emerging growth company," as defined in the Jumpstart Our Business Startups Act of 2012, or the JOBS Act, and a "smaller reporting company." For as long as we continue to be an emerging growth company, we may take advantage of exemptions from various reporting requirements that are applicable to other public companies that are not emerging growth companies, including not being required to comply with the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act of 2002, or the Sarbanes-Oxley Act, reduced disclosure obligations regarding executive compensation in this prospectus and our periodic reports and proxy statements and exemptions from the requirements of holding a nonbinding advisory vote on executive compensation and stockholder approval of any golden parachute payments not previously approved. We could be an emerging growth company for up to five years from our initial public offering, although circumstances could cause us to lose that status earlier, including if the market value of our common stock held by non-affiliates exceeds \$700 million as of March 31 (the end of our second fiscal quarter) of any fiscal year before that time or if we have total annual gross revenue of \$1.07 billion or more during any fiscal year before that time, in which cases we would no longer be an emerging growth company as of the following September 30 (the last day of our fiscal year) or, if we issue more than \$1.0 billion in non-convertible debt during any three-year period before that time, we would cease to be an emerging growth company immediately. Even if we cause to be one an emerging growth company." We cannot predict if investors will find our securities less attractive because we rely on these available exemptions. If some investors find our securities less attractive as a result, there may be a less active trading market for our securities may be more volatile.

We have and will continue to incur significant costs and demands upon management as a result of complying with the laws and regulations affecting public companies in the United States, which may harm our operating results.

As a public company listed in the United States, we have and will continue to incur significant additional legal, accounting and other expenses. The Sarbanes-Oxley Act, as well as rules subsequently implemented by the Securities and Exchange Commission, or SEC, and The Nasdaq Stock Market LLC, or Nasdaq, have imposed various requirements on public companies. In addition, changing laws, regulations and standards relating to corporate governance and public disclosure, including regulations implemented by the SEC and Nasdaq, or as a result of stockholder activism, 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. The Sarbanes-Oxley Act requires, among other things, that we maintain effective internal controls for financial reporting and disclosure controls and procedures. In particular, we are required to perform system and process evaluation and testing of our internal control over financial reporting by Section 404 of the Sarbanes-Oxley Act, or Section 404. Our testing may reveal deficiencies in our internal control over financial reporting that are deemed to be material weaknesses. Our compliance with Section 404 requires us to incur substantial accounting expense and expend significant management efforts. We currently do not have an internal audit group and rely on independent contractors for control monitoring and for the preparation and review of our consolidated financial statements. If we are not able to comply with the requirements of Section 404 in a timely manner or if we identify or our independent registered public accounting

firm identifies deficiencies in our internal control over financial reporting that are deemed to be material weaknesses, the market price of our stock could decline and we could be subject to sanctions or investigations by Nasdaq, the SEC or other regulatory authorities, which would require additional financial and management resources. 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 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.

Further, failure to comply with these laws, regulations and standards might also make it more difficult for us to obtain certain 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.

Due to the speculative nature of warrants, there is no guarantee that it will ever be profitable for holders of the Series A warrants to exercise such warrants.

The Series A warrants issued in our initial public offering represent the right to acquire shares of our common stock at a fixed price for a limited period of time. If not exercised prior to their expiration dates, such warrants expire and have no further value. In the event the price of a share of our common stock price does not exceed the exercise price for one whole share, such warrants may not have any value. Moreover, the market value of the warrants is uncertain and there can be no assurance that the market value of the warrants will equal or exceed their initial public offering price. There can be no assurance that the market price of our common stock will ever equal or exceed the exercise price for one whole share of the warrants, and, consequently, whether it will ever be profitable for holders of the Series A warrants to exercise such warrants.

Future sales and issuances of our common stock or rights to purchase securities, including pursuant to our equity incentive plans or exercise of warrants, could result in additional dilution of the percentage ownership of our stockholders and could cause the market price of our securities to fall.

We will need additional capital in the future to continue our planned operations. To the extent we raise additional capital by issuing equity securities, our stockholders may experience substantial dilution. We may sell common stock, convertible securities or other equity securities in one or more transactions at prices and in a manner we determine from time to time. If we sell common stock, convertible securities or other equity securities in more than one transaction, investors may be materially diluted by subsequent sales. These sales may also result in material dilution to our existing stockholders, and new investors could gain rights superior to our existing stockholders.

Pursuant to the 2015 Equity Incentive Plan, or the 2015 Plan, our management is authorized to grant stock options and other equity-based awards to our employees, directors and consultants. Under the 2015 Plan, the number of shares of our common stock reserved for future issuance as of September 30, 2020 was 20,090,731 shares. The number of shares available for future grant under the 2015 Plan also provides for an "evergreen" increase on an annual basis unless our board of directors determines otherwise. In addition, we have reserved shares for issuance under our 2016 Employee Stock Purchase Plan, or the ESPP, which similarly provides for an annual "evergreen" increase unless determined otherwise by our board of directors does not elect to reduce the annual increases in the number of shares available for future grant under the 2015 Plan of the ESPP, our stockholders may experience additional dilution, which could cause the market price of our securities to fall. We also currently have issued and outstanding a number of warrants to purchase an aggregate of 7,051,854 shares of our common stock, at prices ranging from \$0.9535 to \$12.00 per share.

Our ability to use our net operating loss carryforwards and certain other tax attributes may be limited.

We have incurred substantial losses during our history and do not expect to become profitable in the near future, and we may never achieve profitability. Unused federal net operating losses, or NOLs, for taxable years beginning before January 1, 2018 may be carried forward to offset future taxable income, if any, until such unused NOLs expire. Under legislation enacted in 2017, informally titled the Tax Cuts and Jobs Act, or the Tax Act, as modified by legislation enacted on March

27, 2020, entitled the Coronavirus Aid, Relief, and Economic Security Act, or the CARES Act, federal NOLs incurred in taxable years beginning after December 31, 2017, can be carried forward indefinitely, but the deductibility of such federal NOLs in taxable years beginning after December 31, 2020 is limited to 80% of taxable income. It is uncertain if and to what extent various states will conform to the Tax Act or the CARES Act.

In addition, under Sections 382 and 383 of the Internal Revenue Code of 1986, as amended, if a corporation undergoes an "ownership change," generally defined as a greater than 50 percentage point change (by value) in its equity ownership by certain stockholders over a three-year period, the corporation's ability to use its pre-change NOLs and other pre-change tax attributes (such as research tax credits) to offset its post-change income or taxes may be limited. We may have experienced ownership changes in the past and may experience ownership changes in the future as a result of subsequent shifts in our stock ownership (some of which shifts are outside our control). As a result, if we earn net taxable income, our ability to use our pre-change NOLs to offset such taxable income will be subject to limitations. Similar provisions of state tax law may also apply to limit our use of accumulated state tax attributes. In addition, at the state level, there may be periods during which the use of NOLs is suspended or otherwise limited, which could accelerate or permanently increase state taxes owed. As a result, even if we attain profitability, we may be unable to use a material portion of our NOLs and other tax attributes, which could adversely affect our future cash flows or results of operations.

We do not intend to pay dividends on our capital stock, and as such any returns will be limited to the value of our securities.

We have never declared or paid any cash dividends on our capital stock. We currently anticipate that we will retain future earnings for the development, operation and expansion of our business and do not anticipate declaring or paying any cash dividends for the foreseeable future. Any return to securityholders will therefore be limited to the appreciation of their securities.

Provisions in our amended and restated certificate of incorporation and amended and restated bylaws, as well as provisions of Delaware law, could make it more difficult for a third party to acquire us or increase the cost of acquiring us, even if doing so would benefit our securityholders or remove our current management.

Our amended and restated certificate of incorporation, as amended, amended and restated bylaws, as amended and Delaware law contain provisions that may have the effect of delaying or preventing a change in control of us or changes in our management. Our charter documents also contain other provisions that could have an anti-takeover effect, such as:

- establishing a classified board of directors so that not all members of our board of directors are elected at one time;
- permitting the board of directors to establish the number of directors and fill any vacancies and newly created directorships;
- providing that directors may only be removed for cause;
- prohibiting cumulative voting for directors;
- requiring super-majority voting to amend some provisions in our amended and restated certificate of incorporation and amended and restated bylaws;
- authorizing the issuance of "blank check" preferred stock that our board of directors could use to implement a stockholder rights plan;
- eliminating the ability of stockholders to call special meetings of stockholders; and
- prohibiting stockholder action by written consent, which requires all stockholder actions to be taken at a meeting of our stockholders.

These provisions, alone or together, could delay, deter or prevent hostile takeovers and changes in control or changes in our management.

In addition, because we are incorporated in Delaware, we are governed by the provisions of Section 203 of the Delaware General Corporation Law, which limits the ability of stockholders owning in excess of 15% of our outstanding voting stock to merge or combine with us.

Any provision of our amended and restated certificate of incorporation or amended and restated bylaws, each as amended, or Delaware law that has the effect of delaying or deterring a change in control could limit the opportunity for our securityholders to receive a premium for their securities and could also affect the price that some investors are willing to pay for our securities.

Our amended and restated certificate of incorporation and our amended and restated bylaws, each as amended, provide that the Court of Chancery of the State of Delaware will be the exclusive forum for substantially all disputes between us and our stockholders, which could limit our stockholders' ability to obtain a favorable judicial forum for disputes with us or our directors, officers or employees.

Our amended and restated certificate of incorporation and our amended and restated bylaws, each as amended, provide that the Court of Chancery of the State of Delaware is the exclusive forum for the following types of actions or proceedings under Delaware statutory or common law: 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 amended and restated certificate of incorporation or our amended and restated bylaws, each as amended, or any action asserting a claim against us that is governed by the internal affairs doctrine. This provision would not apply to suits brought to enforce a duty or liability created by the Securities Exchange Act of 1934, as amended, or any other claim for which the U.S. federal courts have exclusive jurisdiction.

The choice of forum provision may limit a stockholder's ability to bring a claim in a judicial forum that it finds favorable for disputes with us or our directors, officers or other employees, which may discourage such lawsuits against us and our directors, officers and other employees. If a court were to find the choice of forum provision contained in our amended and restated certificate of incorporation or in our amended and restated bylaws, as amended, to be inapplicable or unenforceable in an action, we may incur additional costs associated with resolving such action in other jurisdictions, which could harm our business and financial condition.

Item 1B. Unresolved Staff Comments

Not applicable.

Item 2. Properties

Our headquarters are located in Monmouth Junction, New Jersey where we occupy approximately 15,000 square feet of office and warehouse space under a lease that expires in September 2021. Our current needs do not require the amount of space in our existing facilities and we are in the process of identifying an appropriate sized office to reduce expenses, and we do not anticipate difficulties in finding suitable property to lease on commercially reasonable terms, if required. In May 2020, we terminated our lease agreement for approximately 66,000 square feet of office, manufacturing and laboratory space located in Cranbury, New Jersey, which previously served as our headquarters.

Item 3. Legal Proceedings

From time to time, we may become involved in litigation relating to claims arising from the ordinary course of business. Our management believes that there are currently no claims or actions pending against us, the ultimate disposition of which would have a material adverse effect on our results of operations, financial condition or cash flows.

On July 20, 2020, Laboratorios Liomont S.A. de C.V., or Liomont, filed a complaint against us in the U.S. District Court of the Southern District of New York alleging certain breach of contract claims under our June 25, 2014 strategic

development, license and supply agreement relating to the biosimilar development program for ONS-3010 and ONS-1045. According the complaint, Liomont is claiming \$3,000,000 damages due. We dispute the claims in the Liomont complaint, believe they are without merit, and intend to defend against them vigorously.

Item 4. Mine Safety Disclosures

Not applicable.

PART II

Item 5. Market for Registrant's Common Equity, Related Stockholder Matters, and Issuer Purchases of Equity Securities

Market Information

Our units, which comprised one share of our common stock, one-half of a Series A warrant and one-half of a Series B warrant began trading under the symbol "ONSIU" on The Nasdaq Global Market on May 13, 2016 in connection with our initial public offering. Following separation of the units, on June 13, 2016, our shares of common stock and the Series A warrants and Series B warrants began trading under the symbols "ONSI," "ONSIV" and "ONSIZ," respectively, and our units were delisted. On February 13, 2018, the listing of our common stock and the Series A Warrants was transferred to The Nasdaq Capital Market. On February 18, 2018, the Series B warrants began trading under the symbols "ONSI," of "Outlook Therapeutics, Inc.," effective December 4, 2018, our common stock and the Series A warrants began trading under the symbols "OTLK" and "OTLKW," respectively. Prior to our initial public offering, there was no public market for our securities.

On December 18, 2020, the closing sale price of our common stock was \$1.45, and the closing price of our Series A warrants was \$0.20.

Common Stockholders

As of December 18, 2020, there were approximately 111 stockholders of record of our common stock. The actual number of stockholders is greater than this number of record holders, and includes stockholders who are beneficial owners, but whose shares are held in street name by brokers and other nominees. This number of holders of record also does not include stockholders whose shares may be held in trust by other entities.

Series A Warrant Holders

As of December 18, 2020, there was one holder of record of our Series A warrants. The actual number of warrantholders is greater than this number of record holders, and includes warrantholders who are beneficial owners, but whose warrants are held in street name by brokers and other nominees. This number of holders of record also does not include warrantholders whose shares may be held in trust by other entities. As a result of our 1-for-8 reverse stock split that was effected in March 2019, each whole Series A warrant is exercisable for 1/8 of one whole share of our common stock. Each whole Series A warrant has a current exercise price of \$1.50, or \$12.00 per whole common share, and is exercisable until February 18, 2022. The exercise price and number of shares issuable upon exercise of the Series A warrants may be further adjusted upon the occurrence of certain events, including but not limited to any stock split, stock dividend, extraordinary dividend, recapitalization, reorganization, merger or consolidation. The Series A warrant holders do not have rights or privileges of holders of common stock or any voting rights until they exercise their warrants and receive common stock.

Dividend Policy

We have never declared or paid any cash dividends on our capital stock and do not anticipate paying any cash dividends in the foreseeable future. Payment of cash dividends, if any, in the future will be at the discretion of our board of directors and will depend on then-existing conditions, including our financial condition, operating results, contractual restrictions, capital requirements, business prospects and other factors our board of directors may deem relevant.

Securities Authorized for Issuance Under Equity Compensation Plans

The information required by this Item regarding equity compensation plans is incorporated by reference to the information set forth in Item 12 of this Annual Report on Form 10-K.

Recent Sales of Unregistered Equity Securities

None.

Issuer Purchases of Equity Securities

We did not repurchase any of our equity securities during fiscal year ended September 30, 2020.

Item 6. Selected Financial Data

Not applicable.

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations

The following discussion should be read in conjunction with the consolidated financial statements and notes thereto included elsewhere in this Annual Report on Form 10-K. This Annual Report on Form 10-K, including the following sections, contains forward-looking statements. These statements are subject to risks and uncertainties that could cause actual results and events to differ materially from those expressed or implied by such forward-looking statements. For a detailed discussion of these risks and uncertainties, see Item 1A "Risk Factors" in this Annual Report on Form 10-K. See also "Cautionary Note Regarding Forward-Looking Statements and Industry Data." We caution the reader not to place undue reliance on these forward-looking statements, which reflect management's analysis only as of the date of this Form 10-K. We undertake no obligation to update forward-looking statements, which reflect events or circumstances occurring after the date of this Form 10-K.

Overview

We are a late clinical-stage biopharmaceutical company working to develop the first U.S. Food and Drug Administration, or FDA, approved ophthalmic formulation of bevacizumab for use in retinal indications. Our goal is to launch ONS-5010 directly or through a strategic partner as the first and only approved bevacizumab in the United States, Europe, Japan and other markets for the treatment of wet age-related macular degeneration, or wet AMD, diabetic macular edema, or DME, and branch retinal vein occlusion, or BRVO, and we are in active late-stage discussions for the licensing and/or co-development rights to ONS-5010.

ONS-5010 (LYTENAVA (bevacizumab-vikg)), our sole product candidate in active clinical development, is an investigational ophthalmic formulation of bevacizumab, which we are developing to be administered as an intravitreal injection for the treatment of wet AMD and other retinal diseases. Bevacizumab is a full-length, humanized anti-VEGF (Vascular Endothelial Growth Factor) recombinant monoclonal antibody, or mAb, that inhibits VEGF and associated angiogenic activity. The study design for our Phase 3 clinical program to evaluate ONS-5010 as an ophthalmic formulation of bevacizumab was reviewed at an end of Phase 2 meeting with the FDA in April 2018, and we filed our investigational new drug application, or IND, with the FDA in the first quarter of calendar 2019.

Our registration plans for wet AMD, the initial indication planned for ONS-5010, consists of three clinical trials which we refer to as NORSE ONE, NORSE TWO and NORSE THREE. We reported achieving the anticipated safety and efficacy and positive proof-of-concept topline results from NORSE ONE, a clinical experience study, in August 2020. NORSE TWO is our masked, randomized, pivotal Phase 3 clinical trial that serves as the second of our two required clinical trials evaluating ONS-5010 against ranibizumab for wet AMD. Enrollment is complete with a total of 227 primarily treatment naïve patients enrolled at 39 clinical trial sites in the United States. NORSE THREE is an open-label safety study being conducted to ensure the adequate number of safety exposures to ONS-5010 are available for the initial regulatory filings in wet AMD. A total of 195 patients were enrolled during October 2020 with a range of retinal diseases for which an anti-VEGF drug is a therapeutic option, including wet AMD, DME and BRVO. Patients in NORSE 3 will receive three doses of ONS-5010 over three months. Enrollment is now complete. As of October 2020, all three of the clinical trials trial submission for wet AMD in the second half of calendar 2021 have either been completed or are fully enrolled.

We have also received agreement from the FDA on three Special Protocol Assessments, or SPAs, for three additional registration clinical trials for our ongoing Phase 3 program for ONS-5010. The agreements reached with the FDA on these SPAs cover the protocols for NORSE FOUR, a registration clinical trial evaluating ONS-5010 to treat BRVO, and NORSE FIVE and NORSE SIX, two registration clinical trials evaluating ONS-5010 to treat DME. We intend to initiate these studies in 2021 after submission of our BLA for wet AMD.

Currently, the cancer drug Avastin (bevacizumab) is used off-label for the treatment of wet AMD and other retinal diseases such as DME and BRVO even though Avastin has not been approved by regulatory authorities for use in these diseases. If the ONS-5010 clinical program is successful, it will support our plans to submit for regulatory approval in multiple markets in 2021 including the United States, United Kingdom, Europe and Japan, as well as other markets. Because there are no approved bevacizumab products for the treatment of retinal diseases in such major markets, we are developing ONS-5010 as a standard Biologics License Application, or BLA, and not using the biosimilar drug development pathway

that would be required if Avastin were an approved drug for the targeted diseases. If approved, we believe ONS-5010 has potential to mitigate risks associated with off-label use of unapproved bevacizumab. Off-label use of unapproved bevacizumab is currently estimated to account for at least 50% of all wet AMD prescriptions in the United States.

Going Concern

Through September 30, 2020, we have funded substantially all of our operations with \$278.3 million in proceeds from the sale and issuance of our equity and debt securities. We have also received \$29.0 million pursuant to our collaboration and licensing agreements through such date.

On May 6, 2020, we terminated our lease for office space in Cranbury, New Jersey and relocated our headquarters to Monmouth Junction, New Jersey, a site previously used by us as our warehouse location. We expect that the termination of the Cranbury office lease will reduce our cash needs by approximately \$14.0 million over the remaining life of the original lease, through February 2028.

On November 5, 2020, we received \$10.0 million in net proceeds from issuance of an unsecured promissory note with face amount of \$10.2 million. The note bears interest at a rate of 7.5% per annum, matures January 1, 2022, and includes an original issue discount of \$0.2 million. We may prepay all or a portion of the note at any time by paying 105% of the outstanding balance elected for pre-payment. In November 2020, we repaid \$3.6 million of unsecured stockholder notes that were due on demand as of September 30, 2020.

As described in their audit report included elsewhere in this Annual Report on Form 10-K, our auditors have included an explanatory paragraph that states that we have incurred recurring losses and negative cash flows from operations and have an accumulated deficit at September 30, 2020 of \$289.7 million, which raises substantial doubt about our ability to continue as a going concern. We will need to raise substantial additional capital to fund our planned future operations, commence clinical trials, receive approval for and commercialize ONS-5010, or to develop other product candidates. We plan to finance our future operations with a combination of proceeds from potential licensing and/or marketing arrangements with pharmaceutical companies, the issuance of equity securities, and the issuance of additional debt, potential collaborations and revenues from potential future product sales, if any. There are no assurances that we will be successful in obtaining an adequate level of financing for the development and commercialization of ONS-5010 or any other current or future product candidates. If we are unable to secure adequate additional funding, our business, operating results, financial condition and cash flows may be materially and adversely affected. Our consolidated financial statements do not include any adjustments that might be necessary if we are unable to continue as a going concern.

Our current cash resources of \$12.5 million as of September 30, 2020 together with the \$10.0 million in proceeds from an unsecured promissory note we issued in November 2020, after taking into account repayment of \$3.6 million of debt, are expected to fund our operations into March 2021. To provide additional working capital, we are in active late-stage discussions for the licensing and/or co-development rights to ONS-5010. If we are not successful in raising additional capital or entering into one or more licensing and/or co-development rights agreements, we may be required to, among other things, modify our clinical trial plans for ONS-5010 in additional indications, make reductions in our workforce, discontinue our development programs, liquidate all or a portion of our assets, and/or seek protection under the provisions of the U.S. Bankruptcy Code.

We do not have any products approved for sale and we have only generated revenue from our collaboration agreements. We have incurred operating losses and negative operating cash flows since inception and there is no assurance that we will ever achieve profitable operations, and if achieved, that profitable operations will be sustained. Our net loss for the year ended September 30, 2020 was \$35.2 million. We also had a net loss of \$34.5 million for the year ended September 30, 2019. In addition, development activities, clinical and preclinical testing and commercialization of our product candidates will require significant additional financing.

Impacts of the COVID-19 Pandemic

We continue to monitor the ongoing COVID-19 global pandemic, which has resulted in travel and other restrictions to reduce the spread of the disease. To date, we have experienced only minor disruptions from the ongoing COVID-19

pandemic, including a brief delay in patient enrollment and recruitment in NORSE TWO due to local clinical trial site protocols designed to protect staff and patients. Given our current infrastructure needs and current strategy, we were able to transition to remote working with limited impact on productivity, as shelter-in-place and other types of local and state orders were imposed. We have confirmed with the Ophthalmic Division of the FDA that it considers both approved and investigational treatments for sight-threatening conditions such as wet AMD not to be elective, and that as such they should continue during the COVID-19 restrictions. All clinical and chemistry, manufacturing and control, or CMC, activities are currently active.

All three of our clinical trials have completed enrollment and NORSE ONE has also completed patient follow-up activities. NORSE TWO and THREE patients continue to require monthly follow-up visits, which will continue over the next 12 and 3 months, respectively. To date, we have not experienced any significant COVID-19 disruptions to patient follow-up but the clinical trial protocol accounts for potential delayed or missed visits for any reason, including COVID-19 type interruptions. The FDA has provided guidance in the event of COVID-19 disruptions and we intend to confer with the FDA and follow the appropriate guidance in the event that NORSE TWO experiences an unusually high number of delayed or missed patient visits due to COVID-19.

The safety, health and well-being of all patients, medical staff and our internal and external teams is paramount and is our primary focus. As shelter-inplace rules evolve in jurisdictions across the country, we are aware that the potential exists for further disruptions to our projected timelines. We are in close communication with our clinical teams and key vendors and are prepared to take action should the pandemic worsen and impact our business in the future.

The ultimate impact of the COVID-19 pandemic is highly uncertain and subject to change. We do not yet know the full extent of any impacts the evolving COVID-19 pandemic may have on our business, operations, financial position and our clinical and regulatory activities. See also the section titled "Risk Factors" herein for additional information on risks and uncertainties related to the ongoing COVID-19 pandemic.

Collaboration and License Agreements

From time to time, we enter into collaboration and license agreements for the research and development, manufacture and/or commercialization of our products and/or product candidates. These agreements generally provide for non-refundable upfront license fees, development and commercial performance milestone payments, cost sharing, royalty payments and/or profit sharing. We have also licensed rights to our inactive biosimilar product candidates (ONS-3010, ONS-1045 and ONS-1050) in other markets and are in active late-stage discussions for the licensing and/or co-development rights to ONS-5010.

MTTR, LLC – ONS 5010

In January 2020, we agreed to terminate our February 2018 arrangement with MTTR LLC, or MTTR, for ONS-5010. Following receipt of necessary stockholder approval, in March 2020, we issued an aggregate of 7,244,739 shares of our common stock to the four principals of MTTR (who include two of our named executive officers, Mr. Dagnon and Mr. Evanson) pursuant to individual consulting agreements we entered into with each of them, and paid MTTR a one-time settlement fee of \$110,000. The consulting agreements also include terms setting for the respective compensation arrangements of each of the principals, including for Mr. Dagnon and Mr. Evanson, who have been serving as executive officers since November 2018.

See also Item 1 "Business-Collaboration and License Agreements-MTTR-Strategic Parternship Agreement (ONS-5010)."

MTTR and its four principals under the strategic partnership agreement and the subsequent individual consulting agreements earned an aggregate \$1,294,089 and \$1,744,933 during the years ended September 30, 2020 and 2019, respectively, which includes monthly consulting fees and expense reimbursement, but excludes stock-based compensation related to restricted stock.

Syntone – Private Placement and PRC Joint Venture

In May 2020, we entered into a stock purchase agreement with Syntone, pursuant to which we sold and issued in June 2020, in a private placement, 16,000,000 shares of our common stock at a purchase price of \$1.00 per share, for aggregate gross proceeds of \$16.0 million. In connection with the entry into the stock purchase agreement, we entered into a joint venture agreement with Syntone's People's Republic of China, or PRC, based-affiliate, pursuant to which we agreed to form a PRC joint venture that will be 80% owned by Syntone's PRC-affiliate and 20% owned by us. Once formed, we intend to enter into a royalty-free license with the PRC joint venture for the development, commercialization and manufacture of ONS-5010 in the greater China market, which includes Hong Kong, Taiwan and Macau.

Selexis SA

In October 2011, we entered into a research license agreement with Selexis whereby we acquired a non-exclusive license to conduct research internally or in collaboration with third parties to develop recombinant proteins from cell lines created in mammalian cells using the Selexis expression technology, or the Selexis Technology. The research license expired on October 9, 2018 and accordingly, we are no longer using the Selexis Technology in our research.

Selexis also granted us a non-transferrable option to obtain a perpetual, non-exclusive, worldwide commercial license under the Selexis Technology to manufacture, or have manufactured, a recombinant protein produced by a cell line developed using the Selexis Technology for clinical testing and commercial sale. We exercised this option in April 2013 and entered into three commercial license agreements with Selexis for our ONS-3010, ONS-1045 (which covers ONS-5010) and ONS-1050 product candidates. We paid an upfront licensing fee to Selexis for each commercial license and also agreed to pay a fixed milestone payment for each licensed product. In addition, we are required to pay a single-digit royalty on a final product-by-final product and country-by-country basis, based on worldwide net sales of such final products by us or any of our affiliates or sub-licensees during the royalty term. At any time during the term, we have the right to terminate our royalty payment obligation by providing written notice to Selexis and paying Selexis a royalty termination fee. The initiation of our Phase 3 clinical program for ONS-5010 triggered a CHF 65,000 (approximately \$0.1 million) milestone payment under the commercial license agreement, which we paid in November 2019.

Components of Our Results of Operations

Collaboration Revenue

To date, we have derived revenue only from activities pursuant to our emerging market collaboration and licensing agreements related to our inactive biosimilar development program. We have not generated any revenue from commercial product sales. For the foreseeable future, we expect all of our revenue, if any, will be generated from our collaboration and licensing agreements. If any of our product candidates currently under development are approved for commercial sale, we may generate revenue from product sales, or alternatively, we may receive royalties from any collaborator we select to commercialize our product candidates.

Each of our collaboration and licensing agreements was considered to be a multiple-element arrangement for accounting purposes. We determined that there were two deliverables; specifically, the license to our product candidate and the related research and development services that we were obligated to provide. We concluded that these deliverables should be accounted for as a single unit of accounting and revenue was being recognized on a straight-line basis through the estimated period of completion of our obligations under the agreement. As of September 30, 2019, all future development will be completed by our partners without any further assistance by us, accordingly, we recognized all remaining deferred revenue under our collaboration agreements as of September 30, 2019. We did not recognize any collaboration revenue in the fiscal year ended September 30, 2020.



Research and Development Expenses

Research and development expense consists of expenses incurred in connection with the discovery and development of our product candidates. We expense research and development costs as incurred. These expenses include:

- expenses incurred under agreements with contract research organizations, or CROs, as well as investigative sites and consultants that conduct our preclinical studies and clinical trials;
- expenses incurred by us directly, as well as under agreements with contract manufacturing organizations, or CMOs, for manufacturing scaleup expenses and the cost of acquiring and manufacturing preclinical and clinical trial materials and commercial materials, including manufacturing validation batches;
- outsourced professional scientific development services;
- employee-related expenses, which include salaries, benefits and stock-based compensation;
- payments made under a third-party assignment agreement, under which we acquired intellectual property;
- expenses relating to regulatory activities, including filing fees paid to regulatory agencies;
- laboratory materials and supplies used to support our research activities; and
- allocated expenses, utilities and other facility-related costs.

The successful development of our product candidates is highly uncertain. At this time, we cannot reasonably estimate or know the nature, timing and costs of the efforts that will be necessary to complete the remainder of the development of, or when, if ever, material net cash inflows may commence from any of our other product candidates. This uncertainty is due to the numerous risks and uncertainties associated with the duration and cost of clinical trials, which vary significantly over the life of a project as a result of many factors, including:

- the number of clinical sites included in the trials;
- the length of time required to enroll suitable patients;
- the number of patients that ultimately participate in the trials;
- the number of doses patients receive;
- the duration of patient follow-up;
- the results of our clinical trials;
- the establishment of commercial manufacturing capabilities;
- the receipt of marketing approvals; and
- the commercialization of product candidates.

Our expenditures are subject to additional uncertainties, including the terms and timing of regulatory approvals. We may never succeed in achieving regulatory approval for any of our biosimilar product candidates. We may obtain unexpected results from our clinical trials. We may elect to discontinue, delay or modify clinical trials of some product candidates or focus on others. A change in the outcome of any of these variables with respect to the development of a product candidate



could mean a significant change in the costs and timing associated with the development of that product candidate. For example, if the U.S. Food and Drug Administration, or FDA, or other regulatory authorities were to require us to conduct clinical trials beyond those that we currently anticipate, or if we experience significant delays in enrollment in any of our clinical trials, we could be required to expend significant additional financial resources and time on the completion of clinical development. Product commercialization will take several years and millions of dollars in development costs.

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, complexity and duration of later-stage clinical trials.

General and Administrative Expenses

General and administrative expenses consist principally of salaries and related costs for personnel in executive, administrative, finance and legal functions, including stock-based compensation, travel expenses and recruiting expenses. Other general and administrative expenses include facility related costs, patent filing and prosecution costs and professional fees for business development, legal, auditing and tax services and insurance costs.

We anticipate that our general and administrative expenses will increase if and when we believe a regulatory approval of a product candidate appears likely, and we anticipate an increase in payroll and expense as a result of our preparation for commercial operations, particularly as it relates to the sales and marketing of our product.

Interest Expense

Interest expense consists of cash paid and non-cash interest expense related to our senior secured notes, and unsecured notes with current and former stockholders, equipment loans, lease liabilities and other finance obligations.

Loss on Extinguishment of Debt

During the year ended September 30, 2020, we recorded a loss on extinguishment of \$1.9 million in connection with the exchange of our old senior secured notes for new senior secured notes in December 2019 and the exchange of the remaining outstanding principal and accrued interest on all new senior secured notes for shares of our common stock during the third quarter in fiscal 2020. The new senior secured notes were considered substantially different from the old notes, as such, they qualified for extinguishment accounting.

We recorded a loss on extinguishment of debt of \$0.6 million during the year ended September 30, 2019 in connection with a forbearance and exchange agreement in March 2019 pursuant to which a third party purchased two stockholder notes previously issued in an aggregate original principal amount of \$1.0 million with an aggregate outstanding balance of \$1.9 million, including accrued interest.

Change in Fair Value of Redemption Feature

Change in fair value of the redemption feature reflects the change in the fair value of the embedded derivative contained in the new senior secured notes issued in December 2019, as a result of the fact that such notes were convertible into a variable number of shares of our common stock and at a discount that was deemed to be substantial. This embedded derivative was recorded at fair value and was subject to re-measurement at each balance sheet date until our obligations under the new senior secured notes were satisfied.

Change in Fair Value of Warrant Liability

We issued warrants to purchase our common stock in conjunction with our old senior secured notes, which are classified as liabilities and recorded at fair value. The warrants are subject to re-measurement at each balance sheet date and we recognize any change in fair value in our statements of operations as other (income) expense.

Income Taxes

During the years ended September 30, 2020 and 2019, we sold New Jersey State net operating losses, or NOLs, in the amount of \$33.3 million and \$31.2 million, respectively, and unused research and development, or R&D, tax credits in the amount of \$0.6 million and \$0.9 million, respectively, resulting in the recognition of income tax benefits of \$3.3 million and \$3.4 million respectively, recorded in our statement of operations.

Since inception, we have not recorded any U.S. federal or state income tax benefits (excluding the sale of New Jersey state NOLs and R&D tax credits) for the net losses we have incurred in each year or on our earned R&D tax credits, due to our uncertainty of realizing a benefit from those items. As of September 30, 2020, we had federal and state NOL carryforwards of \$236.5 million and \$72.3 million, respectively, that will begin to expire in 2030 and 2038, respectively. As of September 30, 2020, we had federal foreign tax credit carryforwards of \$2.4 million available to reduce future tax liabilities, which begin to expire starting in 2023. As of September 30, 2020, we also had federal research and development tax credit carryforwards of \$6.6 million and \$0.3 million, respectively, which begin to expire in 2032 and 2033, respectively.

In general, under Section 382 of the Internal Revenue Code of 1986, as amended, or the Code, a corporation that undergoes an "ownership change" is subject to limitations on its ability to utilize its NOLs to offset future taxable income. We have not completed a study to assess whether an ownership change has occurred in the past. Our existing NOLs may be subject to limitations arising from previous ownership changes, and if we undergo an ownership change, our ability to utilize NOLs could be further limited by Section 382 of the Code. Future changes in our stock ownership, some of which are outside of our control, could result in an ownership change under Section 382 of the Code. Our NOLs are also subject to international regulations, which could restrict our ability to utilize our NOLs. Furthermore, our ability to utilize NOLs of companies that we may acquire in the future may be subject to limitations. There is also a risk that due to regulatory changes, such as suspensions on the use of NOLs, or other unforeseen reasons, our existing NOLs could expire or otherwise be unavailable to offset future income tax liabilities.

Furthermore, our ability to utilize NOLs of companies that we may acquire in the future may be subject to limitations. There is also a risk that due to regulatory changes, such as suspensions on the use of NOLs, or other unforeseen reasons, our existing NOLs could expire or otherwise be unavailable to offset future income tax liabilities.

Results of Operations

Comparison of Years Ended September 30, 2020 and 2019

	Year ended S			
	2020	2019	Change	
Collaboration revenues	<u>\$ </u>	\$ 8,146,123	\$ (8,146,123)	
Operating expenses:				
Research and development	26,341,998	23,805,251	2,536,747	
General and administrative	9,971,015	9,369,823	601,192	
Impairment of property and equipment	527,624	11,270,110	(10,742,486)	
	36,840,637	44,445,184	(7,604,547)	
Loss from operations	(36,840,637)	(36,299,061)	(541,576)	
Interest expense, net	1,756,471	3,466,688	(1,710,217)	
Loss on extinguishment of debt	1,896,296	607,240	1,289,056	
Change in fair value of redemption feature	(1,796,982)	_	(1,796,982)	
Change in fair value of warrant liability	(184,962)	(2,438,201)	2,253,239	
Loss before income taxes	(38,511,460)	(37,934,788)	(576,672)	
Income tax benefit	(3,271,962)	(3,411,001)	139,039	
Net loss	\$ (35,239,498)	\$ (34,523,787)	\$ (715,711)	

Collaboration Revenues

The following table sets forth a summary of revenue recognized from our collaboration and licensing agreements for the years ended September 30, 2020 and 2019:

		Year ended September 30,		
	20	20	2019	
IPCA Collaboration	\$	_ 5	5 1,664,085	
Liomont Collaboration		_	1,097,412	
Huahai Collaboration		_	4,828,584	
BioLexis Collaboration		—	556,042	
	\$	_ \$	8,146,123	

There were no collaboration revenues for the year ended September 30, 2020 as compared to \$8.1 million for the year ended September 30, 2019. The decrease is due to the full recognition of IPCA, Liomont, and Huahai deferred revenue during the fourth quarter of fiscal 2019, after we determined that we had no further performance obligations on these collaboration arrangements. During fourth quarter of fiscal year 2019, we substantially completed our efforts to outsource the commercial manufacturing and remaining development for the ONS-5010 program, resulting in the termination of the majority of manufacturing and development personnel and initiation of efforts to sell or transfer excess manufacturing, laboratory and related computer equipment no longer required for the development of ONS-5010. As a result, we no longer have the internal capability to support our inactive development of these assets in the United States and other developed markets. We expect that all future development for the biosimilar programs, if any, will be completed by our existing partners without further assistance from us. In addition, BioLexis collaboration revenue was recognized in full during the second quarter of fiscal 2019.

Research and Development Expenses

The following table summarizes our research and development expenses by functional area for the years ended September 30, 2020 and 2019:

	Year ended September 30,			
	2020	_	2019	
ONS-5010 development	\$ 21,707,174	\$	11,163,383	
Compensation and related benefits	1,392,041		5,618,375	
Stock-based compensation	1,241,945		37,053	
Other research and development	2,000,838		6,986,440	
Total research and development expenses	\$ 26,341,998	\$	23,805,251	

Research and development expenses for the year ended September 30, 2020 increased by \$2.5 million compared to the year ended September 30, 2019. We saw a significant increase in ONS-5010 development costs of \$10.5 million as we advanced and fully enrolled our NORSE TWO Phase 3 clinical trial during the year and initiated the necessary process characterization and manufacturing scale up activities with external partners to support our planned BLA filing in 2021. These increased costs were offset by decreased other research and development costs of \$5.0 million and lower compensation costs including stock-based compensation of \$3.0 million due to the discontinuation of in house development and manufacturing related activities.

General and Administrative Expenses

The following table summarizes our general and administrative expenses by type for the years ended September 30, 2020 and 2019:

	Year ended September 30,			
		2020		2019
Professional fees	\$	3,953,660	\$	4,028,104
Compensation and related benefits		998,123		1,281,442
Stock-based compensation		1,565,484		1,276,282
Facilities, fees and other related costs		3,453,748		2,783,995
Total general and administrative expenses	\$	9,971,015	\$	9,369,823

General and administrative expenses for the year ended September 30, 2020 increased by \$0.6 million compared to the year ended September 30, 2019. The increase was primarily due to a \$0.7 million lease termination loss recognized upon termination of our lease at our former corporate headquarters in Cranbury, New Jersey.

Impairment of Property and Equipment

During the year ended September 30, 2020, we recorded an impairment charge of \$0.5 million primarily due to the write-off of assets held for sale after we determined that the carrying amount of these assets was not recoverable as result of the May 2020 termination of our remaining lease for office, manufacturing and laboratory space at our former corporate headquarters in Cranbury, New Jersey and relocation of our corporate headquarters to our warehouse space in Monmouth Junction, New Jersey.

During the year ended September 30, 2019, we recognized a loss on impairment of property and equipment of \$11.3 million. The impairment was recognized due to the substantial completion of our efforts to outsource the commercial manufacturing and remaining development for the ONS-5010 program during the fourth quarter of fiscal 2019. As a result, we were no longer using the manufacturing or development areas of our facility and had been engaged in an effort to sublease all or a portion of the facility and sell or transfer excess manufacturing, laboratory and related computer equipment no longer required for the development of ONS-5010. For a discussion of the impairment analysis, refer to Item 8 "Consolidated Financial Statements – Note 5 - Property and Equipment."

Interest Expense, Net

Interest expense, net decreased by \$1.7 million to \$1.8 million for the year ended September 30, 2020 as compared to \$3.5 million for the year ended September 30, 2019. The decrease was primarily due to the termination of the finance lease for the corporate and manufacturing space in Cranbury, New Jersey and the reduction of outstanding principal amount of notes and other indebtedness due to exchanges of such indebtedness for shares of our common stock in fiscal 2020 and partially due to repayments in fiscal 2019.

Change in Fair Value of Warrant Liability

During the years ended September 30, 2020 and 2019, we recorded income of \$0.2 and \$2.4 million, respectively, related to the decrease in the fair value of our common stock warrant liability as a result of the decrease in the price of our common stock during the period.

Liquidity and Capital Resources

We have not generated any revenue from product sales. Since inception, we have incurred net losses and negative cash flows from our operations. Through September 30, 2020, we have funded substantially all of our operations through the sale and issuance of \$278.3 million net proceeds of our equity securities, debt securities and borrowings under debt

facilities. We have also received an aggregate of \$29.0 million pursuant to emerging markets collaboration and licensing agreements for our inactive biosimilar development programs.

On November 5, 2020, we received \$10.0 million in net proceeds from issuance of an unsecured promissory note with face amount of \$10.2 million. The note bears interest at a rate of 7.5% per annum, matures January 1, 2022, and includes an original issue discount of \$0.2 million. We may prepay all or a portion of the note at any time by paying 105% of the outstanding balance elected for pre-payment. In November 2020, we repaid \$3.6 million of unsecured stockholder notes that were due on demand as of September 30, 2020.

Our current cash resources of \$12.5 million as of September 30, 2020 together with the \$10.0 million in proceeds from an unsecured promissory note we issued in November 2020, after taking into account repayment of \$3.6 million of debt, are expected to fund our operations into March 2021. As of September 30, 2020, we had stockholders' equity of \$4.6 million. In addition, \$3.6 million unsecured notes, which were due on demand as of such date, and \$0.9 million loan granted pursuant to the PPP of the CARES Act, which matures on May 2, 2022 are outstanding as of September 30, 2020. These factors raise substantial doubt about our ability to continue as a going concern. Our consolidated financial statements do not include any adjustments related to the recoverability and classification of recorded asset amounts or the amounts and classification of liabilities that might result from the outcome of this uncertainty. We anticipate incurring additional losses until such time, if ever, that we can generate significant sales of ONS-5010 or any other product candidate we may develop. We will need substantial additional financing to fund our operations and to commercially develop ONS-5010 or any other product candidate we may develop. Management is currently evaluating various strategic opportunities to obtain the required funding for future operations. These strategies may include but are not limited to payments from potential strategic research and development, licensing and/or marketing arrangements with pharmaceutical companies, private placements and/or public offerings of equity and/or debt securities. Although we are in active late-stage discussions for the licensing and/or co-development rights to ONS-5010, there can be no assurance that these future funding efforts will be successful. Alternatively, we will be required to, among other things, make further reductions in our workforce, scale back our plans and place certain activities on hold, discontinue our development programs, liquidate all or a portion of our asse

Our future operations are highly dependent on a combination of factors, including (i) the timely and successful completion of additional financing discussed above, (ii) our ability to complete revenue-generating partnerships with pharmaceutical companies, (iii) the success of our research and development, (iv) the development of competitive therapies by other biotechnology and pharmaceutical companies, and, ultimately, (v) regulatory approval and market acceptance of our proposed future products.

Cash Flows

The following table summarizes our cash flows for each of the years presented:

	 Year ended September 30,			
	2020		2019	
Net cash used in operating activities	\$ (31,790,093)	\$	(32,289,988)	
Net cash used in investing activities	(900,000)		(437,307)	
Net cash provided by financing activities	37,210,551		39,025,432	

Operating Activities

During the year ended September 30, 2020, we used \$31.8 million of cash in operating activities resulting primarily from our net loss of \$35.2 million and the change in our operating assets and liabilities of \$3.0 million. This use of cash was partially offset by \$4.7 million of non-cash items such as change in fair value of redemption feature, non-cash interest expense, stock-based compensation, change in fair value of warrant liability, impairment of property and equipment, loss on extinguishment of debt, loss on lease termination, and depreciation and amortization expense. The change in our operating assets and liabilities of \$1.3 million was primarily due to an increase in our prepaid expenses of \$0.3 million associated with our ONS 5010 development costs and a decrease in our accounts payable and operating lease liability of

\$1.7 million primarily due to payments in fiscal 2020 offset by an increase in accrued expenses of \$0.7 million associated with our ONS 5010 development costs and clinical trial costs.

During the year ended September 30, 2019, we used \$32.3 million of cash in operating activities resulting primarily from our net loss of \$34.5 million and the change in our operating assets and liabilities of \$13.2 million. This use of cash was partially offset was partially offset by \$15.4 million of noncash items such as non-cash interest expense, stock-based compensation, change in fair value of warrant liability, impairment of property and equipment, loss on extinguishment of debt and depreciation and amortization expense. The change in our operating assets and liabilities was primarily due (i) to prepayments associated with our clinical trials and ONS 5010 development costs; (ii) payments of our accounts payable and accrued expenses from September 30, 2018; and (iii) full recognition of our deferred revenues balances from collaborations as September 30, 2019.

Investing Activities

During the year ended September 30, 2020, we used cash of \$0.9 million in investing activities for the initial investment in our planned PRC joint venture.

During the year ended September 30, 2019, we used cash of \$0.4 million in investing activities for the purchase of property and equipment.

Financing Activities

During the year ended September 30, 2020, net cash provided by financing activities was \$37.2 million, primarily attributable to \$9.2 million in net proceeds from a February 2020 registered direct offering and concurrent private placement; \$16.0 million in net proceeds from the initial private placement to Syntone; and \$9.2 million in net proceeds from the registered direct offering in June 2020, and \$1.0 million from a concurrent private placement that closed in July 2020. We also received \$1.1 million in net proceeds from the exercise of common stock warrants and \$0.9 million in proceeds from the PPP loan. We made \$0.3 million in debt and finance lease obligations payments during the year ended September 30, 2020.

During the year ended September 30, 2019, net cash provided by financing activities was \$39.0 million, primarily attributable to \$19.8 million in net proceeds from the November 2018 BioLexis private placement, and \$26.2 million in net proceeds from the April 2019 public offering. We also paid \$6.9 million in debt and lease obligations payments.

Funding Requirements

We plan to focus in the near term on advancing ONS-5010 through clinical trials to support the filing of a Biologics License Application with the FDA to support the generation of commercial revenues. We anticipate we will incur net losses and negative cash flow from operations for the foreseeable future. We may not be able to complete the development and initiate commercialization of ONS-5010 if, among other things, our clinical trials are not successful or if the FDA does not approve our application arising out of our current clinical trials when we expect, or at all, or if we are not able to enter into a licensing deal for ONS-5010 providing for sufficient funding of our expected development costs and we are unable to obtain such funding elsewhere.

Our primary uses of capital are, and we expect will continue to be, compensation and related expenses, manufacturing and facility costs, external research and development services, laboratory and related supplies, legal and other regulatory expenses, and administrative and overhead costs. Our future funding requirements will be heavily determined by the resources needed to support development of our lead product candidate and any other product candidates we may choose to pursue.

We believe our existing cash as of September 30, 2020 of \$12.5 million together with the \$10.0 million in proceeds from the November 2020 issuance of an unsecured promissory note, after taking into account repayment of \$3.6 million of debt, is expected to fund our operations into March 2021. We have based this estimate on assumptions that may prove to be wrong, and we could utilize our available capital resources sooner than we expect. We will need to raise substantial

additional capital in order to complete our planned ONS-5010 development program. We plan to finance our future operations with a combination of proceeds from potential strategic collaborations, sale of the development and commercial rights to our drug product candidates, the issuance of equity securities, the issuance of additional debt, and revenues from potential future product sales, if any. If we raise additional capital through the sale of equity or convertible debt securities, your ownership will be diluted, and the terms of these securities may include liquidation or other preferences that adversely affect your rights as a holder of our common stock. There are no assurances that we will be successful in obtaining an adequate level of financing for the development and commercialization of ONS-5010 or any other current or future product candidates. Alternatively, we will be required to, among other things, modify our clinical trial plans for ONS-5010 in additional indications, make reductions in our workforce, scale back our plans and place certain activities on hold, discontinue our development programs, liquidate all or a portion of our assets, and/or seek protection under the provisions of the U.S. Bankruptcy Code.

Because of the numerous risks and uncertainties associated with research, development and commercialization of pharmaceutical products, we are unable to estimate the exact amount of our working capital requirements. Our future funding requirements will depend on many factors, including:

- the number and characteristics of the product candidates we pursue;
- the scope, progress, results and costs of researching and developing our product candidates, and conducting preclinical studies and clinical trials;
- the timing of, and the costs involved in, obtaining regulatory approvals for our product candidates;
- the cost of manufacturing our product candidates and any drugs we successfully commercialize;
- our ability to establish and maintain strategic collaborations, licensing or other arrangements and the financial terms of such agreements;
- the costs involved in preparing, filing, prosecuting, maintaining, defending and enforcing patent claims, including litigation costs and the outcome of such litigation; and
- the timing, receipt and amount of sales of, or milestone payments related to or royalties on, our current or future product candidates, if any.

See Item 1A "Risk Factors" for additional risks associated with our substantial capital requirements.

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 in the rules and regulations of the SEC.

Critical Accounting Policies and Significant Judgments and Estimates

Our consolidated financial statements are prepared in accordance with U.S. generally accepted accounting principles, or GAAP. The preparation of our consolidated financial statements and related disclosures requires us to make estimates and judgments that affect the reported amounts of assets and liabilities, disclosure of contingent assets and liabilities at the date of the consolidated financial statements, and the reported amounts of revenues and expenses during the reported period. We base our estimates on historical experience, known trends and events and various other factors that we believe to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. We evaluate our estimates and assumptions on an ongoing basis. Our actual results may differ from these estimates under different assumptions and conditions.

While our significant accounting policies are described in more detail in the notes to our audited consolidated financial statements appearing elsewhere in this Annual Report on Form 10-K we believe that the following accounting policies are those most critical to the judgments and estimates used in the preparation of our consolidated financial statements

Revenue Recognition

On October 1, 2018, we adopted Accounting Standards Update, or ASU No. 2014-09, *Revenue from Contracts with Customers*, and changed our revenue recognition policies accordingly. The standard's stated core principle is that an entity should recognize revenue to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. This guidance also requires an entity to disclose sufficient information to enable users of financial statements to understand the nature, amount, timing and uncertainty of revenue and cash flows arising from contracts with customers. Qualitative and quantitative information is required about:

- Contracts with customers including revenue and impairments recognized, disaggregation of revenue and information about contract balances and performance obligations (including the transaction price allocated to the remaining performance obligations).
- Significant judgments and changes in judgments determining the timing of satisfaction of performance obligations (over time or at a point in time) and determining the transaction price and amounts allocated to performance obligations.
- Certain assets assets recognized from the costs to obtain or fulfill a contract.

Our arrangements fall under Accounting Standards Codification, or ASC, Topic 808, *Collaborative Arrangements*, or ASC 808. ASC 808 does not address recognition or measurement matters but prescribes that entities look to other GAAP by analogy, namely ASU 2014-09. As such, we completed an analysis of existing contracts with our collaboration partners and assessed the differences in accounting for such contracts under ASU 2014-09 compared with current revenue accounting standards. We previously recognized substantive milestones in the period the milestones were achieved, but ASU 2014-09 prescribes that those milestones are a form of variable consideration that results in such amounts being recognized over the estimated performance period. During the fiscal year ended September 30, 2019, we would have recognized \$4.5 million of collaboration revenues under revenue recognition guidance in effect during fiscal 2018 prior to the adoption of ASU 2014-09.

Research and Development Expenses

As part of the process of preparing our consolidated financial statements, we are required to estimate our accrued research and development expenses. This process involves reviewing open contracts and purchase orders, communicating with our applicable 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 costs. The majority of our service providers require advance payments; however, some invoice us in arrears for services performed, on a pre-determined schedule or when contractual milestones are met. We make estimates of our prepaid expenses and accrued expenses as of each balance sheet date in the consolidated financial statements based on facts and circumstances known to us at that time. We periodically confirm the accuracy of the estimates with the service providers and make adjustments if necessary. Examples of estimated accrued research and development expenses include fees paid to:

- · vendors in connection with preclinical development activities
- CMOs for the production of preclinical and clinical trial materials;
- CROs in connection with clinical trials; and

clinical trial sites.

We base our expenses related to preclinical studies and clinical trials on our estimates of the services received and efforts expended pursuant to quotes and contracts with multiple research institutions and CROs that conduct and manage preclinical studies and 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. There may be instances in which payments made to our vendors will exceed the level of services provided and result in a prepayment of the expense. 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 actual timing of the performance of services or the level of effort varies from the estimate, we adjust the accrual or prepaid accordingly. Although we do not expect our estimates to be materially different from amounts actually incurred, our understanding of the status and timing of services performed relative to the actual status and timing of services performed may vary and may result in reporting amounts that are too high or too low in any particular period. To date, we have not made any material adjustments to our prior estimates of accrued research and development expenses.

We estimate the fair value of stock options as of the date of grant and warrant liability at the end of each reporting period using the Black-Scholes option pricing model, which requires management to apply judgment and make estimates including the volatility of our common stock, the expected term of our stock options, the expected dividend yield and the fair value of our common stock on the date of grant. We estimate the fair value of restricted stock based on the closing price of our common stock on the date of grant.

JOBS Act Accounting Election

The JOBS Act permits an "emerging growth company" such as our company to take advantage of an extended transition period to comply with new or revised accounting standards applicable to public companies until those standards would otherwise apply to private companies. We have irrevocably elected to "opt out" of this provision and, as a result, we will comply with new or revised accounting standards when they are required to be adopted by public companies that are not emerging growth companies.

Recently Issued Accounting Pronouncements

In August 2018, the FASB issued ASU No. 2018-13, Fair Value Measurement (Topic 820): Disclosure Framework—Changes to the Disclosure Requirements for Fair Value Measurement, or ASU 2018-13, which removes and modifies some existing disclosure requirements and adds others. ASU 2018-13 modifies the disclosure requirements for fair value measurements and removes the requirement to disclose (1) the amount of and reasons for transfers between Level 1 and Level 2 of the fair value measurements, (2) the policy for timing of transfers between levels, and (3) the valuation processes for Level 3 fair value measurements. ASU 2018-13 requires disclosure of changes in unrealized gains and losses for the period included in other comprehensive income (loss) for recurring Level 3 fair value measurements. The ASU is effective for all entities for fiscal years beginning after December 15, 2019, including interim periods therein. Early adoption is permitted for any eliminated or modified disclosures upon issuance of this ASU. We are currently evaluating the impact of the adoption of this standard.

Item 7A. Quantitative and Qualitative Disclosures about Market Risk

Not applicable.

Item 8. Consolidated Financial Statements and Supplementary Data

OUTLOOK THERAPEUTICS, INC.

ANNUAL REPORT ON FORM 10-K

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Report of Independent Registered Public Accounting Firm

To the Stockholders and Board of Directors Outlook Therapeutics, Inc.:

Opinion on the Consolidated Financial Statements

We have audited the accompanying consolidated balance sheets of Outlook Therapeutics, Inc. and subsidiaries (the Company) as of September 30, 2020 and 2019, the related consolidated statements of operations, convertible preferred stock and stockholders' equity (deficit), and cash flows for the years then ended and the related notes (collectively, the consolidated financial statements). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company as of September 30, 2020 and 2019, and the results of its operations and its cash flows for the years then ended, in conformity with U.S. generally accepted accounting principles.

Going Concern

The accompanying consolidated financial statements have been prepared assuming that the Company will continue as a going concern. As discussed in Note 2 to the consolidated financial statements, the Company has incurred recurring losses and negative cash flows from operations since its inception and has an accumulated deficit of \$289.7 million as of September 30, 2020 that raise substantial doubt about its ability to continue as a going concern. Management's plans in regard to these matters are also described in Note 2. The consolidated financial statements do not include any adjustments that might result from the outcome of this uncertainty.

Basis for Opinion

These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these consolidated financial statements based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. As part of our audits, we are required to obtain an understanding of internal control over financial reporting 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.

Our audits included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. We believe that our audits provide a reasonable basis for our opinion.

/s/ KPMG LLP

We have served as the Company's auditor since 2015.

Philadelphia, Pennsylvania December 23, 2020

Outlook Therapeutics, Inc. Consolidated Balance Sheets

	September 30,			
		2020		2019
Assets				
Current assets:	<u>^</u>	10 50 5 00 5	<u>^</u>	0.045.500
Cash	\$	12,535,986	\$	8,015,528
Prepaid expenses and other current assets		5,407,882		4,986,033
Assets held for sale			_	500,000
Total current assets		17,943,868		13,501,561
Property and equipment, net		327.249		3,175,960
Operating lease right-of-use assets, net		166,986		
Other assets		1,294,448		457,476
Total assets	\$	19,732,551	\$	17,134,997
Liabilities, convertible preferred stock and stockholders' equity (deficit)				
Current liabilities:				
Convertible senior secured notes	\$	_	\$	6,699,000
Current portion of long-term debt		50,285		1,026,168
Current portion of finance lease liabilities		29,778		192,290
Current portion of operating lease liabilities		187,486		—
Stockholder notes		3,612,500		3,612,500
Accounts payable		2,394,818		2,277,817
Accrued expenses		7,757,310		4,622,988
Income taxes payable		1,856,629		1,859,434
Total current liabilities		15,888,806		20,290,197
Long-term debt		904.200		50,285
Enance lease liabilities		42,482		3,365,790
Warrant liability		70,772		255,734
Other liabilities		10,112		3,942,948
Total liabilities		16,906,260	_	27,904,954
Total natifices		10,900,200		27,904,934
Commitments and contingencies (Note 10)				
Convertible preferred stock:				
Series A convertible preferred stock, par value \$0.01 per share: 1,000,000 shares authorized, no shares issued and outstanding Series A-1 convertible preferred stock, par value \$0.01 per share: 200,000 shares authorized, no shares issued and outstanding at		_		_
September 30, 2020 and 66,451 shares issued and outstanding at September 30, 2019		_		5.359.404
Total convertible preferred stock		_		5,359,404
Qualitation amin (105 cit)				
Stockholders' equity (deficit): Preferred stock, par value \$0.01 per share: 7,300,000 shares authorized, no shares issued and outstanding		_		_
Series B convertible preferred stock, par value \$0.01 per share: 1,500,000 shares authorized no shares issued and outstanding				
Common stock, par value \$0.01 per share; 200,000,000 shares authorized; 127,183,109 and 28,609,995 shares issued and outstanding				
at September 30, 2020 and 2019, respectively		1,271,831		286,100
Additional paid-in capital		291,274,366		238,064,947
Accumulated deficit		(289,719,906)		(254,480,408)
Total stockholders' equity (deficit)		2,826,291		(16,129,361)
Total liabilities, convertible preferred stock and stockholders' equity (deficit)	\$	19,732,551	\$	17,134,997
······································				

See accompanying notes to consolidated financial statements

Outlook Therapeutics, Inc. Consolidated Statements of Operations

	Year ended September 30,			er 30,
	2020			2019
Collaboration revenues	\$	_	\$	8,146,123
Operating expenses:				
Research and development		26,341,998		23,805,251
General and administrative		9,971,015		9,369,823
Impairment of property and equipment		527,624		11,270,110
		36,840,637		44,445,184
Loss from operations		(36,840,637)		(36,299,061)
Interest expense, net		1,756,471		3,466,688
Loss on extinguishment of debt		1,896,296		607,240
Change in fair value of redemption feature		(1,796,982)		_
Change in fair value of warrant liability		(184,962)		(2,438,201)
Loss before income taxes		(38,511,460)		(37,934,788)
Income tax benefit		(3,271,962)		(3,411,001)
Net loss		(35,239,498)		(34,523,787)
Beneficial conversion feature upon issuance of Series A-1 convertible preferred stock				(61,365)
Series A-1 convertible preferred stock dividends and related settlement		(166,133)		(624,988)
Deemed dividend upon modification of warrants		(3,140,009)		(829,530)
Deemed dividend upon amendment of the terms of the Series A-1 convertible preferred stock		(10,328,118)		_
Net loss attributable to common stockholders	\$	(48,873,758)	\$	(36,039,670)
Per share information:				
Net loss per share of common stock, basic and diluted	\$	(0.67)	\$	(1.98)
Weighted average shares outstanding, basic and diluted		72,555,636		18,191,827

See accompanying notes to consolidated financial statements

Outlook Therapeutics, Inc. Consolidated Statements of Convertible Preferred Stock and Stockholders' Equity (Deficit)

	Convertible l	Preferred Stock	Stock Stockholders' Equity (Deficit)				
	Seri	es A-1	Commo	n Stock	Additional Paid-in	Accumulated	Total Stockholder
	Shares	Amount	Shares	Amount	Capital	Deficit	Equity (Deficit)
Balance at October 1, 2018	60,203	\$ 4,734,416	9,027,491	\$ 90,275	\$ 190,672,166	\$(216,307,363)	\$ (25,544,922
Cumulative effect of adoption of ASU 2014-09 (Topic 606)	_	_	—	_	_	(3,649,258)	(3,649,258
Proceeds from exercise of common stock warrants	_	—	6,134,763	61,348	(56,998)	<u> </u>	4,350
Sale of common stock in public offering, net of issuance costs	_	_	10,340,000	103,400	26,053,103	_	26,156,503
Private placement sale of common stock, net of issuance costs	—	—	2,680,390	26,804	19,781,514	—	19,808,318
Issuance of vested restricted stock units	_	—	4,069	41	(41)	_	-
Issuance of common stock in connection with conversion of senior secured notes	_	—	50,394	503	401,464	—	401,967
Issuance of common stock in connection with conversion of stockholder notes	_	_	372,888	3,729	476,271	_	480,000
Series A-1 convertible preferred stock dividends and related settlement	6,248	624,988		_	(624,988)	—	(624,988
Stock-based compensation expense	_	—	—	_	1,313,335	_	1,313,335
Accrued directors fees settled in fully vested stock options	_	—		_	49,121	—	49,121
Net loss	_	_	_	_	_	(34,523,787)	(34,523,78)
Balance at September 30, 2019	66,451	5,359,404	28,609,995	286,100	238,064,947	(254,480,408)	(16,129,361
Issuance of common stock in connection with exercise of warrants	_	_	13,003,414	130,034	1,008,866		1,138,900
Issuance of common stock in connection with conversion of stockholder notes and interest	_	_	1,475,258	14,753	1,533,673	_	1,548,426
Issuance of common stock in connection with conversion of senior secured notes and interest	_	_	12,201,461	122,015	7,872,479	_	7,994,494
Issuance of vested restricted stock units	_	_	109	1	(1)	_	
Sale of common stock, net of issuance costs	_	_	35,289,512	352,895	34,993,602	_	35,346,497
Issuance of restricted common stock to MTTR, LLC principals (Note 13)	_	_	7,244,739	72,447	(72,447)	_	-
Series A-1 convertible preferred stock dividends and related settlement	1,661	166,133	_	_	(166,133)		(166,133
Conversion of Series A-1 convertible preferred stock to common stock	(68,112)	(5,525,537)	29,358,621	293,586	5,231,951	_	5,525,537
Stock-based compensation expense			_	_	2,807,429	_	2,807,429
Net loss						(35,239,498)	(35,239,498
Balance at September 30, 2020		<u>s </u>		\$	\$ 291,274,366	\$	\$ 2,826,291
			127,183,109	1,271,831		(289,719,906)	

See accompanying notes to consolidated financial statements.

Outlook Therapeutics, Inc. and Subsidiary Consolidated Statements of Cash Flows

	Year ended Septemb		ber 30,	
		2020	·	2019
OPERATING ACTIVITIES				
Net loss	\$	(35,239,498)	\$	(34,523,787)
Adjustments to reconcile net loss to net cash used in operating activities:		554.060		2 2 (1 072
Depreciation and amortization		554,069		3,361,873
Loss on extinguishment of debt		1,896,296		607,240
Non-cash interest expense		235,636		1,314,321 1,313,335
Stock-based compensation Change in fair value of redemption feature		2,807,429		1,313,335
Change in fair value of warrant liability		(1,796,982) (184,962)		(2,438,201)
Impairment of property and equipment		527.624		11,270,110
Loss on lease termination		680,017		11,270,110
Changes in operating assets and liabilities:		000,017		
Prepaid expenses and other current assets		(310,270)		(3,245,146)
Other assets		(84,120)		(87,182)
Operating lease liability		(164,686)		(07,102)
Accounts payable		(1,489,760)		(1,331,640)
Accrued expenses		726,332		(482,665)
Income taxes payable		(2,805)		3,305
Deferred revenue				(8,146,123)
Other liabilities		55,587		94,572
Net cash used in operating activities		(31,790,093)		(32,289,988)
INVESTING ACTIVITIES				
Purchase of property and equipment		_		(437,307)
Investment in joint venture		(900,000)		
Net cash used in investing activities		(900,000)		(437,307)
FINANCING ACTIVITIES		()		() /
Proceeds from the sale of common stock, net of offering costs		35,430,727		45,964,821
Proceeds from debt		904,200		
Proceeds from exercise of common stock warrants		1,138,900		4,350
Payments of finance lease obligations		(215,074)		(526,087)
Repayment of debt		(48,202)		(6,417,652)
Net cash provided by financing activities		37,210,551	_	39,025,432
Net increase in cash		4,520,458		6,298,137
Cash at beginning of year		8,015,528		1,717,391
Cash at end of year	\$	12,535,986	\$	8,015,528
Supplemental disclosure of cash flow information				
Cash paid for interest	S	913,967	\$	2,794,572
Accrued interest settled by conversion into common stock		1.531.004	s	1,393
		1,551,004	.p	1,375
Supplemental schedule of non-cash financing activities:	(7 022 050	¢.	400.574
Senior secured notes principal converted into common stock	\$	7,033,950	\$	400,574
Unsecured notes principal converted into common stock	\$	977,966	\$	480,000
Issuance of capital lease obligations in connection with purchase of property and equipment	\$	_	\$	48,683
Issuance of exchange notes at estimated fair value	S	7.050.206	s	
Issuance of redemption feature at estimated fair value	\$	8.264.451	¢.	
Change in fair value of convertible senior secured notes warrants recorded as debt discount		0,204,401	¢.	1.466.710
5	3	1((122	\$	1
Series A-1 convertible preferred stock dividends and related settlement	\$	166,133	\$	624,988
Deferred offering costs and common stock issuance costs in accounts payable and accrued expenses	<u>\$</u>	84,230	\$	
Accrued directors' fees settled in fully vested stock options	\$	_	\$	49,121
, T			-	

See accompanying notes to consolidated financial statements.

1. Organization and Operations

Description of the Business

Outlook Therapeutics, Inc., (formerly Oncobiologics, Inc.), ("Outlook" or the "Company") was incorporated in New Jersey on January 5, 2010, started operations in July 2011, reincorporated in Delaware by merging with and into a Delaware corporation in October 2015 and changed its name to "Outlook Therapeutics, Inc." in November 2018. The Company is a late clinical-stage biopharmaceutical company focused on developing and commercializing ONS-5010, an ophthalmic formulation of bevacizumab for use in retinal indications. The Company is based in Monmouth Junction, New Jersey.

The Company has been actively monitoring the novel coronavirus ("COVID-19") pandemic and its impact globally. Given the Company's current infrastructure needs and current strategy, the Company was able to transition to remote working with limited impact on productivity, as shelter-in-place and similar government orders were imposed. All clinical and chemistry, manufacturing and control activities are currently active for NORSE ONE, NORSE TWO and NORSE THREE, the Company's clinical trials under its Phase 3 program for ONS-5010.

The full extent to which the COVID-19 pandemic will directly or indirectly impact the Company's business, results of operations and financial condition will depend on future developments that are highly uncertain, including as a result of new information that may emerge concerning COVID-19 and the actions taken to contain it or treat COVID-19. Management believes the financial results for the year ended September 30, 2020 were not significantly impacted by COVID-19.

2. Liquidity

The Company has incurred recurring losses and negative cash flows from operations since its inception and has an accumulated deficit of \$289.7 million as of September 30, 2020, which raises substantial doubt about the Company's ability to continue as a going concern. The accompanying consolidated financial statements have been prepared on a going concern basis, which contemplates the realization of assets and satisfaction of liabilities in the normal course of business. The consolidated financial statements do not include any adjustments related to the recoverability and classification of recorded asset amounts or the amounts and classification of liabilities that might result from the outcome of this uncertainty.

On November 5, 2020, the Company received \$10.0 million in net proceeds from issuance of an unsecured promissory note with face amount of \$10.2 million. The note bears interest at a rate of 7.5% per annum, matures January 1, 2022, and includes an original issue discount of \$0.2 million. The Company may prepay all or a portion of the note at any time by paying 105% of the outstanding balance elected for pre-payment. In November 2020, the Company repaid \$3.6 million of unsecured stockholder notes that were due on demand as of September 30, 2020.

Management believes that the Company's existing cash as of September 30, 2020 together with the \$10.0 million in proceeds from the unsecured promissory note issued in November 2020, after taking into account repayment of \$3.6 million of debt, is expected to fund its operations into March 2021. Substantial additional financing will be needed by the Company to fund its operations in the future and to commercially develop its product candidates. Management is currently evaluating different strategies to obtain the required funding for future operations. These strategies may include, but are not limited to: payments from potential strategic research and development partners, licensing and/or marketing arrangements with pharmaceutical companies, private placements of equity and/or debt securities, sale of its development stage product candidates to third parties and public offerings of equity and/or debt securities. There can be no assurance that these future funding efforts will be successful.

The Company's future operations are highly dependent on a combination of factors, including (i) the timely and successful completion of additional financing discussed above; (ii) the Company's ability to complete revenue-generating partnerships with pharmaceutical companies; (iii) the success of its research and development; (iv) the development of

competitive therapies by other biotechnology and pharmaceutical companies, and, ultimately; (v) regulatory approval and market acceptance of the Company's proposed future products.

3. Basis of Presentation and Summary of Significant Accounting Policies

Basis of presentation

The accompanying consolidated financial statements have been prepared in conformity with U.S. generally accepted accounting principles ("GAAP"). Any reference in these notes to applicable guidance is meant to refer to GAAP as found in the Accounting Standards Codification ("ASC") and Accounting Standards Updates ("ASU") of the Financial Accounting Standards Board ("FASB"). The accompanying consolidated financial statements include the accounts of the Company and Outlook Therapeutics Pty Ltd, its wholly-owned subsidiary incorporated in Australia (the "Subsidiary"). All intercompany accounts and transactions have been eliminated in consolidation. The Company has determined the functional currency of the Subsidiary to be the U.S. dollar. The Company translates assets and liabilities of its foreign operations at exchange rates in effect at the balance sheet date. The Company records remeasurement gains and losses on monetary assets and liabilities, such as incentive and tax receivables and accounts payables, which are not in the functional currency of the operation. These remeasurement gains and losses are recorded in the consolidated statement of operations as they occur.

Use of estimates

The preparation of the consolidated financial statements in conformity with 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 revenues and expenses during the reporting period. Actual results could differ from those estimates. Due to the uncertainty of factors surrounding the estimates or judgments used in the preparation of the consolidated financial statements, actual results may materially vary from these estimates. Estimates and assumptions are periodically reviewed and the effects of revisions are reflected in the consolidated financial statements in the period they are determined to be necessary.

Fair value of financial instruments

Certain assets and liabilities are carried at fair value under GAAP. Fair value is defined as the exchange price that would be received for an asset or paid to transfer a liability (an exit price) in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants on the measurement date. Valuation techniques used to measure fair value must maximize the use of observable inputs and minimize the use of unobservable inputs. Financial assets and liabilities carried at fair value are to be classified and disclosed in one of the following three levels of the fair value hierarchy, of which the first two are considered observable and the last is considered unobservable:

- Level 1 Quoted prices in active markets for identical assets or liabilities.
- Level 2 Observable inputs (other than Level 1 quoted prices), such as quoted prices in active markets for similar assets or liabilities, quoted prices in markets that are not active for identical or similar assets or liabilities, or other inputs that are observable or can be corroborated by observable market data.
- Level 3 Unobservable inputs that are supported by little or no market activity and that are significant to determining the fair value of the assets or liabilities, including pricing models, discounted cash flow methodologies and similar techniques.

The asset's or liability's fair value measurement level within the fair value hierarchy is based on the lowest level of any input that is significant to the fair value measurement. Valuation techniques used need to maximize the use of observable inputs and minimize the use of unobservable inputs.

At September 30, 2020 and 2019, the Company's financial instruments included cash, accounts payable, accrued expenses, equipment loans, stockholder notes and the Paycheck Protection Program (the "PPP") loan under the Coronavirus Aid, Relief, and Economic Security Act (the "CARES Act"). The carrying amount of accounts payable, accrued expenses, equipment loans, and stockholder notes approximates fair value due to the short-term maturities of these instruments.

Fair Value of Other Financial Instruments

As of September 30, 2020, the fair value and carrying value of the PPP loan included in long-term debt on the consolidated balance sheets was \$837,000 and \$904,200, respectively. The estimated fair value for the Company's PPP loan was based on discounted expected future cash flows using prevailing interest rates which are Level 3 inputs under the fair value hierarchy.

Property and equipment

Property and equipment are recorded at cost. Depreciation and amortization is determined using the straight-line method over the estimated useful lives ranging from 3 to 10 years. Leasehold improvements are amortized over the term of the lease or the estimated useful life of the assets, whichever is shorter. Expenditures for maintenance and repairs are expensed as incurred while renewals and betterments are capitalized. When property and equipment is sold or otherwise disposed of, the cost and related accumulated depreciation are eliminated from the accounts and any resulting gain or loss is reflected in operations.

Long-lived assets

Long-lived assets are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. Recoverability of assets to be held and used is measured by a comparison of the carrying amount of an asset to future net cash flows expected to be generated. Impairment charges are recognized at the amount by which the carrying amount of an asset exceeds the fair value of the asset. Assets to be disposed of are reported at the lower of the carrying amount or the fair value less costs to sell. The Company recognized an impairment charge of \$0.5 million and \$11.3 million during the years ended September 30, 2020 and 2019, respectively, which is described more fully in Note 5.

Leases

On October 1, 2019, the Company adopted ASU No. 2016-02, *Leases* ("ASC 842" or "ASU 2016-02") issued by the FASB in February 2016 which was subsequently supplemented by clarifying guidance to improve financial reporting of leasing transactions. The new lease accounting guidance requires lessees to recognize lease liabilities and right-of-use assets on the balance sheet for all leases with initial terms longer than 12 months and provides enhanced disclosures on key information of leasing arrangements. The guidance allowed companies to apply the requirements retrospectively, either to all prior periods presented or through a cumulative adjustment in the year of adoption.

The Company adopted the new standard using the modified retrospective transition method using the package of practical expedients and a discount rate of 9% and elected to not apply the standard in the comparative periods presented in the year of adoption. For all existing operating leases as of September 30, 2019, the Company recorded right of use assets of \$352,172 and corresponding lease liabilities of \$318,672 with an offset to other liabilities of \$33,500 to eliminate deferred rent on the consolidated balance sheets. The Company recorded right of use assets of \$2,525,000 and corresponding finance lease liabilities of \$3,558,080 for leases previously classified as capital leases. This did not include an existing lease termination obligation of \$3,909,448 pertaining to a lease for premises that had been leased in Cranbury, New Jersey for a planned office and laboratory expansion that did not materialize, and which prior termination remained unchanged as a result of the transition. Refer to Note 10 for the Company's lease disclosures.

At lease commencement, the Company records a lease liability based on the present value of lease payments over the expected lease term including any options to extend the lease that the Company is reasonably certain to exercise. The Company calculates the present value of lease payments using an incremental borrowing rate as the Company's leases do not provide an implicit interest rate. The Company's incremental borrowing rate for a lease is the rate of interest it would have to pay on a collateralized basis to borrow an amount equal to the lease payments under similar terms. At the lease commencement date, the Company records a corresponding right-of-use lease asset based on the lease liability, adjusted for any lease incentives received and any initial direct costs paid to the lessor prior to the lease commencement date. The Company may enter into leases with an initial term of 12 months or less ("Short-Term Leases"). For Short-Term Leases, the Company records the rent expense on a straight-line basis and does not record the leases on the consolidated balance sheet. The Company had no Short-Term Leases as of September 30, 2020.

After lease commencement, the Company measures its leases as follows: (i) the lease liability based on the present value of the remaining lease payments using the discount rate determined at lease commencement and (ii) the right-of-use lease asset based on the re-measured lease liability, adjusted for any unamortized lease incentives received, any unamortized initial direct costs and the cumulative difference between rent expense and amounts paid under the lease agreement. Any lease incentives received, and any initial direct costs incurred are amortized on a straight-line basis over the expected lease term. Rent expense is recorded on a straight-line basis over the expected lease term.

The adoption of the new lease accounting standard did not have a material impact on the Company's results of operations or cash flows.

Stock-based compensation

The Company measures equity classified stock-based awards based on the estimated fair value on the date of grant and recognizes compensation expense of those awards on a straight-line basis over the requisite service period, which is generally the vesting period of the respective award. The Company accounts for forfeitures of stock option awards as they occur.

The fair value of each stock option grant is estimated on the date of grant using the Black-Scholes option pricing model, which is described more fully in Note 13. The fair value of each restricted stock award is measured as the fair value per share of the Company's common stock on the date of grant.

Revenue recognition

On October 1, 2018, the Company adopted ASU No. 2014-09, *Revenue from Contracts with Customers* ("ASU 2014-09") and changed its revenue recognition policies accordingly. The standard's stated core principle is that an entity should recognize revenue to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. This guidance also requires an entity to disclose sufficient information to enable users of financial statements to understand the nature, amount, timing and uncertainty of revenue and cash flows arising from contracts with customers. Qualitative and quantitative information is required about:

- Contracts with customers including revenue and impairments recognized, disaggregation of revenue and information about contract balances and performance obligations (including the transaction price allocated to the remaining performance obligations).
- Significant judgments and changes in judgments determining the timing of satisfaction of performance obligations (over time or at a point in time) and determining the transaction price and amounts allocated to performance obligations.
- Certain assets assets recognized from the costs to obtain or fulfill a contract.

The Company's revenue is generated primarily through collaboration research and license agreements. The terms of these agreements generally contain multiple deliverables which may include (i) licenses, (ii) research and development activities, (iii) clinical manufacturing and, (iv) product supply. The payment terms of these agreements may include nonrefundable upfront fees, payments for research and development activities, payments based upon the achievement of certain milestones, royalty payments based on product sales derived from the collaboration, and payments for supplying product. The Company typically receives upfront, nonrefundable payments when licensing its intellectual property.

The Company's arrangements fall under ASC 808, Collaborations ("ASC 808"). ASC 808 does not address recognition or measurement matters but prescribes that entities look to other GAAP by analogy, namely ASU 2014-09. As such, the Company completed an analysis of existing contracts with the Company's collaboration partners and assessed the differences in accounting for such contracts under ASU 2014-09 compared with current revenue accounting standards. Under the ASU 2014-09, the Company treats substantive milestones as forms of variable consideration which is recognized over the estimated performance period. Payments or reimbursements resulting from the Company's research and development efforts are recognized as the services are performed.

The Company adopted the new accounting standard utilizing the modified retrospective method and, therefore, no adjustments were made to amounts in its prior period financial statements. The Company recorded the cumulative effect of adopting the standard as an adjustment to increase accumulated deficit by \$3.6 million. During the fiscal year ended September 30, 2020, the Company would have recognized \$4.5 million of collaboration revenues under revenue recognition guidance in effect during fiscal 2018 prior to the adoption of ASU 2014-09.

Incentive and tax receivables

The Subsidiary is eligible to participate in an Australian research and development tax incentive program. As part of this program, the Subsidiary is eligible to receive a cash refund from the Australian Taxation Office for a percentage of the research and development costs expended by the Subsidiary in Australia. The cash refund is available to eligible companies with annual aggregate revenues of less than \$20.0 million (Australian) during the reimbursable period. The Company's estimate of the amount of cash refund it expects to receive related to the Australian research and development tax incentive program is included in prepaid expenses and other current assets in the accompanying consolidated balance sheets. As of September 30, 2020, the Company's estimate of the amount of cash refund it expects to receive in 2021 for 2020 eligible spending as part of this incentive program was \$0.8 million. As of September 30, 2019, the Company had a receivable of \$1.1 million which was received in 2020 as part of this incentive program.

In addition, the Subsidiary incurs Goods and Services Tax ("GST") on services provided by Australian vendors. As an Australian entity, the Subsidiary is entitled to a refund of the GST paid. The Company's estimate of the amount of cash refund it expects to receive related to GST incurred is included in prepaid expenses and other current assets in the accompanying consolidated balance sheet. As of September 30, 2019, prepaid expenses and other current assets included §0.1 million for refundable GST on expenses incurred with Australian vendors.

Research and development

Research and development costs are expensed as incurred and consist primarily of funds paid to third parties for the provision of services for product candidate development, clinical and preclinical development and related supply and manufacturing costs, and regulatory compliance costs. At the end of the reporting period, the Company compares payments made to third-party service providers to the estimated progress toward completion of the research or development objectives. Such estimates are subject to change as additional information becomes available. Depending on the timing of payments to the service providers and the progress that the Company estimates has been made as a result of the service provided, the Company may record net prepaid or accrued expense relating to these costs.

Upfront milestone payments made to third parties who perform research and development services on the Company's behalf are expensed as services are rendered. Costs incurred in obtaining technology licenses are charged to research and

development expense as acquired in-process research and development if the technology licensed has not reached technological feasibility and has no alternative future use. Research and development expenses are recorded net of expected refunds of eligible research and development costs paid to Australian vendors pursuant to the Australian research and development tax incentive program and GST incurred on services provided by Australian vendors. During the years ended September 30, 2020 and 2019, the Company recorded \$0.5 million and \$1.2 million, respectively, in its consolidated statements of operations related to the cash refund it expected to receive from the Australian research and development tax incentive program.

Income taxes

The Company accounts for income taxes using the asset and liability method. Under the asset and liability method, deferred tax assets and liabilities are recognized for the future tax consequences attributable to differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases. Deferred tax assets and liabilities are measured using enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled. The effect on deferred tax assets and liabilities of a change in tax rates is recognized in income in the period that includes the enactment date. A valuation allowance is recorded to the extent it is more likely than not that some portion or all of the deferred tax assets will not be realized.

Net loss per share

Basic net loss per common share is determined by dividing net loss attributable to common stockholders by the weighted-average number of shares of common stock outstanding during the period. For purposes of calculating diluted net loss per common share, the denominator includes both the weighted average common shares outstanding and the number of common stock equivalents if the inclusion of such common stock equivalents would be dilutive. Dilutive common stock equivalents potentially include warrants, stock options and non-vested restricted stock unit ("RSU") awards using the treasury stock method. For all periods presented, there is no difference in the number of shares used to compute basic and diluted shares due to the Company's loss.

The following potentially dilutive securities have been excluded from the computation of diluted weighted-average shares outstanding as of September 30, 2020 and 2019, as they would be antidilutive:

	As of September 30,	
	2020	2019
Series A-1 convertible preferred stock		1,255,789
Convertible senior secured notes	_	767,605
Convertible unsecured notes	—	149,573
Performance-based stock units	2,470	15,691
Restricted stock units	—	109
Stock options	3,762,143	1,389,999
Common stock warrants	7,051,854	16,067,948

Recently issued accounting pronouncements

On October 1, 2019, the Company adopted ASU No. 2018-07, *Improvements to Nonemployee Share-Based Payment Accounting Compensation*, issued by the FASB in June 2018. The amendments in this ASU expanded the scope of *Compensation—Stock Compensation* ("Topic 718") to include share-based payment transactions for acquiring goods and services from nonemployees. The amendments specified that Topic 718 applied to all share-based payment transactions in which a grantor acquires goods or services to be used or consumed in a grantor's own operations by issuing share-based payment awards. The Company applied the new guidance to share-based payments entered into after October 1, 2019, and the adoption of this standard did not have a material impact on the Company's financial statements.

In August 2018, the FASB issued ASU No. 2018 13, Fair Value Measurement (Topic 820): Disclosure Framework—Changes to the Disclosure Requirements for Fair Value Measurement ("ASU 2018-13"), which removes and modifies some existing disclosure requirements and adds others. ASU 2018-13 modifies the disclosure requirements for fair value measurements and removes the requirement to disclose (1) the amount of and reasons for transfers between Level 1 and Level 2 of the fair value hierarchy, (2) the policy for timing of transfers between levels, and (3) the valuation processes for Level 3 fair value measurements. ASU 2018-13 requires disclosure of changes in unrealized gains and losses for the period included in other comprehensive income (loss) for recurring Level 3 fair value measurements. The ASU is effective for all entities for fiscal years beginning after December 15, 2019, including interim periods therein. Early adoption is permitted for any eliminated or modified disclosures upon issuance of this ASU. The Company is currently evaluating the impact of the adoption of this standard.

4. Fair Value Measurements

The following table presents the Company's assets and liabilities that are measured at fair value on a recurring basis:

	September	September 30, 2020		
	(Level 1) (Level	2) (Level 3)		
Liabilities				
Warrant liability	<u>\$ </u>	\$ 70,772		
	September	30, 2019		
	(Level 1) (Level	2) (Level 3)		
Liabilities				
Warrant liability	<u>\$\$</u>	\$ 255,734		

The table presented below is a summary of changes in the fair value of the Company's Level 3 valuation for the warrant liability and redemption feature for the years ended September 30, 2020 and 2019:

	Warrants	Redemption Feature
Balance at October 1, 2019	\$ 255,734	\$
Addition of feature on December 20, 2019		8,264,451
Change in fair value	(184,962)	(1,796,982)
Write off due to extinguishment of senior secured notes	—	(6,467,469)
Balance at September 30, 2020	\$ 70,772	\$

The warrants issued in connection with the convertible senior secured notes (see Note 9) are classified as liabilities on the accompanying consolidated balance sheets as the warrants include cash settlement features at the option of the holders under certain circumstances. The warrant liability is revalued each reporting period with the change in fair value recorded in the accompanying consolidated statements of operations until the warrants are exercised or expire. The fair value of the warrant liability is estimated using the Black-Scholes option pricing model using the following assumptions:

	September 30,				
		2020		2019	
Risk-free interest rate	0.2	24 %		1.56 %	
Remaining contractual life of warrant	4.3	38 years		5.38 years	
Expected volatility	94	.7 %		89.0 %	
Annual dividend yield		0 %		0 %	
Fair value of common stock	\$ 0.7	72 per share	\$	1.49 per share	

The fair value of the redemption feature was estimated by using a Monte Carlo simulation model and a with-and-without perspective, where the fair value of debt instrument was measured with the derivative and without the derivative and the difference is the implied fair value of the redemption feature. The value of the debt instrument with the redemption feature depended on the daily stock price path followed by the Company's common stock price. This model simulated daily common stock prices from the issuance date through the maturity date for the debt instrument. At issuance, the Company utilized a volatility estimate of 130% based upon the observed historical volatility of both the Company and peer group for 1-year and 2-year periods. Risk-free interest rate was based upon US treasury yields.

5. Property and Equipment

Property and equipment, net, consists of:

	September 30,				
	 2020	_	2019		
Laboratory equipment	\$ 1,067,351	\$	1,067,351		
Leasehold improvements	—		160,086		
Land and building	—		3,000,000		
	 1,067,351		4,227,437		
Less: accumulated depreciation and amortization	(740,102)		(1,051,477)		
	\$ 327,249	\$	3,175,960		

Depreciation and amortization expense for the years ended September 30, 2020 and 2019 was \$219,416 and \$3,361,873, respectively.

On October 1, 2019, the Company adopted ASC 842, which resulted in the reclassification of property and equipment under capital leases to finance lease right-of-use assets separately disclosed on the consolidated balance sheets. Refer to Note 10 for the Company's lease disclosures.

At September 30, 2019, the Company's corporate office was classified as a capital lease and had a gross carrying amount of \$3,000,000 and accumulated amortization of \$475,000.

Impairment Charge

During the year ended September 30, 2020, the Company recorded an impairment charge of \$527,624 primarily due to the write-off of assets held for sale after the Company determined that the carrying amount of these assets was not recoverable as result of a lease termination agreement entered into in May 2020. Refer to Note 10 for further details.

In the fourth quarter of fiscal year 2019, as a result of management's decision to outsource the commercial manufacturing and remaining development for the Company's ONS-5010 program, the Company decided to vacate and sublease the Company's manufacturing and corporate offices and sell or transfer excess laboratory and related computer equipment no longer required for the development of the Company's ONS-5010 program. These events qualified as indicators of impairment in accordance with ASC 360, *Property, Plant and Equipment* ("ASC 360") and required an impairment analysis. As a result of the analysis, management determined that the Company's long-lived assets with a carrying amount of \$13,032,320 were no longer recoverable and were impaired and wrote the assets down to their estimated fair value of \$3,676,008. The estimated fair value for the Company's land and building and leasehold improvement assets was based on discounted expected future cash flows using Level 3 inputs under ASC 820, *Fair Value Measurements* ("ASC 820"). The estimated fair value for the Company's laboratory and related computer equipment was based on offers the Company received from unrelated third parties to purchase the assets which is classified as a Level 3 measurement under ASC 820's fair value hierarchy. Management determined that \$500,000 of laboratory equipment met the definition of "held for sale"

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under ASC 360 as it was probable that a sale of the laboratory equipment could be completed within one year as of September 30, 2019.

The Company recorded an impairment charge totaling \$11,270,110 for the year ended September 30, 2019 in the consolidated statements of operations associated with the above items.

6. Other Assets

Other assets consist of:

	Septe	mber 30,	,
	 2020		2019
Advance to PRC joint venture (see Note 14)	\$ 900,000	\$	
Other assets	394,448		457,476
	\$ 1,294,448	\$	457,476

In June 2020, the Company issued 16,000,000 shares of common stock to Syntone Ventures LLC, or Syntone, a U.S. affiliate of Syntone Technologies Group Co. Ltd., a People's Republic of China, or PRC, entity, its strategic partner for ONS-5010 in China, pursuant to a stock purchase agreement entered in May 2020, at a purchase price of \$1.00 per share, receiving aggregate gross proceeds of \$16.0 million (see Note 11).

7. Accrued Expenses

Accrued expenses consists of:

	September 30,			
	 2020		2019	
Compensation	\$ 579,618	\$	919,394	
Severance and related costs	9,521		505,570	
Research and development	2,890,333		1,692,040	
Interest payable	3,691		934,145	
Professional fees	132,085		419,216	
Lease termination obligation	3,971,111		_	
Other accrued expenses	170,951		152,623	
	\$ 7,757,310	\$	4,622,988	

8. Stockholder Notes

	 September 30,				
	2020		2019		
Restricted stock repurchase notes	\$ 800,000	\$	800,000		
Common stock repurchase note	2,812,500		2,812,500		
	3,612,500		3,612,500		
Less: current portion	(3,612,500)		(3,612,500)		
	\$ _	\$	_		

The Company previously repurchased shares of its restricted stock in exchange for notes totaling \$800,000 that bore interest at rates ranging from 0% to 4% per annum and were due on demand. These notes were paid in full in November 2020.

The Company had a \$2,812,500 note payable related to the previous repurchase of common stock that did not bear interest and was due on demand. This note was paid in full in November 2020.

The Company also borrowed from stockholders for working capital purposes and had two unsecured stockholder notes having an original aggregate principal amount of \$1,000,000 and which bore interest from 0% to 30% per annum. These notes were purchased in March 2019 by Iliad Research and Trading, L.P., a Utah limited partnership, (the "Lender") from the former stockholders, and subsequently converted to common stock and are no longer outstanding. Refer to Note 9 for the details on the purchase agreement.

During the year ended September 30, 2019, the Company recognized interest expense related to the stockholder notes of \$105,357.

9. Debt

Senior secured notes

	Septe	mber 3	30,
	2020		2019
Convertible senior secured notes	\$ —	\$	6,699,000
		_	

In November 2018, the Company reached an agreement with the holders of its \$13.5 million senior secured notes to extend the maturity of the senior secured notes until December 22, 2019, in exchange for making several payments of principal and interest during 2019, as well as subject to meeting additional capital raising commitments that the Company met in April 2019 through the completed public offering. In addition, the Company agreed to make the senior secured notes convertible into common stock at a price of \$8.9539 per share and reduced the exercise price of warrants to purchase 485,245 shares of common stock held by the senior secured noteholders from \$24.00 per share to \$12.00 per share. The increase in the fair value of the warrants of \$1.5 million due to the modification was recorded as additional debt discount and amortized over the remaining term of the senior secured notes using the effective interest rate method. The total amortization of the debt discount for the years ended September 30, 2020 and 2019 was \$235,636 and \$1,314,321, respectively.

During the year ended September 30, 2019, convertible senior secured notes with a carrying amount of \$400,575 and accrued interest of \$1,393 were converted into 50,394 shares of the Company's common stock. During the year ended September 30, 2019, the Company repaid a total of \$6.4 million of principal and \$1.3 million of accrued interest on such notes.

In June 2019, the Company entered into a Third Note Amendment (the "Third Amendment") with the holders of the remaining \$6.7 million outstanding aggregate principal amount of senior secured notes. Under the Third Amendment, the maturity date of the convertible senior secured notes was amended to December 22, 2019 and eliminated the scheduled payments of certain principal and interest payments on or prior to December 22, 2019. The Company also agreed to increase the interest rate payable on such convertible senior secured notes to 12.0% per annum from 5.0% per annum. The Third Amendment was accounted for as an extinguishment of debt. Loss on extinguishment of convertible senior secured notes recognized during the year ended September 30, 2019 was \$423,686.

In December 2019, the Company entered into an exchange agreement with the holders of its \$7,254,077 outstanding aggregate principal amount and accrued interest of senior secured notes (the "Old Senior Notes") originally issued pursuant to the certain Note and Warrant Purchase Agreement dated December 22, 2017, as amended on April 13, 2017, November 5, 2018, and June 28, 2019 (the "Exchange Agreement"). Pursuant to the Exchange Agreement, the holders of the Old Senior Notes exchanged the entire outstanding principal and accrued interest for new senior secured notes having an aggregate outstanding original principal amount of \$7,589,027 which included an aggregate exchange fee of \$334,950.

The new senior secured notes were substantially similar to the Old Senior Notes, as amended through the date of the Exchange Agreement, bore interest at a rate of 12.0% per annum and would have matured December 31, 2020 (subject to extension to June 30, 2021 at the Company's option upon payment of an extension fee equal to 3% of the outstanding balance and being in compliance with applicable Nasdaq listing requirements). The new senior secured notes were convertible, at the option of the holder, beginning April 1, 2020, into shares of the Company's common stock at a conversion price equal to 90% of the two lowest closing bid prices in the 20 trading days immediately preceding such conversion, subject to a floor price of \$0.232 per share. The conversion feature was determined to be a redemption feature and was bifurcated from the debt instrument. The estimated fair value of the redemption feature was \$8,264,451 at issuance (see Note 4). The Exchange Agreement was accounted for as an extinguishment of debt. The Company recognized a loss on extinguishment of convertible senior secured notes for the Exchange Agreement of \$8,060,580, which amount was equal to the excess fair value of the notes and bifurcated redemption feature over the notes' net carrying value.

During the year ended September 30, 2020, the holder of the new senior secured notes converted the entire outstanding principal and accrued interest totaling \$7,994,494 for 12,201,461 shares of the Company's common stock at an average conversion price of \$0.66 per share. As of September 30, 2020, there are no longer any new senior secured notes outstanding. The Company recognized a \$6,164,284 gain on extinguishment of the new senior secured notes exchanged for shares of common stock during the year ended September 30, 2020 primarily due to the redemption feature liability and write-off of unamortized debt discount.

Aggregate interest expense on the Old Senior Notes and the new senior secured notes for the years ended September 30, 2020 and 2019 was \$819,498 and \$1,892,155, respectively.

Other indebtedness

The Company has other outstanding debt consisting of unsecured notes, a PPP term loan and equipment loans. Refer to Note 8 for additional information on unsecured notes (working capital notes).

September 30,				
	2020		2019	
\$		\$	977,966	
	904,200		_	
	50,285		98,487	
_	954,485	_	1,076,453	
	(50,285)		(1,026,168)	
\$	904,200	\$	50,285	
	\$	2020 \$	2020 \$ \$ 904,200 50,285 954,485 (50,285)	

Unsecured notes

On March 7, 2019, the Company entered into a forbearance and exchange agreement with the Lender. Concurrently with the execution of this agreement, the Lender purchased two stockholder notes issued by the Company previously in the original principal amount of \$1,000,000 with an aggregate outstanding balance as of March 7, 2019 of \$1,947,133, including accrued interest. The stockholder notes were accruing interest at the rate of 2.5% per month. The Lender agreed to refrain and forbear from bringing any action to collect under the stockholder notes until March 7, 2020 and to reduce the interest rates currently in effect to 12.0% per annum simple interest during such forbearance period. The Company also agreed to, at Lender's election, repay or exchange the stockholder notes (or portions thereof) for shares of the Company's common stock at an exchange rate of \$13.44 per share or, beginning September 2019, at 95% of the average of the two lowest closing bid prices in the prior twenty trading days, as applicable.

During the year ended September 30, 2020, the remaining unsecured notes with an aggregate carrying amount of \$977,966 and accrued interest of \$570,460 were exchanged for 1,475,258 shares of the Company's common stock at an average exchange price of \$1.05. As of September 30, 2020, these unsecured notes were no longer outstanding.

Paycheck Protection Program term loan

On May 4, 2020, the Company received \$904,200 in proceeds from a loan granted pursuant to the PPP of the CARES Act. The PPP term loan is evidenced by a promissory note containing the terms and conditions for repayment of the PPP term loan. The PPP term loan provides for an initial sixmonth deferral of payments and any amount owed on the loan has a two-year maturity (May 2022), with an interest rate of 1% per annum. Commencing October 15, 2021, the Company is required to pay the lender equal monthly payments of principal and interest as required to fully amortize any principal amount outstanding on the PPP term loan as of October 15, 2021 by May 2, 2022. The Company has the right to prepay any amounts outstanding under this loan at any time and from time to time, in whole or in part, without penalty.

Equipment loans

The equipment loans bear interest at rates ranging from 12% to 16% with the original term of the loans ranging from one to five years. Minimum monthly payments of principal and interest under the equipment loans are collateralized by the related equipment purchased and an unconditional personal guarantee by the founding stockholder and former chief executive officer.

Interest expense on other indebtedness for the years ended September 30, 2020 and 2019 was \$25,628 and \$83,963, respectively.

Future maturities of other indebtedness at September 30, 2020 are as follows for the years ending September 30:

2021	\$ 50,	,285
2022	904,	,200
	\$ 954,	,485

10. Commitments and Contingencies

Selexis Commercial License Agreements

In April 2013, the Company entered into commercial license agreements with Selexis for each of the ONS-3010, ONS-1045 and ONS-1050 biosimilar product candidates (which agreements were subsequently amended on May 21, 2014). Under the terms of each commercial license agreement, the Company acquired a non-exclusive worldwide license under the Selexis Technology to use the applicable Selexis expression technology along with the resulting Selexis materials/cell lines, each developed under the research license, to manufacture and commercialize licensed and final products, with a limited right to sublicense.

The Company paid an upfront licensing fee to Selexis for each commercial license and also agreed to pay a fixed milestone payment for each licensed product. In addition, the Company is required to pay a low single-digit royalty on a final product-by-final product and country-by-country basis, based on worldwide net sales of such final products by the Company or any of the Company's affiliates or sublicensees during the royalty term. The royalty term for each final product in each country is the period commencing from the first commercial sale of the applicable final product in the applicable country and ending on the expiration of the specified patent coverage. At any time during the term, the Company has the right to terminate its royalty payment obligation by providing written notice to Selexis and paying Selexis a royalty termination fee.

Each of the Company's commercial agreements with Selexis will expire upon the expiration of all applicable Selexis patent rights. Either party may terminate the related agreement in the event of an uncured material breach by the other party or in the event the other party becomes subject to specified bankruptcy, winding up or similar circumstances. Either party may also terminate the related agreement under designated circumstances if the Selexis Technology infringes third-

party intellectual property rights. In addition, the Company has the right to terminate each of the commercial agreements at any time at its convenience; however, with respect to the agreements relating to ONS-3010 and ONS-1045, this right is subject to the licensee's consent pursuant to a corresponding letter the Company executed in conjunction with the standby agreement entered into between Selexis and Laboratories Liomont, S.A. de C.V. ("Liomont") in November 2014.

The standby agreement permits Liomont to assume the license under the applicable commercial agreement for Mexico upon specified triggering events involving the Company's bankruptcy, insolvency or similar circumstances.

Technology license

The Company entered into a technology license agreement with Selexis that will require milestone payments of \$381,174 (based on an exchange rate on September 30, 2020 for converting Swiss Francs to U.S. dollars) to the licensor by the Company upon achievement of certain clinical milestones and pay a single digit royalty on net sales by the Company utilizing such technology. The Company also has the contractual right to buy out the royalty payments at a future date.

Litigation

On July 20, 2020, Liomont, filed a complaint against the Company in the U.S. District Court of the Southern District of New York alleging certain breach of contract claims under the June 25, 2014 strategic development, license and supply agreement relating to the biosimilar development program for ONS-3010 and ONS-1045. According to the complaint, Liomont is claiming \$3,000,000 in damages due. The Company disputes the claims in the Liomont complaint, believes they are without merit, and intends to defend against these claims vigorously.

Leases

Prior to October 1, 2019, the Company accounted for leases under ASC 840, *Accounting for Leases*. Effective October 1, 2019, the Company adopted the guidance of ASC 842, *Leases*, which requires an entity to recognize a right-of-use asset and a lease liability for virtually all leases. The implementation of ASC 842 did not have a material impact on the Company's consolidated financial statements and did not have a significant impact on the Company's liquidity. The Company adopted ASC 842 using a modified retrospective approach. As a result, the comparative financial information for fiscal year 2019 has not been updated and the required disclosures prior to the date of adoption have not been updated and continue to be reported under the accounting standards in effect for that period.

Corporate office and warehouse leases

On May 6, 2020, the Company terminated its lease agreement for approximately 66,000 square feet of office, manufacturing and laboratory space located in Cranbury, New Jersey, which previously served as its headquarters, and relocated its corporate office to Monmouth Junction, New Jersey, a site previously used as a warehouse location. In consideration for the termination of the Cranbury lease, the Company agreed to make payments to the landlord totaling \$981,987, payable in eight monthly installments commencing May 1, 2020. The Company's Monmouth Junction, New Jersey lease matures in September 2021.

In connection with the lease termination, the Company recorded a liability of \$981,987 at May 11, 2020, the cease-use date, that represents the undiscounted future termination payments as the termination period is less than a year. The Company derecognized the assets and liabilities associated with the financing lease and recorded a charge of \$680,017 to general and administrative expense.

At September 30, 2020, the lease termination obligation of \$356,987 is included in accounts payable on the consolidated balance sheets. A rollforward of the charges incurred to general and administrative expense for the year ended September 30, 2020:

	Balance October 1, 20)19	Ex	cpensed / Accrued Expense	 Cash Payments	A	Non-cash djustments	s	Balance September 30, 2020
Lease termination payments	\$	—	\$	981,987	\$ (625,000)	\$	_	\$	356,987
Assets and liabilities derecognition		—		(842,514)			842,514		_
Other charges		—		540,544	(540,544)		_		
	\$	_	\$	680,017	\$ (1,165,544)	\$	842,514	\$	356,987

Office and laboratory lease termination obligation

In August 2018, the Company entered into a lease termination agreement effective September 1, 2018, to terminate the lease for office and laboratory space in Cranbury, New Jersey which was due to expire in March 2026. In consideration for the termination of the lease, the Company agreed to make payments to the landlord totaling up to \$5.8 million, which includes (i) \$287,615 upon execution of the termination agreement, (ii) \$50,000 per month for up to 30 months, commencing September 1, 2018, and (iii) a \$4.0 million payment, in any event, on or before February 1, 2021. The Company and landlord agreed that the \$174,250 security deposit will be used to pay the 7th, 8th, 9th and a portion of the 10th monthly payments. The Company may pay the final \$4.0 million payment at any time, whereupon the Company's obligation to make the remaining monthly payments terminates.

In connection with the lease termination, the Company recorded a \$4.2 million liability at September 1, 2018, the cease-use date that represents the present value of the future termination payments. The Company derecognized the assets and liabilities associated with the financing lease and recorded a lease termination charge of \$4.2 million to general and administrative expense for the year ended September 30, 2018. At September 30, 2020, the lease termination obligation is included in accrued expenses and in other liabilities at September 30, 2019 on the consolidated balance sheets. A rollforward of the charges incurred to general and administrative expense for the years ended September 30, 2020 and 2019 is as follows:

Lease termination payments	Balance October 1, 2019 \$ 3,909,448	Expensed / Accrued Expense \$ 661,663	Cash Payments \$ (600,000)	Balance September 30, 2020 \$ 3,971,111
	Balance October 1, 2018	Expensed / Accrued Expense	Cash Payments	Balance September 30, 2019
Lease termination payments	\$ 3,850,081	\$ 485,117	\$ (425,750)	\$ 3,909,448

Equipment leases

The Company has equipment leases with terms between 12 and 36 months and has recorded those leases as finance leases. The equipment leases bear interest between 4.0% and 13.0%.

Certain lease agreements contain provisions for future rent increases. Payments due under the lease contracts include minimum payments that the Company is obligated to make under the non-cancelable initial terms of the leases as the renewal terms are at the Company's option. Lease expense is recorded as research and development or general and administrative based on the use of the leased asset

The components of lease cost for the year ended September 30, 2020 are as follows:

	Year ended September 30, 2020
Finance lease cost:	
Amortization of right-of-use assets	\$ 182,967
Interest on lease liabilities	905,027
Total finance lease cost	1,087,994
Operating lease cost	174,500
Total lease cost	\$ 1,262,494

Rent expense under operating leases was \$1,139,714 for the year ended September 30, 2019.

Amounts reported in the consolidated balance sheets for leases where the Company is the lessee as of September 30, 2020 are as follows: September 30, 2020

	Septem	September 50, 2020	
Operating leases:			
Right-of-use asset	\$	166,986	
Operating lease liabilities		187,486	
Finance leases:			
Right-of-use asset	\$	_	
Financing lease liabilities		72,260	
Weighted-average remaining lease term (years):			
Operating leases		1.0	
Finance leases		2.4	
Weighted-average discount rate:			
Operating leases		9.0%	
Finance leases		8.5%	

Other information related to leases for the year ended September 30, 2020 are as follows:

	 2020
Cash paid for amounts included in the measurement of lease obligations:	
Operating cash flows from finance leases	\$ 905,027
Operating cash flows from operating leases	187,500
Financing cash flows from finance leases	215,074
Right-of-use assets obtained in exchange for lease obligations:	
Operating leases	\$
Finance leases	_

Year ended September 30,

Future minimum payments under noncancelable operating leases at September 30, 2020 are as follows for the years ending September 30:

	Operating leases		Finance leases	
2021	\$	195,000	\$	34,869
2022		—		29,605
2023		_		13,149
2024		—		4,383
Total undiscounted lease payments	\$	195,000	\$	82,006
Less: Imputed interest		7,514		9,746
Total lease obligations	\$	187,486	\$	72,260

Employee Benefit Plan

The Company maintains a defined contribution 401(k) plan in which employees may contribute up to 100% of their salary and bonus, subject to statutory maximum contribution amounts. The Company matches 100% of the first 3% of employee contributions. The Company assumes all administrative costs of the Plan. For the years ended September 30, 2020 and 2019, the expense relating to the matching contribution was \$48,315 and \$125,828, respectively.

11. Stockholders' Equity (Deficit)

Common stock

In February 2020, the Company issued, in a registered direct offering, an aggregate of 7,598,426 shares of common stock and, in a concurrent private placement to the same investors, warrants to purchase up to an aggregate of 3,799,213 shares of common stock at a combined purchase price per share and accompanying warrant of \$1.016, for approximately \$7.7 million in gross proceeds. In the separate concurrent private placement, the Company issued 2,460,630 shares of common stock and warrants to purchase up to an aggregate of 1,230,315 shares of common stock to GMS Ventures and Investments, an affiliate of BioLexis Pte. Ltd. ("BioLexis"), the Company's significant stockholder and strategic partner, at a combined purchase price per share and accompanying warrant of \$1.016 for \$2.5 million in gross proceeds. The warrants issued are exercisable immediately at an exercise price of \$0.9535 per share and will expire four years from the issuance date.

In connection with the registered direct offering and concurrent private placement of warrants to those investors, the Company issued placement agent warrants to purchase up to an aggregate of 531,890 shares of common stock, on substantially the same terms as the concurrent private placement warrants, at an exercise price of \$1.27 per share and a 5-year term.

Effective March 19, 2020, following approval of the Company's stockholders, the Company issued an aggregate of 7,244,739 shares of its common stock to the four principals (who include two of its named executive officers, Messrs. Dagnon and Evanson) of MTTR, LLC ("MTTR") pursuant to their respective consulting agreements that were entered into on January 27, 2020 and concurrent with the termination agreement and mutual release with MTTR to terminate the strategic partnership agreement. Refer to Note 13 for the accounting of the restricted stock issued and Note 15 for further details on the terminated MTTR strategic partnership agreement.

In June 2020, the Company issued, in a private placement, an aggregate of 16,000,000 shares of common stock to Syntone, pursuant to a stock purchase agreement entered into on May 22, 2020, at a purchase price of \$1.00 per share, for aggregate gross proceeds to the Company of \$16.0 million (see Note 6).

In June 2020, the Company issued, in a registered direct offering, an aggregate of 8,407,411 shares of common stock at a purchase price of \$1.215 per share, for aggregate gross proceeds to the Company of approximately \$10.2 million. In

connection with the registered direct offering, the Company issued placement agent warrants to purchase up to an aggregate of 588,519 shares of common stock, at an exercise price of \$1.51875 per share and a 5-year term.

On July 16, 2020, the Company received \$1.0 million in gross proceeds in connection with a securities purchase agreement entered into on June 22, 2020 with Syntone, in a private placement pursuant to which the Company issued and sold 823,045 shares of its common stock at a purchase price of \$1.215 per share.

During the year ended September 30, 2019, the Company issued an aggregate of 2,680,390 shares of the Company's common stock for gross cash proceeds of \$20.0 million (\$19.8 million net of issuance costs) pursuant to the November 5, 2018 BioLexis private placement agreement.

In April 2019, the Company issued an aggregate of 10,340,000 shares of its common stock, 15-month warrants to purchase up to an aggregate of 10,340,000 shares of common stock and five-year warrants to purchase up to an aggregate of 10,340,000 shares of common stock for \$26.2 million in net proceeds after payment of fees, expenses and underwriting discounts and commissions. The shares of common stock and the warrants were immediately separable and were issued separately. The warrants were exercisable immediately at an exercise price of \$2.90 per share.

During the years ended September 30, 2020 and 2019, the Company issued 109 and 4,069 shares of common stock, respectively, upon the vesting of RSUs.

Each share of common stock entitles the holder to one vote on all matters submitted to a vote of the Company's stockholders. Subject to preferences that may apply to any outstanding preferred stock, holders of common stock are entitled to receive ratably any dividends that the Company's board of directors may declare out of funds legally available for that purpose on a non-cumulative basis. No dividends had been declared through September 30, 2020.

Common stock warrants

As of September 30, 2020, the Company had the following warrants outstanding to acquire shares of its common stock:

Expiration Date		Shares of common stock issuable upon exercise of warrants	ercise Price Per Share
February 18, 2022		416,666	\$ 12.00
December 22, 2024	(i)	277,128	\$ 12.00
April 13, 2025	(i)	145,686	\$ 12.00
May 31, 2025	(i)	62,437	\$ 12.00
February 24, 2025		531,890	\$ 1.27
February 26, 2024		5,029,528	\$ 0.9535
June 22, 2025		588,519	\$ 1.5188
		7,051,854	

(i) The warrants were issued in connection with the convertible senior secured notes (see Note 9) and are classified as liabilities on the accompanying consolidated balance sheets as the warrants include cash settlement features at the option of the holders under certain circumstances. Refer to Note 4 for fair value measurements disclosures.

On December 23, 2019, the Company amended the terms of its then outstanding 15-month warrants and five-year warrants issued April 12, 2019 (the "April 2019 Warrants"), which originally had an exercise price of \$2.90 per share of the Company's common stock. The exercise price of all outstanding April 2019 Warrants was reduced to \$0.2320 per share and the exercise period was amended such that all April 2019 Warrants expired on December 24, 2019. Immediately prior

to expiration, all then unexercised April 2019 Warrants were automatically net exercised pursuant to the amended provisions.

On January 27, 2020, the Company amended the exercise price of its outstanding warrants to purchase an aggregate 4,657,852 shares of its common, all of which were held by BioLexis, to \$0.232 per share. BioLexis exercised all such warrants for cash payment of approximately \$1.1 million on January 29, 2020.

The estimated change in fair value of warrants amended during the year ended September 30, 2020 was \$3,140,009, and reflected as a deemed dividend in the consolidated statements of operations for purposes of presenting net loss attributable to common stockholders when calculating basic and diluted loss per share.

During the year ended September 30, 2020, warrants to purchase an aggregate of 15,085,240 shares of common stock with a weighted averaged exercise price of \$0.232 were exercised (including the warrants exercised by BioLexis on December 26, 2019) for an aggregate 13,003,414 shares of the Company's common stock; and warrants to purchase an aggregate of 80,797 shares of common stock with a weighted averaged exercise price of \$0.08 expired. In aggregate, 10,157,050 of the exercised warrants were April 2019 Warrants, described above, exercised pursuant to the net exercise provisions therein, as amended.

During the year ended September 30, 2019, warrants to purchase an aggregate of 10,273,558 shares of common stock with a weighted averaged exercise price of \$2.90 were exercised (including the warrants exercised by BioLexis on July 9, 2019) resulting in the issuance of an aggregate 6,134,763 shares of the Company's common stock. Of these exercised warrants, 10,270,250 of them were 15-month warrants issued in the Company's April 2019 public offering that were exercised pursuant to the net exercise provisions therein.

12. Convertible Preferred Stock

Series A-1 Convertible Preferred Stock

A total of 200,000 shares of Series A-1 have been authorized for issuance under the Certificate of Designation of Series A-1 Convertible Preferred Stock of the Company. The shares of Series A-1 have a stated value of \$100.00 per share and rank senior to all junior securities (as defined in the Certificate of Designation).

The Series A-1 accrue dividends at a rate of 10% per annum, compounded quarterly, payable quarterly at the Company's option in cash or in kind in additional shares of Series A-1. The Series A-1 is also entitled to dividends on an as-if-converted basis in the same form as any dividends actually paid on shares of Common Stock or other securities. The initial conversion rate is subject to appropriate adjustment in the event of a stock split, stock dividend, combination, reclassification or other recapitalization affecting the Common Stock. The holders of the Series A-1 have the right to vote on matters submitted to a vote of the Company's stockholders on an as-converted basis, voting with the Company's other stockholders as a single class. In addition, without the prior written consent of a majority of the outstanding shares of Series A-1, the Company may not take certain actions, including amending its certificate of incorporation or bylaws, or issuing securities ranking pari passu or senior to the Series A-1.

On March 23, 2020, the Company issued 29,358,621 shares of its common stock upon conversion of the 68,112 shares of Series A-1 outstanding by BioLexis, pursuant to an agreement entered on January 27, 2020 with BioLexis, whereby the effective conversion rate of the Series A-1 was increased from the \$18.89797 per share to \$431.03447263 per share, (or an effective conversion rate of \$0.232 per share) following stockholder approval of the amended terms on March 19, 2020.

The amendment to the Series A-1 was deemed an extinguishment for accounting purposes. The excess fair value of common stock received over the net carrying value of the Series A-1 was \$10,328,118 and reflected as a deemed dividend in the consolidated statements of operations for purposes of presenting net loss attributable to common stockholders when calculating basic and diluted loss per share.

During the years ended September 30, 2020 and 2019, the Company issued an additional 1,661 and 6,248 shares, respectively, of Series A-1 to settle the related dividends that were due on a quarterly basis. The Company recognized a beneficial conversion charge of \$61,365 during the year ended September 30, 2019 which represents the in-the-money value of the conversion rate as of the date of issuance.

At September 30, 2020, there were no shares of Series A-1 outstanding.

13. Stock-Based Compensation

2011 Equity Incentive Plan

The Company's 2011 Equity Compensation Plan (the "2011 Plan") provided for the Company to sell or issue restricted common stock, RSUs, performance-based awards ("PSUs"), cash-based awards or to grant stock options for the purchase of common stock to officers, employees, consultants and directors of the Company. The 2011 Plan was administered by the board of directors or, at the discretion of the board of directors, by a committee of the board. The number of shares of common stock reserved for issuance under the 2011 Plan is 106,490. As of September 30, 2020, PSUs representing 2,470 shares of the Company's common stock were outstanding under the 2011 Plan. In light of the December 2015 adoption of the 2015 Equity Incentive Plan, (the "2015 Plan") no future awards under the 2011 Plan will be granted.

2015 Equity Incentive Plan

In December 2015, the Company adopted the 2015 Plan. The 2015 Plan provides for the grant of stock options, stock appreciation rights, restricted stock awards, RSU awards, performance stock awards and other forms of equity compensation to Company employees, directors and consultants. The aggregate number of shares of common stock authorized for issuance pursuant to the Company's 2015 Plan is 24,022,526. As of September 30, 2020, 20,090,731 shares remained available for grant under the 2015 Plan.

Stock options and RSUs granted under the Company's 2015 Plan generally vest over a period of one to four years from the date of grant and, in the case of stock options, have a term of 10 years. The Company recognizes the grant date fair value of each option and share of RSU over its vesting period.

		Year ended September 30,	
	2020	2019	
Research and development	\$ 1,241,945	\$ 37,053	
General and administrative	1,565,484	1,276,282	
	\$ 2,807,429	\$ 1,313,335	

Stock options

The following table summarizes all of the Company's stock option activity for the years ended September 30, 2019 and 2020:

	Number of Shares	Weighted Average Exercise Price	Weighted Average Remaining Contractual Term (Years)	Aggregate Intrinsic Value
Balance at October 1, 2018	182,120	\$ 7.22		
Granted	1,449,498	3.80		
Expired	(19,077)	7.86		
Forfeited	(222,542)	8.34		
Balance at September 30, 2019	1,389,999	3.46		
Granted	2,641,621	1.33		
Forfeited	(269,477)	2.78		
Balance at September 30, 2020	3,762,143	2.01	9.3	\$ 85,814
Vested and exercisable	964,754	2.64	8.9	\$ 85,814
Vested and expected to vest at September 30, 2020	3,762,143	\$ 2.01	9.3	

The aggregate intrinsic value represents the total amount by which the fair value of the common stock subject to options exceeds the exercise price of the related options.

The Company estimated the fair value of each stock option award on the grant date using the Black-Scholes option pricing model, wherein expected volatility is based on historical volatility of the publicly traded common stock of a peer group of companies. The expected term calculation is based on the "simplified" method described in Staff Accounting Bulletin ("SAB") No. 107, *Share-Based Payment*, and SAB No. 110, *Share-Based Payment*, since the simplified method provides a reasonable estimate in comparison to actual experience. For options granted to non-employees, the Company uses the remaining contractual life. The risk-free interest rate is based on the U.S. Treasury yield at the date of grant for an instrument with a maturity that is commensurate with the expected term of the stock options. The dividend yield is zero since the Company has never paid cash dividends on its common stock and has no present intention to pay cash dividends. Options granted under the 2015 Plan generally vest over one to four years and have a term of 10 years.

The weighted average grant date fair value of the options awarded to employees for the years ended September 30, 2020 and 2019 was \$0.96 and \$2.86 per option, respectively. The fair value of the options was estimated on the date of grant using a Black-Scholes option pricing model with the following weighted-average assumptions:

	Year ended Sep	Year ended September 30,		
	2020	2019		
Risk-free interest rate	0.66 %	2.02 %		
Expected life (years)	5.72	6.14		
Expected volatility	90.5 %	92.7 %		
Expected dividend yield	_	—		

As of September 30, 2020, there was \$3,216,405 of unrecognized compensation expense that is expected to be recognized over a weighted-average period of 2.3 years.

Performance-based stock units

The Company has issued PSUs, which generally have a ten -year life from the date of grant. Upon exercise, the PSU holder receives common stock or cash at the Company's discretion.



The following table summarizes the activity related to PSUs during the years ended September 30, 2020 and 2019:

	Number of PSUs	Base Price Per PSU	Weighted Average Remaining Contractual Term (Years)
Balance at October 1, 2018	16,131	\$ 49.99	
Forfeitures	(440)	50.60	
Balance at September 30, 2019	15,691	49.97	
Forfeitures	(13,221)	49.97	
Balance at September 30, 2020	2,470	49.97	4.0
Vested and exercisable at September 30, 2020	2,470	49.97	4.0
Vested and expected to vest at September 30, 2020	2,470	\$ 49.97	4.0

Restricted stock units

The Company has granted RSUs that generally vest over a period of two to four years from the date of grant. The following table summarizes the activity related to RSUs during the years ended September 30, 2020 and 2019:

	Number of RSUs	Weighted Average Grant Date Fair Value
Balance at September 30, 2018	7,638	\$ 153.88
Vested and settled	(4,069)	227.57
Forfeitures	(3,460)	69.06
Balance at September 30, 2019	109	96.00
Vested and settled	(109)	96.00
Balance at September 30, 2020		\$

Restricted stock

In connection with the consulting agreements entered into by the Company and four principals of MTTR, LLC, the Company issued an aggregate of 7,244,739 shares of its common stock. Refer to Note 15 for further details on the consulting agreements and terminated strategic partnership agreement. The shares may not be sold until the earlier of (i) six months following FDA approval of ONS-5010, (ii) the date the Company publicly announces not to pursue development of ONS-5010, (iii) a change in control or (iv) January 2025. In addition, the Company has the right to repurchase the shares for \$0.01 per share if the consultant terminates his agreement other than for good reason or the Company terminates the agreement for cause. The repurchase right lapses, in tiered percentages, based upon the completion of enrollment of the Company's NORSE TWO clinical trial of ONS-5010 by certain dates. The Company achieved full enrollment for NORSE TWO in June 2020. The repurchase right may also lapse as to 50% or 100% of the shares if the Company enters into certain agreements pertaining to ONS-5010 that meet certain value thresholds or the Company's share price meets certain predefined targets. The repurchase right also lapses as to 100% of the shares upon the earliest to occur of (i) filing of the biologics license application for ONS-5010, (ii) termination of the agreement by the consultant for good reason or by the Company other than for cause, (iii) in the event of disability, or (iv) upon a change in control.

The grant date fair value of the restricted shares was \$0.54 per share and equal to the closing stock price of the Company's common stock at the time of grant. Compensation expense is recognized over the shorter of the explicit service period or derived service period which was determined to be 4.8 years at the time of grant. Compensation expense may be accelerated when certain performance conditions become probable and the corresponding purchase right has lapsed.

During the year ended September 30, 2020, the Company recognized compensation expense related to the restricted stock of \$1,301,152. As of September 30, 2020, there was \$2,611,007 of unrecognized compensation expense related to the restricted stock.

14. Collaboration Arrangements

During fourth quarter of fiscal year 2019, the Company substantially completed its efforts to outsource the commercial manufacturing and remaining development for the ONS-5010 program, resulting in the termination of the majority of manufacturing and development personnel and initiation of efforts to sell or transfer excess manufacturing, laboratory and related computer equipment no longer required for the development of ONS-5010 program. As a result, the Company no longer has the internal capability to support its inactive development programs for ONS-3010 (biosimilar for Humira) and ONS-1045 (biosimilar for Avastin) and does not intend to complete the development of these assets in the United States and other developed markets. All future development for the biosimilar programs, if any, will be completed by the Company's existing, or potential future, partners without further assistance from the Company. As a result, the Company recognized all remaining deferred revenues as of September 30, 2019 for each of its collaboration agreements.

Huahai Agreement

In May 2013, the Company entered into strategic license and collaboration arrangement with Zhejiang Huahai Pharmaceutical Co., Ltd ("Huahai") under which the Company granted Huahai and its affiliates an exclusive license for the research, development, manufacture, use or sale of ONS-3010 or ONS-1045 in China, including, the People's Republic of China, Hong Kong, Macau and Taiwan. In addition, the Company granted Huahai a right and license under the Selexis Technology agreement to establish a production process for the products in the agreed territory pursuant to the relevant terms and conditions of the Company's commercial license agreement with Selexis.

Under the terms of the arrangement, the Company has received \$7,500,000 in upfront payments and milestones and received \$8,500,000 in substantive milestones. The Company determined that the deliverables under the Huahai arrangement were the exclusive license and the research and development services to be completed by the Company. Since the license did not have a standalone value, the upfront milestones payments received had been deferred and were being recognized ratably on a straight line basis through December 2021, the expected date in which the research and development would be completed prior to the Company's decision in the fourth quarter of fiscal 2019 to stop developing its biosimilar assets as described fully above.

During year ended September 30, 2019, the Company recognized \$4,828,584 of deferred revenues.

IPCA License and Collaboration Agreement

In August 2013, the Company entered into a strategic license agreement with IPCA Laboratories Limited and its affiliates ("IPCA") under which the Company granted IPCA a license for the research, development, manufacture, use or sale of the ONS-3010 and, by amendment in May 2014, the ONS-1045 biosimilar product candidates with respect to India, Sri-Lanka, and Myanmar, and non-exclusive with respect to Nepal and Bhutan, or collectively, the agreed territory. In addition, the Company granted IPCA a right and license under the Selexis Technology to enable IPCA to establish an exclusive production process for the products in its agreed territory and to exclusively market the products in the agreed territory. The Company also agreed not to amend or terminate its rights under its commercial license agreement with Selexis without IPCA's prior written consent.

Pursuant to the agreement, the Company agreed to continue the non-clinical and clinical development of each of ONS-3010 and ONS-1045 and corresponding products around the world and to develop and commercialize such products through Phase 3 clinical trials and regulatory approval in the United States and European Union. These obligations continue until termination of the agreement or the individual development programs or upon final regulatory approval of the last product

for such biosimilars in the United States or European Union. The Company agreed to provide IPCA with a pre-IND package as submitted to EMEA and FDA, as well as perform preclinical development and characterization of ONS-3010 and ONS-1045 so as to enable IPCA to file an IND to conduct clinical trials and to perform clinical trials.

Under the terms of the agreement, in prior years the Company received upfront and milestone payments of \$2,400,000 and received \$1,000,000 in regulatory milestone payments. In addition, the Company is eligible to receive royalties at a low double-digit percentage rate of annual net sales of products by IPCA and its affiliates in the agreed territory. For each of ONS-3010 and ONS-1045, IPCA agreed to fund a portion of the global costs associated with the Phase 3 clinical trials.

The Company determined that the deliverables under the IPCA arrangement were the exclusive license and the research and development services to be completed by the Company. Since the license did not have standalone value, the upfront and milestones payments received had been deferred and were being recognized ratably on a straight line basis through December 2021 the expected date in which the research and development would be completed prior to the Company's decision in the fourth quarter of fiscal 2019 to stop developing its biosimilar assets as described fully above.

As of September 30, 2019, the Company has received an aggregate of \$5.0 million of payments from IPCA under its various agreements. During the year ended September 30, 2019, the Company recognized deferred revenues of \$1,664,085.

Liomont Agreement

In June 2014, the Company entered into a strategic license agreement with Liomont, under which the Company granted Liomont and its affiliates an exclusive, sublicenseable license in Mexico for the research, development, manufacture, use or sale of the ONS-3010 and ONS-1045 biosimilar product candidates in Mexico. In addition, the Company granted Liomont a non-exclusive right and license under the Selexis Technology and related intellectual property to enable Liomont to distribute, market and commercialize the products in Mexico. The Company also agreed not to amend or terminate its rights under the commercial agreement with Selexis without Liomont's prior written consent.

Under the terms of the agreement, in prior years the Company received upfront payments and milestone payments of \$2,000,000 and received \$1,000,000 in regulatory milestone payments. In addition, the Company is eligible to receive up to \$2,000,000 in future substantive milestone payments. For each of ONS-3010 and ONS-1045, Liomont agreed to fund a portion of the global costs for Phase 3 clinical trials.

The Company is eligible to receive tiered royalties at upper single digit to low double-digit percentage rates of annual net sales of products by Liomont and its affiliates in Mexico.

The Company determined that the deliverables under the Liomont arrangement were the exclusive license and the research and development services to be completed by the Company. Since the license did not have standalone value, the upfront payments received had been deferred and were being recognized ratably on a straight-line basis through December 2021, the expected date in which the research and development would be completed prior to the Company's decision in the fourth quarter of the year ended September 30, 2019 to stop developing its biosimilar assets as described fully above.

As of September 30, 2019, the Company has received an aggregate of \$3.0 million of upfront and milestone payments from Liomont. During the year ended September 30, 2019, the Company recognized deferred revenue of \$1,097,412.

BioLexis Agreement

In July 2017, the Company entered into a strategic licensing agreement with BioLexis, under which it granted BioLexis and its affiliates a perpetual, irrevocable, exclusive sublicensable license in the agreed territory for the research, development, manufacture, use or sale of the ONS-1045 biosimilar product candidate in the agreed territory. The agreed territory includes all emerging markets, but specifically excludes major developed markets, such as the United States,

Canada, Europe, Japan, Australia and New Zealand, and smaller markets where the Company has existing licensing arrangements, such as Mexico, greater China and India. In prior years, the Company received an initial upfront payment from BioLexis of \$1.25 million, and an additional \$1.25 million upon meeting a notice and acknowledgment milestone.

In September 2017 the Company and BioLexis superseded and replaced the strategic license agreement with a Joint Development and License Agreement (the "JDLA") providing for the development and commercialization of the Company's ONS-3010 and ONS-1045 biosimilar product candidates in the same geographic territories. In exchange for granting BioLexis a perpetual, irrevocable, exclusive, sublicensable license in the agreed territory for the research, development, manufacture, use or sale of the ONS-3010 and ONS-1045 biosimilar product candidates in the agreed territory, BioLexis made an additional payment of \$2.5 million in connection with the JDLA. The Company may receive up to an additional \$2.5 million milestone payments under the JDLA for each licensed product upon achievement of certain net profit thresholds. The parties agreed to share net profits based on sales of licensed products in the agreed territory, in proportions weighed in BioLexis's favor, subject to adjustment as provided in the agreed network.

During the years ended September 30, 2019, the Company recognized revenue of \$556,042 under the BioLexis agreements.

Syntone Strategic Partnership and PRC Joint Venture

In connection with a stock purchase agreement entered in May 2020 between the Company and Syntone, the Company and Syntone entered into a joint venture agreement pursuant to which they agreed to form a PRC joint venture that will be 80% owned by Syntone and 20% owned by the Company. Once formed, the Company intends to enter into a royalty-free license with the PRC joint venture for the development, commercialization and manufacture of the Company's product candidate, ONS-5010 in the greater China market, which includes Hong Kong, Taiwan and Macau.

The Company made the initial investment of \$900,000 in June 2020. The Company expects to be required to make an additional capital contribution to the PRC joint venture of approximately \$2.1 million, which will be made within four years after the establishment date in accordance with the development plan contemplated in the license agreement or on such other terms within such four-year period. As of September 30, 2020, the joint venture had not been formed.

15. Related-Party Transactions

MTTR - Strategic Partnership Agreement (ONS-5010)

In February 2018, the Company entered into a strategic partnership agreement with MTTR to advise on regulatory, clinical and commercial strategy and assist in obtaining approval of ONS-5010, the Company's bevacizumab therapeutic product candidate for ophthalmic indications.

In November 2018, the board of directors of the Company appointed Mr. Terry Dagnon as Chief Operating Officer, and Mr. Jeff Evanson as Chief Commercial Officer. Both Mr. Dagnon and Mr. Evanson initially provided services to the Company pursuant to the February 2018 strategic partnership agreement with MTTR, as amended. Mr. Dagnon and Mr. Evanson were both principals in MTTR. The Company did not pay Mr. Dagnon or Mr. Evanson any direct compensation as consultants or as employees during the year ended September 30, 2019 nor during the period from October 1, 2019 through March 19, 2020. Both Mr. Dagnon and Mr. Evanson were compensated directly by MTTR for services provided to the Company as the Company's Chief Operating Officer and Chief Commercial Officer, respectively, pursuant to the strategic partnership agreement until such agreement, as amended, was terminated effective March 19, 2020. The Company began compensating Mr. Dagnon and Mr. Evanson directly as consultants effective March 19, 2020 following agreements with the Company, which became effective March 19, 2020 following stockholder approval of the share issuances contemplated therein. Mr. Dagnon and Mr. Evanson have also agreed to provide consulting services to an affiliate of BioLexis pursuant to a separate arrangement.

On January 27, 2020, the Company entered into a termination agreement and mutual release with MTTR to terminate the strategic partnership agreement. Pursuant to the agreement, the Company agreed (x) to issue to the four principals of MTTR (who include two of its named executive officers, Messrs. Dagnon and Evanson), an aggregate of 7,244,739 shares of its common stock, subject to stockholder approval, (y) to enter into consulting agreements with each of the four principals setting forth the terms of his respective compensation arrangement, and (z) to pay MTTR a one-time settlement fee of \$110,000, upon effectiveness of the agreement.

Concurrently, the Company also entered into consulting agreements directly with each of the four principals of MTTR setting forth the terms of his respective compensation arrangement, as well as providing for certain transfer restrictions and repurchase rights applicable to the shares of common stock to be issued pursuant hereto. The termination agreement, and the consulting agreements, became effective upon stockholder approval of the share issuance on March 19, 2020. Refer to Note 13 for the accounting of the restricted stock issued and compensation expense recognized.

MTTR and its four principals under the strategic partnership agreement and the subsequent individual consulting agreements earned an aggregate \$1,294,089 and \$1,744,933 during the years ended September 30, 2020 and 2019, respectively, which includes monthly consulting fees and expense reimbursement, but excludes stock-based compensation related to restricted stock (Note 13). As of September 30, 2020, an aggregate \$89,762 was due to the former MTTR principals as consultants, which is included in accounts payable in the accompanying consolidated balance sheets. As of September 30, 2019, \$365,301 was due to MTTR which is included in accrued expenses in the accompanying consolidated balance sheet.

For other related party transactions during the years ended September 30, 2020 and 2019, refer to the Stockholder Notes (Note 8), Debt (Note 9) and the BioLexis Agreement (Note 14).

16. Income Taxes

Income tax benefit for the years ended September 30, 2020 and 2019 consists of the following:

Year ended September 30,		
 2020		2019
\$ (3,269,157)	\$	(3,413,806)
(2,805)		2,805
\$ (3,271,962)	\$	(3,411,001)
\$ \$	2020 \$ (3,269,157) (2,805)	2020 \$ (3,269,157) \$ (2,805) \$

During the years ended September 30, 2020 and 2019, the Company sold New Jersey State net operating losses ("NOLs") in the amount of \$33,335,492 and \$31,168,800, and unused research and development tax credits in the amount of \$555,410 and \$944,045, resulting in the recognition of income tax benefits of \$3,271,157 and \$3,415,806, respectively, recorded in the Company's statement of operations.

A reconciliation of income tax expense (benefit) at the statutory federal income tax rate and income taxes as reflected in the financial statements is as follows:

	Year ended September 30, 2020 2019	
U.S. federal statutory rate	(21.0)%	(21.0)%
State taxes, net of federal benefit	(6.6)	(6.6)
Sale of New Jersey net operating losses	(6.7)	(7.1)
Net operating loss	6.2	6.1
Deferred true-up	26.8	
Permanent differences	(0.3)	(0.2)
Research and development credit	3.3	0.8
Change in valuation allowance	(10.0)	18.6
Other	(0.2)	0.4
Effective income tax rate	(8.5)%	(9.0)%

The tax effects of the temporary differences that gave rise to deferred taxes were as follows:

	 September 30,		
	 2020		2019
Deferred tax assets			
Net operating loss carryforwards	\$ 54,836,227	\$	47,664,187
Stock-based compensation	795,216		10,583,524
Lease liability	52,702		
Research and development credit carryforward	6,892,133		8,180,511
Foreign tax credits	2,357,309		2,357,309
Accruals and others	307,745		410,390
Gross deferred tax assets	 65,241,332		69,195,921
Less: valuation allowance	(65,102,402)		(68,967,686)
	 138,930		228,235
Deferred tax liability:			
Property and equipment	(91,990)		(228,235)
Right-of-use Assets	(46,940)		
Net deferred tax assets	\$ _	\$	

As of September 30, 2020, the Company has approximately \$236.5 million and \$72.3 million of U.S. federal and New Jersey NOLs that will begin to expire in 2030 and 2039, respectively. As of September 30, 2020, the Company has federal and state research and development tax credit carryforwards of \$6.6 million and \$0.3 million, respectively, available to reduce future tax liabilities which will begin to expire in 2032 and 2033, respectively. As of September 30, 2020, the Company has federal foreign tax credit ("FTC") carryforwards of \$2.4 million available to reduce future tax liabilities which will begin to expire starting in 2023, of which \$1.9 million of the FTC carryforward is included in the balance of unrecognized tax benefits. Realization of the deferred tax asset is contingent on future taxable income and based upon the level of historical losses, management has concluded that the deferred tax asset does not meet the more-likely-than-not threshold for realizability. Accordingly, a full valuation allowance continues to be recorded against the Company's deferred tax assets as of September 30, 2020 and 2019. The valuation allowance decreased \$3.9 million during the year ended September 30, 2020 and increased \$7.1 million during the year ended September 30, 2019.

When uncertain tax positions exist, the Company recognizes the tax benefit of tax positions to the extent that the benefit will more likely-than-not be realized. The determination as to whether the tax benefit will more-likely-than-not be realized is based upon the technical merits of the tax position as well as consideration of the available facts and circumstances. The

Company recognizes interest and penalties accrued on any unrecognized tax benefits within the provision for income taxes in its consolidated statements of operations.

In December 2017, the Tax Cuts and Jobs Act of 2017 (the "Act") was signed into law making significant changes to the Internal Revenue Code. These changes include a federal statutory rate reduction from 34% to 21% effective for tax years beginning after December 31, 2017, the elimination or reduction of certain domestic deductions and credits and limitations on the deductibility of interest expense and executive compensation. For the fiscal years ended September 30, 2020 and 2019, the federal tax rate is 21.0%. The Act also transitions international taxation from a worldwide system to a modified territorial system and includes base erosion prevention measures on non-U.S. earnings, which has the effect of subjecting certain earnings of the Company's foreign subsidiaries to U.S. taxation as global intangible low-taxed income.

A reconciliation of the beginning and ending amount of unrecognized tax benefits is as follows:

	Year ended	Year ended September 30,	
	2020		2019
Balance at beginning of year	\$ 1,859,434	\$	1,856,129
Changes based on tax positions related to the current year	(2,805)		3,305
Balance at end of year	\$ 1,856,629	\$	1,859,434

The Company does not anticipate material change in the unrecognized tax benefits in the next 12 months. These unrecognized tax benefits, if recognized, would affect the annual effective tax rate. The Company's income tax returns for the years from 2011 through 2019 remain open for examination by the Internal Revenue Service as well as various states and municipalities.

Due to the change in ownership provisions of the Internal Revenue Code, the availability of the Company's NOL carryforwards may be subject to annual limitations against taxable income in future periods, which could substantially limit the eventual utilization of such carryforwards. The Company has not analyzed the historical or potential impact of its equity financings on beneficial ownership and therefore no determination has been made whether the net operating loss carry forward is subject to any Internal Revenue Code Section 382 limitation. To the extent there is a limitation, there would be a reduction in the deferred tax assets with an offsetting reduction in the valuation allowance.

Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure

None.

Item 9A. Controls and Procedures

Evaluation of Disclosure Controls and Procedures

Our management, with the participation of our Chief Executive Officer and Chief Financial Officer, have evaluated our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended, or the Exchange Act) prior to the filing of this Annual Report on Form 10-K. Based on that evaluation, our Chief Executive Officer and Chief Financial Officer concluded that, as of the end of the period covered by this Annual Report on Form 10-K, our disclosure controls and procedures were, in design and operation, effective as of September 30, 2020.

Internal Control over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting, as such term is defined in Rule 13a-15(f) of the Exchange Act. Our internal control system is designed to provide reasonable assurance regarding the preparation and fair presentation of financial statements for external purposes in accordance with generally accepted account principles. All internal control systems, no matter how well designed, have inherent limitations and can provide only reasonable assurance that the objectives of the internal control system are met.

Under the supervision and with the participation of our management, including our Chief Executive Officer and Chief Financial Officer, we conducted an evaluation of the effectiveness of our internal control over financial reporting, based on criteria established by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) in its 2013 Internal Control-Integrated Framework. Based on our evaluation, we concluded that our internal control over financial reporting was effective as of September 30, 2020.

As an emerging growth company, as defined under the Terms of the JOBS Act of 2012, and as a smaller reporting company, our independent registered accounting firm is not required to issue an attestation report on our internal control over financial reporting.

Changes in Internal Control over Financial Reporting

There were no changes in our internal control over financial reporting during the quarter ended September 30, 2020 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Inherent Limitation on the Effectiveness of Internal Control.

The effectiveness of any system of internal control over financial reporting, including ours, is subject to inherent limitations, including the exercise of judgment in designing, implementing, operating, and evaluating the controls and procedures, and the inability to eliminate misconduct completely. Accordingly, any system of internal control over financial reporting, including ours, no matter how well designed and operated, can only provide reasonable, not absolute assurances. In addition, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate. We intend to continue to monitor and upgrade our internal controls as necessary or appropriate for our business but cannot assure you that such improvements will be sufficient to provide us with effective internal control over financial reporting.

Item 9B. Other Information

Not applicable.

PART III

Certain information required by Part III is omitted from this Report on Form 10-K because we intend to file our definitive Proxy Statement for our next Annual Meeting of the Stockholders, pursuant to Regulation 14A of the Securities Exchange Act of 1934, as amended, or the 2021 Proxy Statement, no later than January 28, 2021, and certain information to be included in the 2021 Proxy Statement is incorporated herein by reference.

Item 10. Directors, Executive Officers and Corporate Governance

The information required by this item is to be included in our 2021 Proxy Statement as follows:

- The information relating to our directors and nominees for director is to be included in the section entitled "Election of Directors";
- The information relating to our executive officers is to be included in the section entitled "Executive Officers";
- The information regarding compliance with Section 16(a) of the Exchange Act is to be included in the section entitled "Delinquent Section 16(a) Reports";
- The information regarding family relationships is to be included in the section entitled "Election of Directors Family Relationships";
- The information relating to our Code of Ethics is to be included in the section entitled "Information Regarding the Board of Directors and Corporate Governance Code of Ethics"; and
- The information relating to our audit committee and audit committee financial expert is to be included in the section entitled "Information Regarding the Board of Directors and Corporate Governance Audit Committee".

Item 11. Executive Compensation

The information required by this item is to be included in our 2021 Proxy Statement under the section entitled "Executive Compensation" and is incorporated herein by reference, provided that if the 2021 Proxy Statement is not filed within 120 days after the end of the fiscal year covered by this Annual Report on Form 10-K, the omitted information will be included in an amendment to this Annual Report on Form 10-K filed not later than the end of such 120-day period.

Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters

The information required with respect to equity compensation plans is to be included in our 2021 Proxy Statement under the section entitled "Equity Compensation Plan Information" and the information required by this item with respect to security ownership of certain beneficial owners and management is to be included in our 2021 Proxy Statement under the section entitled "Security Ownership of Certain Beneficial Owners and Management" and is incorporated herein by reference, provided that if the 2021 Proxy Statement is not filed within 120 days after the end of the fiscal year covered by this Annual Report on Form 10-K, the omitted information will be included in an amendment to this Annual Report on Form 10-K filed not later than the end of such 120-day period.

Item 13. Certain Relationships and Related Transactions, and Director Independence

The information required by this item is to be included in our 2021 Proxy Statement under the sections entitled "Transactions with Related Persons" and "Information Regarding the Board of Directors and Corporate Governance – Independence of the Board of Directors" and is incorporated herein by reference, provided that if the 2021 Proxy Statement is not filed within 120 days after the end of the fiscal year covered by this Annual Report on Form 10-K, the omitted information will be included in an amendment to this Annual Report on Form 10-K filed not later than the end of such 120-day period.

Item 14. Principal Accounting Fees and Services

The information required by this item is to be included in our 2021 Proxy Statement under the section entitled "Ratification of Selection of Independent Registered Public Accounting Firm" and is incorporated herein by reference, provided that if the 2021 Proxy Statement is not filed within 120 days after the end of the fiscal year covered by this Annual Report on Form 10-K, the omitted information will be included in an amendment to this Annual Report on Form 10-K filed not later than the end of such 120-day period.

PART IV

Item 15. Exhibits and Financial Statement Schedules

(a) (1) The financial statements required by Item 15(a) are filed in Item 8 of this Annual Report on Form 10-K.

(2) The financial statement schedules required by Item 15(a) are omitted because they are not applicable, not required or the required information is included in the financial statements or notes thereto as filed in Item 8 of this Annual Report on Form 10-K.

EXHIBITS

Exhibit Number 3.1	Description Amended and Restated Certificate of Incorporation (incorporated by reference to Exhibit 3.1 to the Registrant's current report on Form 8-K filed with the SEC on May 19, 2016).
3.2	<u>Certificate of Amendment to the Amended and Restated Certificate of Incorporation (incorporated by reference to Exhibit 3.1</u> to the Registrant's current report on Form 8-K filed with the SEC on December 6, 2018).
3.3	Certificate of Amendment to the Amended and Restated Certificate of Incorporation (incorporated by reference to Exhibit 3.1 to the Registrant's current report on Form 8-K filed with the SEC on March 18, 2019).
3.4	Amended and Restated Bylaws (incorporated by reference to Exhibit 3.2 to the Registrant's current report on Form 8-K filed with the SEC on May 19, 2016).
3.5	Amendment to the Amended and Restated Bylaws (incorporated by reference to Exhibit 3.1 to the Registrant's current report on Form 8-K filed with the SEC on November 29, 2016).
4.1	Description of Registrant's securities.
10.1#	2011 Stock Incentive Plan (incorporated by reference to Exhibit 10.2 to the Registrant's registration statement on Form S-1 (File No. 333-209011) filed with the SEC on January 15, 2016).
10.2#	Form of Amended and Restated Performance Stock Unit Agreement for 2011 Stock Incentive Plan (incorporated by reference to Exhibit 10.29 to the Registrant's registration statement on Form S-1 (File No. 333-209011) filed with the SEC on April 27, 2016).
10.3#	2015 Equity Incentive Plan, as amended and restated (incorporated by reference to Exhibit 99.1 to the Registrant's current report on Form 8-K filed with the SEC on September 18, 2020).
10.4#	Forms of agreements and award grant notices for 2015 Equity Incentive Plan (incorporated by reference to Exhibit 10.4 to the Registrant's registration statement on Form S-1 (File No. 333-209011) filed with the SEC on January 15, 2016).
10.5#	2016 Employee Stock Purchase Plan (incorporated by reference to Exhibit 10.5 to the Registrant's registration statement on Form S-1 (File No. 333-209011) filed with the SEC on February 12, 2016).
10.6#	Form of Indemnity Agreement, by and between the Registrant and each of its directors and executive officers (incorporated by reference to Exhibit 10.12 to the Registrant's registration statement on Form S-1 (File No. 333-209011) filed with the SEC on January 15, 2016).

10.7#	Executive Employment Agreement between the Registrant and Lawrence A. Kenyon, dated October 22, 2018 (incorporated by reference to Exhibit 10.1 to the Registrant's current report on Form 8-K filed with the SEC on October 26, 2018).
10.8#¥	Consulting Agreement between the Company and The Dagnon Group LLC (Dagnon), dated as of January 27, 2020 (incorporated by reference to Exhibit 10.4 to the Registrant's current report on Form 8-K filed with the SEC on January 31, 2020).
10.9#¥	Consulting Agreement between the Company and Scott Three Consulting, LLC (Evanson), dated as of January 27, 2020 (incorporated by reference to Exhibit 10.5 to the Registrant's current report on Form 8-K filed with the SEC on January 31, 2020).
10.10†	ONS-3010 Commercial License Agreement by and between the Registrant and Selexis SA effective as of April 11, 2013, as amended effective as of May 21, 2014 (incorporated by reference to Exhibit 10.14 to the Registrant's registration statement on Form S-1 (File No. 333-209011) filed with the SEC on January 15, 2016).
10.10†	ONS-1045 Commercial License Agreement by and between the Registrant and Selexis SA effective as of April 11, 2013, as amended effective as of May 21, 2014 (incorporated by reference to Exhibit 10.15 to the Registrant's registration statement on Form S-1 (File No. 333-209011) filed with the SEC on January 15, 2016).
10.11†	ONS-1050 Commercial License Agreement by and between the Registrant and Selexis SA effective as of April 11, 2013, as amended effective as of May 21, 2014 (incorporated by reference to Exhibit 10.16 to the Registrant's registration statement on Form S-1 (File No. 333-209011) filed with the SEC on January 15, 2016).
10.12	Warrant Agreement by and between the Registrant and American Stock Transfer & Trust Company LLC, as Warrant Agent dated May 18, 2016 (incorporated by reference to Exhibit 10.4 to the Registrant's Quarterly Report on Form 10-Q filed with the SEC on June 27, 2016).
10.13	Amendment to the Warrant Agreement dated May 18, 2016 by the Registrant and American Stock Transfer & Trust Company LLC, as Warrant Agent, dated February 6, 2017 (incorporated by reference to Exhibit 10.1 to the Registrant's current report on Form 8-K filed with the SEC on February 6, 2017).
10.14	Amendment #2 to the Warrant Agreement dated May 18, 2016 by and between the Registrant and American Stock Transfer & Trust Company LLC, as Warrant Agent, dated February 9, 2018 (incorporated by reference to Exhibit 10.1 to the Registrant's current report on Form 8-K filed with the SEC on February 9, 2018).
10.15	Amendment #3 to the Warrant Agreement dated May 18, 2016 by and between the Registrant and American Stock Transfer & Trust Company LLC, as Warrant Agent, dated January 22, 2019 (incorporated by reference to Exhibit 10.1 to the Registrant's current report on Form 8-K filed with the SEC on January 22, 2019).
10.16	Form of Series A warrant certificate (included in Exhibit 10.13).
10.17	Form of Warrant to Purchase Common Stock of the Registrant (incorporated by reference to Exhibit B to the Note and Warrant Purchase Agreement filed as Exhibit 10.1 to the Registrant's current report on Form 8-K filed with the SEC on December 23, 2016).
10.18	Investor Rights Agreement by and between the Registrant and BioLexis Pte. Ltd. (formerly GMS Tenshi Holdings Pte. Limited), dated September 11, 2017 (incorporated by reference to Exhibit 10.3 to the Registrant's current report on Form 8-K filed with the SEC on September 11, 2017).
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10.19	Amendment to Investor Rights Agreement by and between the Registrant and BioLexis Pte. Ltd. (formerly GMS Tenshi Holdings Pte. Limited), dated May 11, 2018 (incorporated by reference to Exhibit 10.2 to the Registrant's current report on Form 8-K filed with the SEC on May 15, 2018).
10.20	Second Amendment to Investor Rights Agreement by and between the Registrant, and BioLexis Pte. Ltd. (formerly GMS Tenshi Holdings Pte. Limited), dated July 18, 2018 (incorporated by reference to Exhibit 10.2 to the Registrant's current report on Form 8-K filed with the SEC on July 19, 2018).
10.21	Third Amendment to Investor Rights Agreement by and between the Registrant and BioLexis Pte. Ltd. (formerly GMS Tenshi Holdings Pte. Limited), dated November 5, 2018 (incorporated by reference to Exhibit 10.2 to the Registrant's current report on Form 8-K filed with the SEC on November 9, 2018).
10.22	Fourth Amendment to Investor Rights Agreement dated September 11, 2017 by and between the Registrant and BioLexis Pte. Ltd. (formerly GMS Tenshi Holdings Pte. Limited) by and between the Registrant, BioLexis Pte. Ltd. and GMS Ventures and Investments dated February 24, 2020 (incorporated by reference to Exhibit 10.4 to the Registrant's current report on Form 8-K filed with the SEC on February 24, 2020).
10.23	Form of Securities Purchase Agreement, dated February 24, 2020, by and among the Company and the purchasers named therein (incorporated by reference to Exhibit 10.1 to the Registrant's current report on Form 8-K filed with the SEC on February 24, 2020).
10.24	Form of Common Stock Purchase Warrant (incorporated by reference to Exhibit 4.1 to the Registrant's current report on Form 8-K filed with the SEC on February 24, 2020).
10.25	Securities Purchase Agreement by and between the Company and GMS Ventures and Investments dated February 24, 2020 (incorporated by reference to Exhibit 10.2 to the Registrant's current report on Form 8-K filed with the SEC on February 24, 2020).
10.26	Form of GMS Stock Purchase Warrant (incorporated by reference to Exhibit 4.2 to the Registrant's current report on Form 8-K filed with the SEC on February 24, 2020).
10.27	Form of Placement Agent Warrant (incorporated by reference to Exhibit 4.3 to the Registrant's current report on Form 8-K filed with the SEC on February 24, 2020).
10.28	Stock Purchase Agreement dated May 22, 2020, by and between the Registrant and Syntone Ventures LLC (incorporated by reference to Exhibit 10.1 to the Registrant's current report on Form 8-K filed with the SEC on May 28, 2020).
10.29	Form of Securities Purchase Agreement dated June 22, 2020, by and among the Registrant and the purchasers named therein (incorporated by reference to Exhibt 10.1 to the Registrant's current report on Form 8-K filed with the SEC June 23, 2020).
10.30	Securities Purchase Agreement dated June 22, 2020 by and between the Registrant and Syntone Ventures LLC (incorporated by reference to Exhibit 10.2 to the Registrant's current report on Form 8-K filed with the SEC June 23, 2020).
10.31	Engagement Letter dated June 2, 2020 by and between the Registrant and H.C. Wainwright & Co., LLC (incorporated by reference to Exhibit 10.3 to the Registrant's current report on Form 8-K filed with the SEC June 23, 2020).
10.32	Form of Placement Agent Warrant (incorporated by reference to Exhibit 4.1 to the Registrant's current report on Form 8-K filed with the SEC June 23, 2020).

10.33	Lease Termination Agreement dated May 6, 2020 between the Registrant and Cedar Brooke Corporate Center, LP (incorporated by reference to Exhibit 10.6 to the Registrant's quarterly report on Form 10-Q filed with the SEC August 14, 2020).
10.34	Note Purchase Agreement dated November 4, 2020, between the Registrant and Streeterville Capital, LLC (incorporated by reference to Exhibit 10.1 to the Registrant's current report on Form 8-K filed with the SEC November 6, 2020).
10.35	Promissory Noted dated November 4, 2020 between the Registrant and Streeterville Capital, LLC (incorporated by reference to Exhibit 10.2 to the Registrant's current report on Form 8-K filed with the SEC November 6, 2020).
23.1	Consent of independent registered public accounting firm.
31.1	Certification of Principal Executive Officer and Principal Financial Officer pursuant to Rules 13a-14(a) and 15d-14(a) promulgated under the Securities Exchange Act of 1934, as amended.
32.1*	Certification of Principal Executive Officer and Principal Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
101.INS	XBRL Instance Document
101.SCH	XBRL Taxonomy Extension Schema Document
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document
101.DEF	XBRL Definition Linkbase Document
101.LAB	XBRL Taxonomy Extension Labels Linkbase Document
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document

Indicates management contract or compensatory plan.

Item 16. Form 10-K Summary

None.

Confidential treatment has been granted for certain information contained in this document pursuant to an order of the SEC. Such information t

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⁽indicated by asterisks) has been omitted and been filed separately with the SEC. Certain portions of this exhibit (indicated by "[***]") have been omitted because they are not material. Furnished herewith and not deemed to be "filed" for purposes of Section 18 of the Securities Exchange Act of 1934, as amended, and shall not be deemed to be incorporated by reference into any filing under the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

 Date: December 23, 2020
 By:
 /s/ Lawrence A. Kenyon

 Name:
 Image: A. Kenyon

 Title:
 President, Chief Executive Officer and Chief Financial Officer

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, this Annual Report on Form 10-K has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

Executive Chairman	December 23, 2020
sident, Chief Executive Officer, Chief Financial Officer, Treasurer, Secretary and Director Principal Executive, Financial and Accounting Officer)	December 23, 2020
Director	December 23, 2020
	sident, Chief Executive Officer, Chief Financial Officer, Treasurer, Secretary and Director Principal Executive, Financial and Accounting Officer) Director Director Director Director Director

Description of Registrant's Securities

The following is a description of the capital stock of Outlook Therapeutics, Inc. (the "Company," "we," "our," or "us"). The following summary description is based on the provisions of our Amended and Restated Certificate of Incorporation, as amended (the "Certificate of Incorporation"), our Amended and Restated Bylaws, (the "Bylaws"), and the applicable provisions of the Delaware General Corporation Law (the "DGCL"). This information may not be complete in all respects and is qualified entirely by reference to the provisions of our Certificate of Incorporation, our Bylaws and the DGCL. Our Certificate of Incorporation and our Bylaws are filed as exhibits to our Annual Report on Form 10-K to which this description is filed as Exhibit 4.1.

General

Our authorized capital stock consists of 200,000,000 shares of common stock, par value \$0.01 per share (the "Common Stock"), and 10,000,000 shares of preferred stock, par value \$0.01 per share (the "Preferred Stock").

Common Stock

Voting Rights

Each holder of common stock is entitled to one vote for each share on all matters submitted to a vote of the stockholders. The affirmative vote of holders of 662/3% of the voting power of all of the then-outstanding shares of capital stock, voting as a single class, will be required to amend certain provisions of our Certificate of Incorporation, including provisions relating to amending our Bylaws, the classified board, the size of our board, removal of directors, director liability, vacancies on our board, special meetings, stockholder notices, actions by written consent and exclusive jurisdiction.

Dividends

Subject to preferences that may apply to any outstanding preferred stock, holders of our common stock are entitled to receive ratably any dividends that our board of directors may declare out of funds legally available for that purpose on a non-cumulative basis.

Liquidation

In the event of our liquidation, dissolution or winding up, holders of our common stock are entitled to share ratably in all assets remaining after payment of liabilities and the liquidation preference of any outstanding preferred stock.

Rights and Preferences

Holders of our common stock have no preemptive, conversion, subscription or other rights, and there are no redemption or sinking fund provisions applicable to our common stock. The rights, preferences and privileges of the holders of our common stock are subject to and may be adversely affected by the rights of the holders of shares of any series of our preferred stock that we may designate in the future.

Preferred Stock

Our board of directors has the authority, without further action by our stockholders, to issue up to 10,000,000 shares of preferred stock in one or more series and to fix the number, rights, preferences, privileges and restrictions thereof. These rights, preferences and privileges could include dividend rights, conversion rights, voting rights, terms of redemption, liquidation preferences and sinking fund terms, and the number of shares constituting any series or the designation of such series, any or all of which may be greater than the rights of common stock. The issuance of our preferred stock could adversely affect the voting power of holders of common stock and the likelihood that such holders will receive dividend payments upon liquidation. In addition, the issuance of preferred stock could have the effect of delaying, deferring or preventing a change in control or other corporate action. Our Board of

Directors has previously designated 1,000,000 shares as "Series A Convertible Preferred Stock," 200,000 shares as "Series A-1 Convertible Preferred Stock," and 1,500,000 shares as "Series B Convertible Preferred Stock." As of September 30, 2020, we did not have any shares of preferred stock issued and outstanding.

Stockholder Registration Rights

Certain holders of our securities, including certain holders of 5% of our capital stock who are affiliated with certain of our directors, are entitled to certain rights with respect to registration of such securities under the Securities Act of 1933, as amended. These securities are referred to as registrable securities. The holders of these registrable securities possess registration rights pursuant to the terms of registration rights agreements. In general, the registration of shares of our common stock pursuant to the exercise of registration rights enables the holders to trade such shares without restriction under the Securities Act when the applicable registration statement is declared effective. We generally have agreed to pay the registration expenses for such registration statements, other than underwriting discounts, selling commissions and stock transfer taxes, of the shares registered. Generally, in an underwritten offering, the managing underwriter, if any, has the right, subject to specified conditions, to limit the number of shares the holders may include. We must use commercially reasonable efforts to keep the registration statement effective until the earlier of the date on which all registrable securities covered by such registration statement have been sold, or at such time that the holders of the registrable securities can sell their shares under Rule 144 of the Securities Act during any three-month period.

Anti-Takeover Provisions of Delaware Law and Our Charter Documents

Section 203 of the DGCL

We are subject to Section 203 of the DCGL, 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 (1) by persons who are directors and also officers and (2) 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; and
- 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 662/3% 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;

- the receipt by the interested stockholder of the benefit of any loans, advances, guarantees, pledges or other financial benefits by or through the corporation; and
- 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.

The statute could prohibit or delay mergers or other takeover or change in control attempts and, accordingly, may discourage attempts to acquire us even though such a transaction may offer our stockholders the opportunity to sell their stock at a price above the prevailing market price.

Amended and Restated Certificate of Incorporation and Amended and Restated Bylaws, as Amended

Among other things, our Certificate of Incorporation and Bylaws:

- permit our board of directors to issue up to 10,000,000 shares of preferred stock, with any rights, preferences and privileges as they may
 designate, including the right to approve an acquisition or other change in control;
- provide that the authorized number of directors may be changed only by resolution of our board of directors;
- provide that our board of directors is classified into three classes of directors;
- provide that, subject to the rights of any series of preferred stock to elect directors, directors may only be removed for cause, which removal may be effected, subject to any limitation imposed by law, by the holders of at least a majority of the voting power of all of our then-outstanding shares of the capital stock entitled to vote generally at an election of directors;
- provide that all vacancies, including newly created directorships, may, except as otherwise required by law, be filled by the affirmative vote of a majority of directors then in office, even if less than a quorum;
- require that any action to be taken by our stockholders must be effected at a duly called annual or special meeting of stockholders and not be taken by written consent or electronic transmission;
- 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 advance notice in writing, and also specify requirements as to the form and content of a stockholder's notice;
- provide that special meetings of our stockholders may be called only by the chairman of our board of directors, our chief executive
 officer or president or by our board of directors pursuant to a resolution adopted by a majority of the total number of authorized
 directors; and
- not provide for cumulative voting rights, therefore allowing the holders of a majority of the shares of common stock entitled to vote in any election of directors to elect all of the directors standing for election, if they should so choose.

The amendment of any of these provisions requires approval by the holders of at least 662/3% of the voting power of all of our then-outstanding common stock entitled to vote generally in the election of directors, voting together as a single class.

The combination of these provisions may 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. Because 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 Certificate of Incorporation and our Bylaws provide that the Court of Chancery of the State of Delaware is the sole and exclusive forum for any derivative action or proceeding brought on our behalf; any action asserting a breach of fiduciary duty to us or our stockholders; any action asserting a claim against us arising pursuant to any provision of the DGCL, our Certificate of Incorporation or our 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 one or more actions or proceedings described above, a court could find the choice of forum provisions contained in our Certificate of Incorporation to be inapplicable or unenforceable.

Listing

Our common stock and Series A warrants are listed on The Nasdaq Capital Market under the symbols "OTLK" and "OTLKW," respectively.

Transfer Agent and Registrar

The transfer agent and registrar for our common stock and for the Series A Warrants is American Stock Transfer & Trust Company, LLC. Its address is 6201 15th Avenue, Brooklyn, New York 11219.

Consent of Independent Registered Public Accounting Firm

The Board of Directors Outlook Therapeutics, Inc.:

We consent to the incorporation by reference in the Registration Statements (Nos. 333-211362, 333-216081, 333-223064, 333-229685, 333-234024, 333-236471 and 333-283318) on Form S-8, (Nos. 333-223063 and 333-231922) on Form S-3 and (Nos. 333-209011, 333-212351, 333-216610, 333-230791 and 333-237607) on Form S-1 of Outlook Therapeutics, Inc. of our report dated December 23, 2020, with respect to the consolidated balance sheets of Outlook Therapeutics, Inc. as of September 30, 2020 and 2019, and the related consolidated statements of operations, convertible preferred stock and stockholders' equity (deficit), and cash flows for the years then ended and related notes (collectively, the consolidated financial statements), which report appears in the September 30, 2020 annual report on Form 10-K of Outlook Therapeutics, Inc.

Our report dated December 23, 2020 contains an explanatory paragraph that states that Outlook Therapeutics, Inc. has incurred recurring losses and negative cash flows from operations since inception and has an accumulated deficit of \$289.7 million as of September 30, 2020 that raise substantial doubt about its ability to continue as a going concern. The consolidated financial statements do not include any adjustments that might result from the outcome of this uncertainty.

/s/ KPMG LLP

Philadelphia, Pennsylvania December 23, 2020

CERTIFICATIONS

I, Lawrence A. Kenyon, certify that:

1. I have reviewed this Annual Report on Form 10-K of Outlook Therapeutics, Inc. (the "registrant"); and

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report:

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. I am responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

- (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under my supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to me by others within those entities, particularly during the period in which this report is being prepared;
- (b) Designed such internal control over financial reporting or caused such internal control over financial reporting to be designed under my supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
- (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report my conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
- (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. I have disclosed, based on my most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

- (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 (b) Any fraud whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial information; and
- (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: December 23, 2020 /s/ Lawrence A. Kenyon Lawrence A. Kenyon Chief Executive Officer and Chief Financial Officer (Principal Executive, Financial and Accounting Officer)

CERTIFICATION PURSUANT TO18 U.S.C. SECTION 1350, AS ADOPTED PURSUANT TO SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

Pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, the undersigned officer of Outlook Therapeutics, Inc. (the "Registrant") certifies that the Annual Report of Outlook Therapeutics, Inc. on Form 10-K for the year ended September 30, 2020 (the "Report") fully complies with the requirements of Section 13(a) or 15(d), as applicable, of the Securities Exchange Act of 1934, as amended, and that information contained in the Report fairly presents in all material respects the financial condition and results of operations of the Registrant.

Date: December 23, 2020

By: /s/ Lawrence A. Kenyon

Name:	Lawrence A. Kenyon
Title:	Chief Executive Officer and Chief Financial Officer
	(Principal Executive, Financial and Accounting Officer)

A signed original of this written statement required by Rule 13a-14(b) of the Securities Exchange Act of 1934, as amended, and 18 U.S.C. Section 1350 has been provided to the Registrant and will be retained by the Registrant and furnished to the Securities and Exchange Commission or its staff upon request.

This certification accompanies the Form 10-K to which it relates, is not deemed filed with the Securities and Exchange Commission and is not to be incorporated by reference into any filing of the Registrant under the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended, (whether made before or after the date of the Report), irrespective of any general incorporation language contained in such filing.