CASCADIAN THERAPEUTICS, INC.

FORM 10-K
(Annual Report)

Filed 03/09/17 for the Period Ending 12/31/16

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CIK	0001412067
Symbol	CASC
SIC Code	8731 - Commercial Physical and Biological Research
Industry	Biotechnology & Medical Research
Sector	Healthcare
Fiscal Year	12/31

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

Form 10-K

(Mark One)

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

FOR THE FISCAL YEAR ENDED DECEMBER 31, 2016

OR

☐ **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: 001-33882

CASCADIAN THERAPEUTICS, INC.

(Exact name of registrant as specified in its charter)

Delaware	**26-0868560**
(State or other jurisdiction of incorporation or organization)	**(I.R.S. Employer Identification Number)**
2601 Fourth Ave, Suite 500 Seattle, Washington (Address of principal executive offices)	**98121 (Zip Code)**

Registrant's telephone number, including area code: (206) 801-2100

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

Title of Each Class	**Name of Exchange on Which Registered**
Common Stock, $0.0001 par value	**The NASDAQ Stock Market LLC (The NASDAQ Global Market)**

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 that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☒ No ☐

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes ☒ No ☐

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of the Form 10-K or any amendment to this Form 10-K. ☐

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

Large accelerated filer	☐	Accelerated filer	☒
Non-accelerated filer	☐ (Do not check if a smaller reporting company)	Smaller reporting company	☐

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

The aggregate market value of the voting and non-voting stock held by non-affiliates of the Registrant, based on the closing sale price of the Registrant's common stock on the last day of its most recently completed second fiscal quarter, as reported on the NASDAQ Global Market, was approximately $86 million. Shares of common stock held by each executive officer and director and by each person who owns 10% or more of the outstanding common stock, based on filings with the Securities and Exchange Commission, have been excluded from this computation since such persons may be deemed affiliates of the Registrant. The determination of affiliate status for this purpose is not necessarily a conclusive determination for other purposes.

There were 49,221,940 shares of the Registrant's common stock, $0.0001 par value, outstanding on March 9, 2017.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the Registrant's Definitive Proxy Statement ("Proxy Statement") relating to the 2017 Annual Meeting of Stockholders will be filed with the Commission within 120 days after the end of the Registrant's 2016 fiscal year and is incorporated by reference into Part III of this Report.

CASCADIAN THERAPEUTICS, INC.
ANNUAL REPORT ON FORM 10-K
FOR THE FISCAL YEAR ENDED DECEMBER 31, 2016

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PART I

ITEM 1. *Business*

This annual report on Form 10-K, including Part I, Item 1, "Business," Part II, Item 7, "Management's Discussion and Analysis of Financial Condition and Results of Operations" and other sections in this annual report on Form 10-K, contain forward-looking statements or incorporate by reference forward-looking statements. The words "believe," "may," "will," "estimate," "continue," "anticipate," "intend," "expect," and similar expressions are intended to identify forward-looking statements. You should read these statements carefully because they discuss future expectations, contain projections of future results of operations or financial condition, or state other "forward-looking" information. These statements relate to our, or in some cases our partners' future plans, objectives, expectations, intentions and financial performance and the assumptions that underlie these statements.

All forward-looking statements are based on information available to us on the date of this annual report and we will not update any of the forward-looking statements after the date of this annual report, except as required by law. Our actual results could differ materially from those discussed in this annual report. The forward-looking statements contained in this annual report, and other written and oral forward-looking statements made by us from time to time, are subject to certain risks and uncertainties that could cause actual results to differ materially from those anticipated in the forward-looking statements. Factors that might cause such a difference include, but are not limited to, those discussed in the following discussion and within Part I, Item 1A, "Risk Factors" of this annual report.

Throughout this discussion, unless the context specifies or implies otherwise, the terms "Company," "Cascadian Therapeutics," "Oncothyreon," "Biomira," "we," "us," and "our" refer to Cascadian Therapeutics, Inc., its predecessors, Oncothyreon Inc, and Biomira Inc., and its subsidiaries.

Overview

We are a clinical-stage biopharmaceutical company focused on the development of therapeutic products for the treatment of cancer. Our goal is to develop and commercialize novel targeted compounds that have the potential to improve the lives and outcomes of cancer patients. In June 2016, we changed our name to Cascadian Therapeutics, Inc. from Oncothyreon Inc. The change underlies our shift in focus to targeted therapeutics from cancer vaccines. Our lead clinical-stage product candidate is tucatinib (also known as ONT-380), an oral, HER2-selective small molecule tyrosine kinase inhibitor. We are also developing CASC-578, a Chk1 kinase inhibitor and an antibody against an immuno-oncology target known as TIGIT, both of which are currently in preclinical development.

Tucatinib

Our lead development candidate, tucatinib, is an orally bioavailable, potent tyrosine kinase inhibitor (TKI) that is highly selective for HER2, also known as ErbB2, a growth factor receptor that is over-expressed in approximately 20% of breast cancers. In addition to breast cancer, HER2 is over-expressed in other malignancies, including subsets of bladder, cervical, colorectal, esophageal, gastric, lung and ovarian cancers. We are currently developing tucatinib for the treatment of HER2-positive (HER2+) metastatic breast cancer. Over-expression of HER2 in breast cancer has been associated historically with increased mortality in early stage disease, decreased time to relapse and increased incidence of metastases. Similarly, the overexpression of HER2 is thought to play an important role in the development and progression of other cancers.

The introduction of HER2-targeted therapies, including antibody-based therapies and the small molecule TKI, lapatinib, has led to improvement in the outcomes of patients with HER2+ cancer. Unlike lapatinib, tucatinib selectively inhibits HER2 and is at least 1,000-fold more selective for HER2 than the epidermal growth factor receptor (EGFR). This selectivity may improve drug tolerability by reducing Grade 3 (severe) diarrhea and skin rash.

We are currently conducting a randomized (2:1), double-blind, controlled pivotal clinical trial, known as HER2CLIMB, comparing tucatinib in combination with capecitabine (Xeloda ®) and trastuzumab (Herceptin ®) versus placebo in combination with capecitabine and trastuzumab in patients with locally advanced or metastatic HER2+ breast cancer who have had prior treatment with a taxane, trastuzumab, pertuzumab (Perjeta ®) and ado-trastuzumab emtansine or T-DM1 (Kadcyla ®) and who may or may not have brain metastases. In addition, our two Phase 1b trials of tucatinib, one in combination with T-DM1 and another in combination with capecitabine and/or trastuzumab, are fully enrolled and active patients remain on treatment. Results to date from the Phase 1b trials indicate these drug combinations are well tolerated

and may provide clinical activity in heavily pretreated patients with metastatic breast cancer, with and without brain metastases. Tucatinib will also be studied in several investigator-sponsored trials in combination with approved agents in other HER2-expressing cancers or in patients with earlier stage breast cancer.

We have an exclusive license agreement with Array BioPharma Inc. (Array) for the worldwide rights to develop, manufacture and commercialize tucatinib. We continue to evaluate additional opportunities for tucatinib in other settings and geographies, including licensing opportunities in non-core territories, such as China.

In June 2016, tucatinib was granted Fast Track designation by the FDA for the treatment of metastatic HER2+ breast cancer. The FDA's Fast Track process is designed to facilitate the development and expedite the review of drugs to treat serious conditions and fill an unmet medical need. The HER2CLIMB clinical trial is intended to support a potential NDA submission to the FDA.

In June 2016, we presented updated safety and activity data from our Phase 1b combination trial of tucatinib with T-DM1 at the 2016 American Society of Clinical Oncology Annual Meeting. Data from this combination showed the majority of adverse events (AE) were Grade 1 out of a scale from Grade 1 to Grade 5. Most patients who required a dose reduction of tucatinib maintained disease control at the lower dose. The median progression free survival (PFS) in the combination of tucatinib and T-DM1 was 8.2 months and the overall response rate (ORR) was 47% at the time of data analysis. Many of the patients with brain metastases in the study had long-term control of both brain metastases and systemic disease. Progression-free survival in the 30 patients with brain metastases was similar to patients without brain metastases. There were no patients without brain metastases at baseline who developed new clinically apparent brain metastases while on the study.

In June 2016, we also presented updated data from our Phase 1b clinical trial combining tucatinib with trastuzumab and capecitabine (triplet combination). In this combination trial, the majority of adverse events were Grade 1, with most patients being able to continue on the full dose of tucatinib. Grade 3 diarrhea was infrequent without a requirement for prophylactic anti-diarrheal medicine. The ORR was 58% and the interim PFS was 6.3 months, with many patients still active on study at the time of the data analysis. Outcomes in patients with brain metastases were similar to patients without brain metastases.

In October 2016, data were presented at the European Society of Clinical Oncology 2016 Congress describing clinical activity of tucatinib in combination with capecitabine and/or trastuzumab in HER2+ metastatic lesions to the skin.

In December 2016, we announced updated data from the Phase 1b triplet combination trial. The updated results showed that the combination continued to be well tolerated. The updated PFS increased to 7.8 months and the ORR increased to 61%. The median duration of response was 10 months. Patients in the Phase 1b triplet combination trial previously received a median of three HER2-targeted agents such as trastuzumab, pertuzumab, lapatinib or T-DM1. These updated results were presented at the 2016 San Antonio Breast Cancer Symposium.

Early results from this Phase 1b clinical trial in 2014 and 2015 were a basis for our decision to commence the HER2CLIMB clinical trial as a Phase 2 trial in February 2016. At initiation, this clinical trial planned to enroll 180 patients at approximately 90 clinical trial sites in the U.S., Canada, and select countries in the European Union. The primarily endpoint was PFS. At the 2016 San Antonio Breast Cancer Symposium, we announced that, following a meeting with the U.S. Food and Drug Administration (FDA) and discussions with our external Steering Committee, we amended the HER2CLIMB trial of tucatinib by increasing the sample size so that, if successful, the trial could serve as a single pivotal study to support a new drug application. The primary endpoint remains PFS based upon independent radiologic review, and the sample size has been increased from 180 patients to approximately 480 patients, including patients who were already enrolled in HER2CLIMB to date. Patients will also be followed for overall survival, which is a secondary endpoint. Key endpoints related to assessing activity in brain metastases include a secondary endpoint of PFS in the subset of patients with brain metastases. HER2CLIMB is currently enrolling in the United States and Canada and is expected to expand into Europe, Australia and Israel in the first half of 2017. Based on current feasibility studies, we expect to complete enrollment of the HER2CLIMB pivotal trial in mid-2019.

Other Pipeline Candidates

Although our efforts are focused primarily on developing and commercializing tucatinib, we have two preclinical programs. Our earlier stage product candidate, CASC-578, is a Chk1 cell cycle inhibitor that is an orally available, small molecule kinase inhibitor and additionally we have an antibody against an immuno-oncology target known as TIGIT.

Chk1 is a protein kinase that regulates the cell division cycle and is activated in response to DNA damage and DNA replication stress. Cancer cells often have mutations that alter DNA damage response signaling pathways that function in parallel with Chk1 to regulate the cell cycle. These mutations may make tumor cells more reliant on the activity of Chk1 to provide cell cycle checkpoint control, which represents a potential weak point that can be exploited by drugs that target Chk1. We plan to complete pharmacology studies in the first half of 2017 and to determine whether to conduct IND-enabling studies, including GLP toxicology studies, for CASC-578 in the second half of 2017.

We also have a preclinical program focused on the development of novel antibodies to TIGIT (T-cell immunoreceptor with Ig and ITM domains), an inhibitory receptor expressed on T-cells and NK cells that may negatively regulate immune response to cancers. Antibodies that inhibit TIGIT function may potentially activate anti-tumor immune responses.

The continued research and development of our product candidates will require significant additional expenditures, including preclinical studies, clinical trials, manufacturing costs and the expenses of seeking regulatory approval. We rely on third parties to conduct a portion of our preclinical studies, our clinical trials and our manufacturing of current good manufacturing practice (cGMP) drug material. We expect expenditures associated with these activities to increase in future years as we continue the development of tucatinib and potentially both CASC-578 and our antibody against the target TIGIT.

Our Strategy

Our strategy is focused on the development of therapeutic products for the treatment of cancer. The key elements of our strategy are to:

- ***Develop tucatinib in HER2+ metastatic breast cancer.*** We intend to develop and commercialize tucatinib for adult patients with HER2+ metastatic breast cancer, including patients with or without brain metastases. We also intend to continue to evaluate tucatinib in other solid tumors, including HER2+ colorectal cancer, through ongoing and planned investigator-sponsored studies (ISTs).
- ***Increase and advance our product pipeline through preclinical development programs.*** We believe it is important to maintain a diverse pipeline to sustain our future growth. To accomplish this, we have internal capabilities and expertise in preclinical and clinical development, and manufacturing. Our preclinical programs include our novel small molecule Chk1 kinase inhibitor program and our antibody against the target known as TIGIT.
- ***Support our internal activities with strategic collaborations and out-licensing.*** We may enter into collaborations, acquisitions or license arrangements to advance the development or potential commercialization of programs in our pipeline. Such relationships can supplement our own internal expertise in areas such as clinical trials, and manufacturing, as well as provide us with access to licensees' marketing, sales and distribution capabilities.

Product Candidate Portfolio

In the table below, under the heading "Development Stage, "Pivotal" indicates clinical testing of efficacy, safety, dosage tolerance, pharmacokinetics and pharmacodynamics of the product candidate in a trial designed for registration with the FDA for marketing of the product. "Preclinical" indicates the product candidate is undergoing tumor modeling, toxicology and pharmacology studies intended to support subsequent clinical development.

Product Candidate	Technology	Most Advanced Indication	Development Stage
Tucatinib	Small Molecule	Breast cancer	Pivotal Study
Chk1	Small Molecule	To be determined	Preclinical
TIGIT	Antibody	To be determined	Preclinical

Oncology Market Overview and Opportunity

Breast cancer is the most common form of cancer in women worldwide, and the second leading cause of cancer-related death in women in North America. The American Cancer Society estimated that in 2015 more than 230,000 women in the U.S. would develop breast cancer and more than 40,000 would die from the disease. Approximately 15-20% of breast cancers overexpress HER2.

The treatment of breast cancer differs by stage and includes surgery and radiation for most patients with early-stage disease. The addition of HER2 targeted agents, including antibody-based therapies and a small molecule, has led to significant improvements in progression-free survival and overall survival, both in the adjuvant setting and for patients with metastatic HER2+ disease. There are currently four approved agents for the treatment of HER2+ breast cancer, trastuzumab, pertuzumab, TDM1 and lapatinib. The size of the worldwide market for these types of agents in 2016 exceeded $9.5 billion.

The prevention and treatment of metastatic disease in the central nervous system (CNS), including brain metastases, remains a significant unmet medical need for patients with HER2+ breast cancer. The incidence of first relapse occurring in the brain is increasing in patients who have progressed following trastuzumab-containing adjuvant regimens, and approximately 30-50% of patients with HER2+ metastatic disease will develop brain metastases over the course of their disease.

Development Candidates

Tucatinib

Our lead development candidate, tucatinib, is an orally bioavailable, potent TKI that is highly selective for HER2, also known as ErbB2, a growth factor receptor that is over-expressed in approximately 20% of breast cancers. In addition to breast cancer, HER2 is overexpressed in other malignancies, including subsets of bladder, cervical, colorectal, esophageal, gastric, lung and ovarian cancers. We are currently developing tucatinib for the treatment of HER2+ metastatic breast cancer. Over-expression of HER2 in breast cancer has been associated historically with increased mortality in early stage disease, decreased time to relapse and increased incidence of metastases. The introduction of HER2-targeted therapies, including antibody-based therapies and the small molecule TKI, lapatinib, has led to improvement in the outcomes of patients with HER2+ cancer. Unlike lapatinib, tucatinib selectively inhibits HER2 and is at least 1,000-fold more selective for HER2 than EGFR. This selectivity may improve drug tolerability by reducing Grade 3 (severe) diarrhea and skin rash. We acquired tucatinib in December 2014 pursuant to an agreement under which we have certain royalty and milestone payment obligations. See Part I, Item 1, “Business—License Agreements” for additional information.

Tucatinib has been studied as a single agent in a Phase 1 clinical trial, with both dose-escalation and cohort expansion components, which enrolled 50 patients, 43 of whom had HER2+ metastatic breast cancer. All HER2+ breast cancer patients had progressed on a trastuzumab-containing regimen that may have also included other chemotherapeutic agents. In addition, over 80% had been treated with lapatinib, with many patients having progressed on this therapy. In this study, tucatinib demonstrated an acceptable safety profile; treatment-related adverse events were primarily Grade 1. Because tucatinib is selective for HER2 and does not inhibit the EGFR, there was a low incidence and severity of treatment-related diarrhea, rash and fatigue which may be associated with tucatinib’s high selectively for HER2 over EGFR. Additionally, there were no treatment-related cardiac events or Grade 4 treatment-related adverse events reported. Twenty-two HER2+ breast cancer patients with measurable disease were treated with tucatinib at doses greater than or equal to 600 mg BID. In this heavily pretreated patient population, there was a clinical benefit rate of 27% (partial response [n = 3] plus stable disease for at least 6 months [n = 3]).

In February 2014, we initiated two Phase 1b trials of tucatinib. The trials are closed to enrollment although patients remain on treatment. The following is a summary of these studies:

Phase 1b Clinical Trial of tucatinib in combination with TDM-1:

This Phase 1b clinical trial studied tucatinib in combination with T-DM1 in patients with metastatic HER2+ breast cancer who had progressed following prior treatment with trastuzumab and a taxane. This trial was a dose-escalation study of tucatinib in combination with the approved dose of T-DM1, with expansion cohorts in patients with and without brain metastases. The primary objective was to determine the maximum tolerated dose/[define RP2D] (MTD/RP2D) of tucatinib in combination with the approved dose of T-DM1. Secondary objectives included an evaluation of the safety and preliminary anti-tumor activity of the combination.

As reported at the 2016 American Society of Clinical Oncology Annual Meeting, patients treated at the MTD of tucatinib with T-DM1 had previously been treated with trastuzumab, and, in addition, 46% had been treated with prior pertuzumab, and 20% with prior lapatinib. Overall,60% of patients had a history of brain metastases and 42% had brain metastases that were either untreated or had progressed after prior local treatment. In this high-risk population, durable (> 6 months) systemic and CNS responses as well as disease stabilization were seen. The ORR was 41% (14/34) in patients with measurable disease and at least one follow-up scan, and the CNS response rate was 33% (4/12).

The combination of tucatinib and T-DM1 was clinically well tolerated. In 50 patients treated at the MTD of tucatinib, the majority of adverse events were low grade in severity, Grade 1 or 2, and included nausea, fatigue, diarrhea, vomiting, thrombocytopenia and asymptomatic elevated liver enzymes. Grade 3 diarrhea occurred in only two patients (4%), with no mandatory use of anti-diarrheal medications. While asymptomatic elevations in ALT/AST were seen in most patients, the majority were Grade 1 or 2 in severity requiring no change in dosing. Asymptomatic Grade 3 elevations were reported in 18% of patients (9/50) and Grade 4 elevation in 2% (1/50). Except in the setting of progressive liver metastases, all Grade 3 or greater elevations of ALT/AST were reversible with dose interruption and dose reduction of tucatinib and T-DM1. Two of 50 patients (4%), experienced asymptomatic decreases in left ventricular ejection fraction, reported as Grade 1 heart failure. Both of these patients had a prior history of treatment with trastuzumab and pertuzumab. Treatment with both tucatinib and T-DM1 was discontinued in one of these patients, and treatment with T-DM1 alone was discontinued in a second patient who went on to recover normal cardiac function.

Phase 1b Clinical Trial of tucatinib in combination with capecitabine and/or trastuzumab:

In December 2015, updated results from the Phase 1b clinical trial of tucatinib evaluating tucatinib in combination with capecitabine and/or trastuzumab in patients previously treated with trastuzumab and TDM-1 for HER2+ metastatic breast cancer were presented at the 2015 San Antonio Breast Cancer Symposium. Some patients had also been previously treated with pertuzumab or lapatinib. The primary objective of this study was to determine the maximum-tolerated and/or recommended Phase 2 dose (MTD/RP2D) of tucatinib in combination with the approved dose of either capecitabine or trastuzumab, or both. Secondary objectives included an evaluation of the safety and preliminary anti-tumor activity of the combinations. The trial included expansion cohorts at the MTD/RP2D of tucatinib in combination with both capecitabine and trastuzumab and with trastuzumab or capecitabine alone in patients with and without brain metastases.

In a heavily pretreated population, durable (> 6 months) systemic and CNS responses as well as disease stabilization were seen across all three treatment combinations, including patients previously treated with pertuzumab and/or lapatinib as well as trastuzumab and T-DM1. As reported at SABCS in 2015, in seven patients treated with tucatinib and capecitabine, the ORR was 83%, with a CNS response in the one patient with assessable brain metastases and at least one follow-up scan. In 16 patients treated with tucatinib and trastuzumab, the ORR was 29%, with a CNS response in one of seven patients with assessable brain metastases and at least one follow-up scan. In 18 patients treated with tucatinib and capecitabine and trastuzumab, the ORR was 39%, with CNS response in two of four patients with assessable brain metastases and at least one follow-up scan.

In June 2016, updated data from our Phase 1b clinical trial combining tucatinib with trastuzumab and capecitabine were presented at our R&D Day held in New York. In this combination trial, the majority of adverse events were Grade 1, with most patients being able to continue on the full dose of tucatinib. Grade 3 diarrhea was infrequent without a requirement for prophylactic anti-diarrheal medicine. The ORR was 58% and the interim PFS was 6.3 months, with many patients still active on study at the time of the data analysis. Outcomes in patients with brain metastases were similar to patients without brain metastases. On October 10, 2016, data from our on-going combination trial of tucatinib with trastuzumab and capecitabine demonstrating clinical activity in HER2+ metastatic lesions to the skin was presented at the 2016 European Society of Clinical Oncology meeting.

In December 2016, updated data from the Phase 1b trial showed encouraging safety and anti-tumor activity in patients with and without brain metastases, with an updated median PFS of 7.8 months (a 24% improvement over prior median PFS), ORR of 61% and a median duration of response of 10 months. Patients with and without brain metastases had similar response rates. The combination of tucatinib with trastuzumab and capecitabine was well-tolerated. Most treatment-emergent adverse events were Grade 1, with few tucatinib dose reductions and no required prophylactic use of antidiarrheal agents. These updated data were presented at the 2016 SABCS meeting.

In December 2016, we reported that following a meeting with the FDA and discussions with our external Steering Committee, we had amended the ongoing HER2CLIMB Phase 2 clinical trial of tucatinib by increasing the sample size so that, if successful, the trial could serve as a single pivotal study to support registration. HER2CLIMB is a randomized (2:1), double-blind, controlled pivotal clinical trial comparing tucatinib vs. placebo in combination with capecitabine and trastuzumab in patients with locally advanced or metastatic HER2-positive breast cancer who have had prior treatment with a taxane, trastuzumab, pertuzumab and T-DM1.The primary endpoint remains PFS based upon independent radiologic review, and the sample size has increased to approximately 480 patients, including patients already enrolled in the trial. Key objectives related to assessing activity in brain metastases include a key secondary endpoint of PFS in a subset of patients with brain metastases. All patients will be followed for overall survival. HER2CLIMB is currently enrolling in the United States and Canada and is expected to expand into Europe, Australia and Israel.

Preclinical Programs

Checkpoint kinase 1 inhibitor

Checkpoint kinase 1 (Chk1) is a protein kinase that is activated in response to DNA damage and DNA replication stress. Together with other cellular factors, Chk1 provides a coordinated "checkpoint" to arrest the cell division cycle in response to damaged DNA. The induction of this cell cycle checkpoint enables cells to repair DNA lesions and ensures the fidelity of the cell division process. Cancer cells commonly have mutations that reduce or eliminate the activity of DNA damage response factors that function in parallel with Chk1. These mutations make tumor cells more reliant on the activity of Chk1 to provide cell cycle checkpoint control, which may make them more sensitive to Chk1 inhibitors and produce a synergistic tumor killing effect when combined with DNA targeted chemotherapy drugs.

We have identified a lead development candidate, CASC-578, which is an orally available, highly potent and selective Chk1 inhibitor and we are conducting preclinical studies. CASC-578 was developed in collaboration with Sentinel Oncology Ltd., Cambridge, United Kingdom. See Part I, Item 1, "Business—Collaborations" for additional information.

Immuno-oncology

We have identified novel antibodies to TIGIT, an immune receptor that may block the induction of adaptive and innate immune response to cancers. The TIGIT antibody program is in preclinical development and is part of the collaborative effort with Adimab for the discovery of novel antibodies against immunotherapy targets. See Part I, Item 1, "Business—Collaborations" for additional information.

In May 2016, we ceased conducting discovery research and developing preclinical product candidates using our protocell technology.

License and Collaboration Agreements

Array BioPharma Inc. In December 2014, we entered into a license agreement with Array. Pursuant to the license agreement, Array has granted us an exclusive license to develop, manufacture and commercialize tucatinib. The license agreement replaced a development and commercialization agreement under which we and Array were previously jointly developing tucatinib. As part of the agreement, we paid Array $20 million as an upfront fee. In addition, we will pay Array a portion of any payments received from sublicensing tucatinib rights. If we are acquired within three years of the effective date of the license agreement, Array may be eligible for up to $280 million, primarily in commercial milestone payments. Array is also entitled to receive up to a double-digit royalty based on net sales of tucatinib by us.

Sentinel Oncology Ltd. In 2014, we entered into a research collaboration agreement with Sentinel for the discovery of novel Chk1 inhibitors. Under the agreement, we made payments to Sentinel to support their chemistry research. We are responsible for preclinical and clinical development, manufacture and commercialization of any resulting compounds. Sentinel is eligible to receive success-based development and commercial milestone payments up to approximately $90 million based on development and commercialization events, including the initiation of toxicology studies under the FDA's good laboratory practices (GLP) regulations, the initiation of certain clinical trials, regulatory approval and first commercial sale. We plan to make a decision on whether to proceed with GLP toxicology studies in the second half of 2017, which may trigger a $1.0 million milestone payment to Sentinel. Sentinel is also entitled to a single-digit royalty based on net sales.

Adimab LLC. In 2014, we initiated a collaboration with Adimab for the discovery of novel antibodies against immunotherapy targets in oncology. We have sole responsibility for the manufacture, development and commercialization of any antibody product candidates that result from the collaboration. The collaboration is currently at an early preclinical development stage. Adimab is entitled to certain research funding, success-based development milestone payments of up to $17 million and a low single-digit royalty based on net sales.

Patents and Proprietary Information

Our objective is to obtain, maintain and enforce intellectual property protection for our pipeline candidates and other proprietary technologies; to preserve our trade secrets; and to operate without infringing on the valid proprietary rights of other parties. We believe the protection of patents, trademarks and other proprietary rights that we own or license is critical to our success and competitive position. We rely on a combination of patent, trademark, copyright, trade secret, confidentiality agreements and other measures to protect our proprietary rights.

With respect to our development candidates, as of December 31, 2016, we owned one U.S. patent and 18 patent applications in other jurisdictions. In addition, as of December 31, 2016, we had licensed approximately 139 issued patents and 83 patent applications from third parties, mostly on an exclusive basis. The patent portfolios for our leading product candidates as of December 31, 2016 are summarized below.

Tucatinib. In the United States, the composition of matter for tucatinib is covered by U.S. Patent No. 8,648,087, entitled "N4-phenyl-quinazoline-4-amine derivatives and related compounds as ErbB type I receptor tyrosine kinase inhibitors for the treatment of hyperproliferative diseases," which will provide patent coverage for tucatinib until 2031. We have also licensed pending U.S. Patent Application No. 14/034,361, with the same title. Patent applications corresponding to U.S. Patent No. 8,648,087 have issued in Australia, Canada, China, Columbia, Europe, Hong Kong, Indonesia, Israel, Japan, South Korea, Mexico, Philippines, Russia, Singapore and South Africa. Corresponding patent applications are pending in Brazil, China, Egypt, India, Israel, Norway and Russia. These foreign patents and patent applications, if issued, are not due to expire until at least 2026. The Array patent portfolio also includes other issued patents and pending patent applications drawn to tucatinib formulations, polymorphs and methods of use in the U.S. and in many foreign jurisdictions. Certain jurisdictions, including the U.S., Japan and Europe, provide mechanisms for restoring a period of patent term consumed by regulatory review. We plan to take advantage of all opportunities to extend the patent term in each jurisdiction where we are able to do so.

The patents and patent applications covered by the Array License Agreement are prosecuted by Array and reviewed and monitored by outside legal counsel on behalf of the Company.

CASC-578. CASC-578, a Chk1 kinase inhibitor, is licensed from Sentinel. The Sentinel Chk1 kinase inhibitor patent portfolio includes one issued U.S. patent, U.S. Patent No. 8,716,287, entitled "Pharmaceutical compounds," and allowed U.S. Patent Application No. 14/358,678, entitled "Pharmaceutically active pyrazine derivatives," both of which are drawn to compounds and compositions that inhibit Chk-1 kinase activity. A foreign patent application also drawn to compounds and compositions that inhibit Chk-1 kinase activity has issued in Europe. The current U.S. issued patent and allowed patent application, if issued, are not due to expire until at least 2031. The European patent is not due to expire until at least 2032. The U.S. and Europe provide mechanisms for restoring a period of patent term consumed by regulatory review. We will take advantage of all opportunities to extend the patent term in the U.S. and Europe.

The Cascadian Chk1 kinase inhibitor, patent portfolio includes a pending U.S. patent application covering substituted pyrazoles, many of which have Chk1 inhibitor activity. Related foreign patent applications are pending in Australia, Brazil, Canada, China, Europe, Indonesia, Israel, India, Japan, South Korea, Mexico, Malaysia, New Zealand, Philippines, Russia, Singapore, Ukraine and South Africa. The currently pending U.S. and foreign patent applications, if issued, are not due to expire until at least 2035. Certain jurisdictions may provide mechanisms for restoring a period of patent term consumed by regulatory review. We will take advantage of all opportunities to extend the patent term in each jurisdiction where we are able to do so.

Manufacturing

We use third party contractors to procure the necessary materials and manufacture, as applicable, starting materials, active pharmaceutical ingredients and finished drug product, as well as for labeling, packaging, storage and distribution of our compounds. This arrangement allows us to use contract manufacturers that have extensive Good Manufacturing Practices, or cGMP, manufacturing experience. We have a staff with experience in the management of contract manufacturing and in the development of efficient commercial manufacturing processes for our products candidates. We currently intend to outsource the manufacture of all our commercial products.

We believe that our existing supplies of tucatinib, along with our contract manufacturing relationships with our existing contract manufacturers, will be sufficient to supply tucatinib for HER2CLIMB and other clinical trials of tucatinib and to supply initial commercial quantities of tucatinib for commercial sale. As our business expands, we expect that our manufacturing, distribution and related operational requirements will increase correspondingly and we may need to retain additional contractors to ensure adequate supplies of our products. Each third party contractor undergoes a formal qualification process by our subject matter experts before services by that contractor commence, and each contractor is audited periodically thereafter as required by cGMP.

Competition

The pharmaceutical and biotechnology industries are intensely competitive, and any product candidate developed by us will compete with existing drugs and therapies. There are many pharmaceutical companies, biotechnology companies, public and private universities, government agencies and research organizations that compete with us in developing various approaches to cancer therapy. Many of these organizations have substantially greater financial, technical,

manufacturing and marketing resources than we have. Several of them have developed or are developing therapies that could be used for treatment of the same diseases that we are targeting. In addition, many of these competitors have significant commercial infrastructures that we do not currently have. Our ability to compete successfully will depend largely on our ability to:

- design and develop products that are superior to other products in the market and under development;
- attract and retain qualified scientific, product development, manufacturing and commercial personnel;
- obtain patent and/or other proprietary protection for our product candidates and technologies;
- obtain required regulatory approvals;
- successfully collaborate with pharmaceutical companies in the design, development and commercialization of new products;
- compete on, among other things, product efficacy and safety profile, time to market, price, and the types of and convenience of treatment procedures; and
- identify, secure the rights to and develop products and exploit these products commercially before others are able to develop competitive products.

Our ability to compete may be affected by government policies relating to the pricing and reimbursement of proprietary drug products and the policies of insurers and other third party payors encouraging the use of generic products, all of which may make branded products less attractive to buyers from a cost perspective.

Tucatinib. Tucatinib is an inhibitor of the receptor tyrosine kinase HER2, also known as ErbB2. Multiple marketed products target HER2, including the antibodies trastuzumab (Herceptin) and pertuzumab (Perjeta) and the antibody toxin conjugate ado-trastuzumab emtansine (Kadcyla), all from Roche/Genentech. In addition, GlaxoSmithKline markets the dual HER1/HER2 oral kinase inhibitor lapatinib (Tykerb) for the treatment of metastatic breast cancer, Puma Biotechnology is developing the HER1/HER2/HER4 inhibitor neratinib in Phase 3 clinical trials, and Macrogenics is developing margetuximab, a HER2 targeted, Fc-optimized antibody in Phase 3 clinical trials.

With respect to checkpoint kinase 1 Inhibitors, there are currently no marketed drugs which specifically target Chk1. There are other Chk1 inhibitors in clinical trials, the most advanced of which is in a Phase 2 study.

Government Regulation

Government authorities in the United States, at the federal, state and local level, and government authorities in other countries extensively regulate, among other things, the research, development, testing, manufacture, labeling, promotion, advertising, distribution, marketing and export and import of biopharmaceutical products such as those we are developing. In many other countries, governmental authorities also regulate reimbursement for products such as those we are developing.

U.S. Government Regulation

In the United States, the information that must be submitted to the FDA in order to obtain approval to market a new drug varies depending on whether the drug is a new product whose safety and effectiveness has not previously been demonstrated in humans or a drug whose active ingredient(s) and certain other properties are the same as those of a previously approved drug. A new drug will follow the New Drug Application (NDA) route for approval, a new biologic will follow the biologics license application (BLA) route for approval, and a drug that claims to be the same as an already approved drug may be able to follow the Abbreviated New Drug Application (ANDA) route for approval. Our tucatinib and Chk1 inhibitor product candidates will follow the NDA route for approval.

NDA and BLA Approval Process

In the United States, the FDA regulates drugs and biologics under the Federal Food, Drug and Cosmetic Act, and, in the case of biologics, also under the Public Health Service Act, and implementing regulations. If we fail to comply with the applicable U.S. requirements at any time during the product development process, approval process or after approval, we may become subject to administrative or judicial sanctions. These sanctions could include the FDA's refusal to approve pending applications, license suspension or revocation, withdrawal of an approval, a clinical hold, warning letters, product recalls, product seizures, total or partial suspension of production or distribution, injunctions, fines, civil penalties or criminal prosecution. Any agency or judicial enforcement action could have a material adverse effect on us.

The steps required before a drug or biologic may be marketed in the United States include:

- completion of preclinical laboratory tests, animal studies and formulation studies under the FDA's GLP regulations;
- submission to the FDA of an IND for human clinical testing, which must become effective before human clinical trials may begin;
- performance of adequate and well-controlled clinical trials to establish the safety and efficacy of the product candidate for each indication;
- submission to the FDA of an NDA or BLA;
- satisfactory completion of an FDA inspection of the manufacturing facility or facilities at which the product is produced to assess compliance with cGMP; and
- FDA review and approval of the NDA or BLA.

Preclinical tests include laboratory evaluations of product chemistry, toxicity and formulation, as well as animal studies. An IND sponsor must submit the results of the preclinical tests, together with manufacturing information and analytical data, to the FDA as part of the IND. The IND must become effective before human clinical trials may begin. An IND will automatically become effective 30 days after receipt by the FDA, unless before that time the FDA raises concerns or questions about issues such as the conduct of the trials as outlined in the IND. In that case, the IND sponsor and the FDA must resolve any outstanding FDA concerns or questions before clinical trials can proceed. Submission of an IND may not result in the FDA allowing clinical trials to commence.

Clinical trials involve the administration of the investigational product to human subjects under the supervision of qualified investigators. Clinical trials are conducted under protocols detailing, among other things, the objectives of the trial, the parameters to be used in monitoring safety and the effectiveness criteria to be evaluated. Each clinical protocol must be submitted to the FDA as part of the IND.

Clinical trials typically are conducted in three sequential phases, but the phases may overlap or be combined. Each trial must be reviewed and approved by an independent institutional review board for each site where the trial will be conducted before it can begin at that site. Phase 1 clinical trials usually involve the initial introduction of the investigational drug into humans to evaluate the product candidate's safety, dosage tolerance, pharmacokinetics and pharmacodynamics and, if possible, to gain an early indication of its effectiveness. Phase 2 clinical trials usually involve controlled trials in a limited patient population to evaluate dosage tolerance and appropriate dosage, identify possible adverse effects and safety risks, and evaluate preliminarily the efficacy of the drug for specific indications. Phase 3 clinical trials usually further evaluate clinical efficacy and further test for safety in an expanded patient population. Phase 1, Phase 2 and Phase 3 testing may not be completed successfully within any specified period, if at all. The FDA or we may suspend or terminate clinical trials at any time on various grounds, including a finding that the subjects or patients are being exposed to an unacceptable health risk.

Assuming successful completion of the required clinical testing, the results of the preclinical studies and of the clinical studies, together with other detailed information, including information on the chemistry, manufacture and control criteria of the product candidate, are submitted to the FDA in the form of an NDA or BLA requesting approval to market the product for one or more indications. The FDA reviews an NDA to determine, among other things, whether a product is safe and effective for its intended use. The FDA reviews a BLA to determine, among other things, whether the product is safe, pure and potent and whether the facility in which it is manufactured, processed, packed or held meets standards designed to assure the product's continued safety, purity and potency.

Before approving an NDA or BLA application, the FDA may inspect the facility or the facilities at which the product candidate will be manufactured for commercial sale. The FDA will not approve the product unless cGMP compliance is satisfactory. The FDA will also inspect a certain number of clinical sites that participated in clinical studies of the product candidate that is the subject of the application, as well as inspect the sponsor of the clinical trial to ensure processes and procedures used during the conduct of the trial were appropriate and comply with federal regulations. Any deficiencies at these clinical sites or by the sponsor could jeopardize approval of the NDA or BLA. If the FDA determines the application, results of inspections, manufacturing process or manufacturing facilities are not acceptable, it will outline the deficiencies in 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.

The testing and approval process for each NDA or BLA application requires substantial time, effort and financial resources, and may take several years to complete. The FDA may not grant approval on a timely basis, or at all. We may encounter difficulties or unanticipated costs in our efforts to secure FDA approval, which could delay or preclude us from marketing our product candidates. The FDA may limit the indications for use or place other conditions on any approvals that could restrict the commercial application of our product candidates. After approval, some types of changes to the approved product, such as adding new indications, manufacturing changes and additional labeling claims, are subject to further FDA review and approval.

Fast Track Designation / Priority Review

A Fast Track product is defined as a new drug or biologic intended for the treatment of a serious or life-threatening condition that demonstrates the potential to address unmet medical needs for this condition. Under the Fast Track program, the sponsor of a new drug or biologic may request that the FDA designate the drug or biologic as a Fast Track product at any time during the development of the product prior to marketing.

The FDA can base approval of an NDA or BLA application for a Fast Track product on the effect of the product candidate on a surrogate endpoint or on another endpoint that is reasonably likely to predict clinical benefit. The FDA may condition approval of an application for a Fast Track product candidate on a commitment to do post-approval clinical trials to validate the surrogate endpoint or confirm the effect on the clinical endpoint and may require prior review of all promotional materials. In addition, the FDA may withdraw approval of a Fast Track product in an expedited manner on a number of grounds, including the sponsor's failure to conduct any required post-approval clinical trial in a timely manner.

The FDA also has established priority and standard review classifications for original NDAs and efficacy supplements. Priority review applies to the time frame for FDA review of completed NDA applications and is separate from and independent of the Fast Track and accelerated approval mechanisms. The classification system, which does not preclude the FDA from doing work on other projects, provides a way of prioritizing NDAs upon receipt and throughout the application review process.

Priority designation applies to new drugs that have the potential for providing significant improvement compared to marketed products in the treatment or prevention of a disease. Hence, even if an NDA is initially classified as a priority application, this status can change during the FDA review process; for example if another product is approved for the same disease for which there was no previously available therapy. In addition, priority review does not guarantee that a product candidate will receive regulatory approval or that the FDA will adhere to the shortened review time frame described in the priority review guidance.

Also, new government requirements may be established that could delay or prevent regulatory approval of our product candidates under development.

In June 2016, tucatinib was granted Fast Track designation for the treatment of advanced HER2+ metastatic breast cancer.

Post-Approval Requirements

After regulatory approval of a product candidate is obtained, we are required to comply with a number of post-approval requirements. Holders of an approved NDA or BLA are required to report certain adverse reactions and production problems to the FDA, to provide updated safety and efficacy information and to comply with requirements concerning advertising and promotional labeling for their products. Also, quality control and manufacturing procedures must continue to conform to cGMP after approval. The FDA periodically inspects manufacturing facilities to assess compliance with cGMP, which imposes certain procedural, substantive and recordkeeping requirements. Accordingly, manufacturers must continue to expend time, money and effort on production and quality control to maintain compliance with cGMP and other aspects of regulatory compliance.

We use, and anticipate that we will continue to use, third party manufacturers to produce our product candidates in clinical and commercial quantities. Future FDA inspections may identify compliance issues at the facilities of our contract manufacturers that may disrupt production or distribution, or require substantial resources to correct. In addition, discovery of problems with a product or the failure to comply with applicable requirements may result in restrictions on a product, manufacturer or holder of an approved NDA or BLA, including withdrawal or recall of the product from the market or other voluntary, FDA-initiated or judicial action that could delay or prohibit further marketing.

In addition, as a condition of approval of an NDA or BLA, the FDA may require post-marketing testing and surveillance to monitor the product's safety or efficacy. Also, we may be required to comply with new government requirements in the future.

Canadian and Foreign Regulation

In addition to regulations in the United States, we will be subject to a variety of foreign regulations governing clinical trials and commercial sales and distribution of our product candidates outside the United States. Whether or not we obtain FDA approval for a product candidate, we must comply with the requirements of the comparable regulatory authorities of foreign countries before we can commence clinical trials or marketing of the products in those countries. The approval process varies from country to country, and the approval process may be longer or shorter than that required for FDA approval. The requirements governing the conduct of clinical trials, product licensing, pricing and reimbursement vary greatly from country to country.

Under the Canadian regulatory system, Health Canada is the regulatory body that governs the clinical trials of investigational products and the approval of drugs for commercial sale. Accordingly, any company that wishes to conduct a clinical trial in Canada must submit a clinical trial application to Health Canada. Health Canada reviews the application and notifies the company within 30 days if the application is found to be deficient. If the application is deemed acceptable, Health Canada will issue a letter to the company within the 30-day review period which means the company may proceed with its clinical trial(s).

Under European Union regulatory systems, we must also meet applicable regulatory requirements before commencing a clinical trial in any country in the European Union. To obtain approval for commercial sale, we may submit marketing authorizations either under a centralized or decentralized procedure. The centralized procedure provides for the grant of a single marketing authorization that is valid for all European Union member states. The decentralized procedure provides for mutual recognition of national approval decisions. Under this procedure, the holder of a national marketing authorization from one member state may submit an application to the remaining member states. Within 90 days of receiving the application and assessment report, each member state must decide whether to recognize approval. There are also separate regulatory requirements that a sponsor must meet to obtain reimbursement for an approved drug under the national health systems in each country in the European Union before it may be lawfully marketed.

Reimbursement

Sales of biopharmaceutical products depend in significant part on the availability of reimbursement from health insurers, health maintenance organizations and other private third party payers, and from government programs including Medicare. Each private and governmental third party payer may have its own policy regarding what products it will cover, the conditions under which it will cover such products, and how much it will pay for such products. Once a product is approved for commercial sale, third party payers will determine, based upon their policies, whether to reimburse for the product and how much of the price will be reimbursed to patients. Generally, drug sponsors will work with private third party payers in this process and it can be time consuming and expensive. Reimbursement from private third party payers may not be available or sufficient to allow us to sell our products on a competitive and profitable basis. Generally, once a drug is approved by the FDA, it is covered by Medicare and other federal government programs. However, the amount of reimbursement to a patient for the drug may be determined by the manner in which the drug is dispensed and administered (e.g. by a pharmacy or by a physician practice or hospital). Because of the perception that the costs of new drugs are excessive, there is increasing pressure to implement price controls for drugs reimbursed by federal government programs in order to contain costs.

We anticipate that the U.S. Congress, state legislatures and the private sector will continue to consider and may adopt healthcare policies intended to curb rising healthcare costs. These cost containment measures may include:

- restrictions on government funded reimbursement for drugs;
- restrictions on healthcare providers;
- challenges to the pricing of drugs or limits or prohibitions on reimbursement for specific products through other means;
- reform of drug importation laws; and
- expansion of use of managed care systems in which healthcare providers contract to provide comprehensive healthcare for a fixed cost per person.

We are unable to predict what legislation, regulations or policies, if any, relating to the healthcare industry or third party coverage and reimbursement may be enacted in the future or what the magnitude of the effect such legislation, regulations or policies would have on our business. Any cost containment measures, including those listed above, or other healthcare system reforms that are adopted could have a material adverse effect on our business, financial condition and profitability.

In addition, in some foreign countries, the proposed pricing for a drug must be approved before it may be lawfully marketed. The requirements governing drug pricing vary widely from country to country. For example, the European Union provides options for its member states to restrict the range of medicinal products for which their national health insurance systems provide reimbursement and to control the prices of medicinal products for human use. A member state may approve a specific price for the medicinal product or it may instead adopt a system of direct or indirect controls on the profitability of the company placing the medicinal product on the market.

Research and Development

We devote a substantial portion of our resources to developing new product candidates. During the years ended December 31, 2016, 2015 and 2014, we expended approximately $27.5 million, $23.5 million and $41.9 million, respectively, on research and development activities. Our research and development expenses included a $20.0 million upfront license payment to Array in 2014 in connection with our exclusive license of tucatinib.

Employees

As of December 31, 2016, we had 57 employees. A number of our management and professional employees have had prior experience with other pharmaceutical or medical products companies.

Our ability to develop marketable products and to establish and maintain our competitive position in light of technological developments will depend, in part, on our ability to attract and retain qualified personnel. Competition for such personnel is intense. We have also chosen to outsource activities where skills are in short supply or where it is economically prudent to do so.

None of our employees are covered by collective bargaining agreements and we believe that our relations with our employees are good.

Corporate Information

We were incorporated in Canada in 1985 under the name Biomira Inc. (Biomira). In June 2016, we changed our name to Cascadian Therapeutics, Inc. from Oncothyreon Inc. Our common stock trades on the NASDAQ Global Market under the symbol “CASC”. Our executive office is located at 2601 Fourth Avenue, Suite 500, Seattle, Washington 98121. Our telephone number is (206) 801-2100. Our website address is http://www.cascadianrx.com. We may post information that is important to investors on our website. However, information found on our website is not incorporated by reference into this Annual Report on Form 10-K. We make available free of charge on our website our Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K and other filings pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended, or the Exchange Act, as soon as reasonably practicable after each is electronically filed with, or furnished to, the SEC. These reports may also be obtained without charge by contacting Investor Relations, Cascadian Therapeutics Inc., 2601 Fourth Avenue, Suite 500, Seattle, Washington 98121, e-mail: IR@cascadianrx.com.

In addition, you may review a copy of this Annual Report on Form 10-K, including exhibits and any schedule filed herewith, and obtain copies of such materials at prescribed rates, at the SEC’s Public Reference Room at 100 F Street, N.E., Washington, D.C. 20549. You may obtain information on the operation of the Public Reference Room by calling the SEC at 1-800-SEC-0330. The SEC maintains a website (http://www.sec.gov) that contains reports, proxy and information statements and other information regarding registrants, including the Company, that file electronically with the SEC.

“Cascadian Therapeutics”, is a proprietary mark. All other product names, trademarks and trade names referred to in this Annual Report on Form 10-K are the property of their respective owners.

Financial Information

We manage our operations and allocate resources as a single reporting segment. Financial information regarding our operations, including net loss, for the years ended December 31, 2016, 2015 and 2014, our total assets, liabilities and stockholders' equity as of December 31, 2016 and 2015, is included in our audited financial statements located elsewhere in this Annual Report on Form 10-K.

Item 1A. Risk Factors

Set forth below and elsewhere in this report, and in other documents we file with the SEC, are descriptions of risks and uncertainties that could cause actual results to differ materially from the results contemplated by the forward-looking statements contained in this report. Because of the following factors, as well as other variables affecting our operating results, past financial performance should not be considered a reliable indicator of future performance and investors should not use historical trends to anticipate results or trends in future periods. The risks and uncertainties described below are not the only ones facing us. Other events that we do not currently anticipate or that we currently deem immaterial may also affect our results of operations and financial condition.

Risks Relating to our Business

Product candidates that appear promising in research and development may be delayed or may fail to reach later stages of clinical development.

The successful development of pharmaceutical products is highly uncertain. Product candidates that appear promising in research and development may be delayed or fail to reach later stages of development. For example, preliminary data from our Phase 1b trial of ONT-10 in combination with the T-cell agonist antibody, varlilumab, did not demonstrate sufficient activity to move forward with the program. We, therefore, decided not to continue this trial and, in February 2016, we terminated our collaboration agreement with Celldex. The ongoing or future trials for tucatinib (ONT-380) and our preclinical research and development of our Chk1 kinase inhibitor or TIGIT antibody may fail to demonstrate that these product candidates are sufficiently safe and effective to warrant further development.

Furthermore, decisions regarding the further development of product candidates must be made with limited and incomplete data, which makes it difficult to accurately predict whether the allocation of limited resources and the expenditure of additional capital on specific product candidates will result in desired outcomes. Preclinical and clinical data can be interpreted in different ways, and negative or inconclusive results or adverse medical events during a clinical trial could delay, limit or prevent the development of a product candidate, which could harm our business, financial condition or the trading price of our securities. There can be no assurance as to whether or when we will receive regulatory approvals for any of our product candidates, including tucatinib or our Chk1 kinase inhibitor.

There is no assurance that tucatinib will be safe, effective or receive regulatory approval for any indication.

Tucatinib is a late-stage clinical development candidate and the risks associated with its development are significant. Promising preclinical data in animal models and early clinical data may not be predictive of later clinical trial results. Clinical data from our pivotal HER2CLIMB clinical trial may fail to establish that tucatinib is effective in treating HER2+breast cancer or associated brain metastases or may indicate safety profile concerns not indicated by earlier clinical data.

In December 2014, we announced that interim data from our ongoing Phase 1b combination trials indicated preliminary clinical activity and tolerability in a heavily pretreated patient population. Updates to some of these data provided further preliminary evidence of clinical activity and tolerability, including in brain metastases. Based upon this data, we commenced a Phase 2 clinical trial of tucatinib in February 2016 and are continuing that trial as our pivotal HER2CLIMB trial. However, none of these trials are complete, and even if final Phase 1b data are encouraging, the results from the pivotal HER2CLIMB clinical trial and any other clinical trials may not indicate a favorable safety and efficacy profile for tucatinib or may otherwise fail to support continued development of this product candidate.

In December 2016, we announced that, following discussions with the Food and Drug Administration (FDA) and discussions with our external Steering Committee, we amended the HER2CLIMB clinical trial of tucatinib by increasing the sample size so that, if successful, the trial could serve as a single pivotal study to support a new drug application. The primary endpoint remains progression-free survival (PFS) and the sample size has been increased to approximately 480 patients from 180 patients. Patients will also be followed for overall survival which is a secondary endpoint. Key objectives related to assessing activity in brain metastases include a secondary endpoint of PFS in a subset of patients with brain metastases. There is no assurance that the clinical data will achieve these endpoints in whole or in part. For example, the clinical data may achieve the primary endpoint in the overall study population, but not achieve the secondary endpoint in patients with brain metastases. We have not received a Special Protocol Assessment for the HER2CLIMB study. Thus, even if some or all of the endpoints are achieved and we file an NDA seeking approval for the commercial sale of tucatinb in metastatic breast cancer, there is no assurance that the FDA will approve the application.

We plan to initiate one or more investigator-sponsored clinical trials of tucatinib in other indications and we may initiate additional clinical trials of this product candidate. Data from clinical trials we or investigators may initiate in other indications may fail to demonstrate that tucatinib is effective in the indications studied or safety profile concerns may arise. In that event, even if the pivotal HER2CLIMB succeeds in reaching its endpoints and receives regulatory approval, we may not be able to continue development of tucatinib in other indications or to receive regulatory approval for additional indications, which may limit the commercial potential of tucatinib and harm our business.

Reports of adverse events or safety concerns involving tucatinib could delay or prevent us from obtaining regulatory approval

Reports of adverse events or safety concerns involving tucatinib or the combination of tucatinib with capecitabine or trastuzumab being studied in the HER2CLIMB study or the combination of tucatinib with other drugs could interrupt, delay or halt the HER2CLIMB clinical trial and/or other clinical trials of tucatinib. Tucatinib alone and in combination with other drugs has been studied in a limited number of patients to date and the known safety information is correspondingly limited. With study in additional patients, more severe or unanticipated adverse events may be experienced by patients. Reports of adverse events or safety concerns involving tucatinib could result in regulatory authorities denying approval of tucatinib or limiting its use. There are no assurances that patients receiving tucatinib in combination with other drugs will not experience serious adverse events in the future or that unexpected or unanticipated adverse events will not occur. Further, there are no assurances that patients receiving tucatinib with co-morbid diseases will not experience new or different serious adverse events in the future.

Adverse events may also negatively impact the sales of tucatinib, if it is approved for sale in any jurisdiction. If tucatinib is approved for sale in the United States, we could be required to implement a Risk Evaluation and Mitigation Strategy to address safety concerns, which could adversely affect tucatinib's acceptance in the market, make competition easier or make it more difficult or expensive for us to distribute and sell tucatinib.

We rely on our license agreement with Array Biopharma, Inc. for our tucatinib technology. Failure to maintain that license agreement could prevent us from continuing to develop and commercialize tucatinib

We entered into an exclusive license agreement with Array BioPharma, Inc. for our tucatinib technology. If Array BioPharma were to terminate our license agreement or if we are unable to maintain the exclusivity of that license agreement, we may be unable to continue to develop tucatinib. Further, we may in the future have a dispute with Array BioPharma which may impact our ability to develop and commercialize tucatinib or require us to enter into additional licenses. An adverse result in potential future disputes with our licensor may impact our ability to develop and commercialize tucatinib, may require us to enter into additional licenses, or may require us to incur additional costs in litigation or settlement. In addition, continued development and commercialization of tucatinib and our other product candidates may require us to secure licenses to additional technologies. We may not be able to secure these licenses on commercially reasonable terms, if at all.

We also have an exclusive license from Sentinel Oncology for our Chk1 program. If Sentinel Oncology were to terminate our license agreement or if we are unable to maintain the exclusivity of that license agreement, we may be unable to continue to develop Chk1. Further, we may in the future have a dispute with Sentinel Oncology which may impact our ability to develop and commercialize Chk1 or require us to enter into additional licenses. An adverse result in potential future disputes with our licensor may impact our ability to develop and commercialize Chk, may require us to enter into additional licenses, or may require us to incur additional costs in litigation or settlement. In addition, continued development and commercialization of Chk1 may require us to secure licenses to additional technologies. We may not be able to secure these licenses on commercially reasonable terms, if at all.

We also have a development and option agreement for our TIGIT antibody program with Adimab. If Adimab were to terminate that agreement or if we are do not exercise our option to acquire a license from Adimab, we may be unable to continue to with our TIGIT antibody program. Further, even if we exercise our option we may in the future have a dispute with Adimab which may impact our ability to develop and commercialize a TIGIT antibody or require us to enter into additional licenses. An adverse result in potential future disputes with our Adimab may impact our ability to develop and commercialize a TIGIT antibody, may require us to enter into additional licenses, or may require us to incur additional costs in litigation or settlement. In addition, continued development and commercialization of our TIGIT antibody program may require us to secure licenses to technologies in addition to a license from Adimab. We may not be able to secure these licenses on commercially reasonable terms, if at all.

Our development programs for our Chk1 kinase inhibitor and TIGIT antibodies is at an early stage, and one or both of those programs may not be successful or warrant further internal investment.

Our development efforts for our Chk1 kinase inhibitor and TIGIT antibodies are at an early stage. We have not yet completed any IND-enabling preclinical studies for our Chk1 kinase inhibitor or TIGIT antibody programs, and future research and preclinical development of our Chk1 kinase inhibitor or TIGIT antibodies may indicate that one or both of those programs do not have sufficient indications of clinical benefit or acceptable tolerability. If our preclinical research and development efforts do not support further development of our Chk1 kinase inhibitor or TIGIT antibodies, we may suspend such development activities.

Our ability to continue with our planned operations is dependent on our success at raising additional capital sufficient to meet our obligations on a timely basis. If we fail to obtain additional financing when needed, we may be unable to complete the development, regulatory approval and commercialization of our product candidates.

We have expended and will continue to expend substantial funds in connection with our product development activities and clinical trials and regulatory approvals. Conducting a large pivotal trial and other clinical trials and IND-enabling studies is very costly and our funds are very limited. Accordingly, to commercialize tucatinib, if our HER2CLIMB trial is successful, to continue tucatinib' development into other indications, and to fund the continued development of our other programs, we will need to raise additional funds from the sale of our securities, partnering arrangements or other financing transactions in order to finance the commercialization of tucatinib and our other product candidates. We cannot be certain that additional financing will be available when and as needed or, if available, that it will be available on acceptable terms. If financing is available, it may be on terms that adversely affect the interests of our existing stockholders or restrict our ability to conduct our operations. To the extent that we raise additional funds through collaboration and licensing arrangements, we may be required to relinquish some rights to our technologies or product candidates, or grant licenses on terms that are not favorable to us. Our actual capital requirements will depend on numerous factors, including:

- the pace of enrollment in the HER2CLIMB trial and the actual costs of that trial;
- whether we enter into licensing or collaboration arrangements for any of our product candidates that reduce our costs to develop those product candidates;
- activities and arrangements related to the commercialization of our product candidates;
- the progress of our research and development programs;
- the progress of preclinical and clinical testing of our product candidates;
- the time and cost involved in obtaining regulatory approvals for our product candidates;
- the cost of filing, prosecuting, defending and enforcing any patent claims and other intellectual property rights with respect to our intellectual property;
- the effect of competing technological and market developments;
- the effect of changes and developments in our existing licensing and other relationships; and
- the terms of any new collaborative, licensing and other arrangements that we may establish.

If we require additional financing and cannot secure sufficient financing on acceptable terms, we may need to delay, reduce or eliminate some or all of our research and development programs, any of which could have a material adverse effect on our business and financial condition.

We have a history of net losses, we anticipate additional losses and we may never become profitable.

Other than the year ended December 31, 2008, we have incurred net losses in each fiscal year since we commenced our research activities. The net income we realized in 2008 was due entirely to our December 2008 transactions with Merck KGaA, and we do not anticipate realizing net income again for the foreseeable future. As of December 31, 2016, our accumulated deficit was approximately $572.3 million. Our losses have resulted primarily from expenses incurred in research and development of our product candidates. We make significant capital commitments to fund the development

of our product candidates. If these development efforts are unsuccessful, the development costs would be incurred without any future revenue, which could have a material adverse effect on our financial condition. We do not know when or if we will complete our product development efforts, receive regulatory approval for any of our product candidates, or successfully commercialize any approved products. As a result, it is difficult to predict the extent of any future losses or the time required to achieve profitability, if at all. Any failure of tucatinib or our other product candidates to complete successful clinical trials and obtain regulatory approval and any failure to become and remain profitable could adversely affect the price of our common stock and our ability to raise capital and continue operations.

We may be unable to enter into licensing or collaboration relationships.

We may from time to time seek to enter into licensing or collaboration relationships. Proposing, negotiating and implementing an economically viable licensing or collaboration arrangement is a lengthy and complex process. We compete for partnering arrangements and license agreements with pharmaceutical and biotechnology companies and other institutions. Our competitors may have stronger relationships with third parties with whom we are interested in collaborating or may have more established histories of developing and commercializing products. As a result, our competitors may have a competitive advantage in entering into partnering or licensing arrangements with such third parties. In addition, even if we generate interest in a partnering or licensing arrangement, we may not be able to enter into such arrangements on terms that we find acceptable, if at all.

The failure to enroll patients in the HER2CLIMB study or in other clinical trials may cause delays in developing our product candidates.

We may encounter delays if we are unable to enroll enough patients to timely complete the pivotal HER2CLIMB clinical trial or any of our other clinical trials. Patient enrollment depends on many factors, including the size of the patient population, the ability to engage clinical sites, the nature of the protocol, the proximity of patients to clinical sites, the eligibility criteria for the trial, and competition for patients with competing trials. The HER2CLIMB clinical trial has specific criteria for enrollment that may limit the number of patients eligible to participate in the trial and only a small fraction of potentially eligible patients in a given patient population ever seek to participate in a clinical trial. We undertake feasibility studies to help us determine the number of investigative sites required to enroll the patients needed for a given clinical trial, but the results of those studies are estimates and enrollment may be substantially slower than anticipated. Moreover, when one product candidate is evaluated in multiple clinical trials, patient enrollment in ongoing trials can be adversely affected by negative results from completed trials. Our product candidates are focused in oncology, which can be a difficult patient population to recruit. If we fail to enroll patients for HER2CLIMB or our other clinical trials, HER2CLIMB or our other clinical trials may be delayed or suspended, which could delay our ability to generate revenues or raise capital to fund our operations. To enroll patients, we may have to seek additional clinical sites which cause additional expense and time with no guarantee of recruiting patients to our trials.

There is no assurance that we will be granted regulatory approval for tucatinib for metastatic breast cancer or any other indication or be granted regulatory approval for any of our other product candidates.

We are currently conducting a pivotal clinical trial and two Phase 1b trials for tucatinib and preclinical research of our Chk1 kinase inhibitor and TIGIT antibodies. There can be no assurance that these and future studies and trials will demonstrate sufficient safety and efficacy to obtain the requisite regulatory approvals. A number of companies in the biotechnology and pharmaceutical industries, including our company, have suffered significant setbacks in advanced clinical trials, even after promising results in earlier trials. For example, in September 2014, we and Merck KGaA announced that Merck KGaA decided to discontinue the clinical development program of tecemotide in NSCLC, including the Phase III INSPIRE and START2 studies.

Further, we may be unable to submit applications to regulatory agencies within the time frame we currently expect. Once submitted, applications must be approved by various regulatory agencies before we can commercialize the product described in the application. Additionally, even if applications are submitted, regulatory approval may not be obtained for any of our product candidates, and regulatory agencies could require additional clinical trials to verify safety or efficacy, which could make further development of our product candidates impracticable. If our product candidates are not shown to be safe and effective in clinical trials, we may not receive regulatory approval, which would have a material adverse effect on our business, financial condition and results of operations.

We currently rely on third-party manufacturers and other third parties to manufacture, package and supply tucatinib. Any disruption in production, inability of these third parties to produce adequate, satisfactory quantities to meet our needs or other impediments with respect to, manufacturing and supply could adversely affect our ability to continue and the HER2CLIMB and other clinical trials of tucatinib, delay submissions of our regulatory applications or adversely affect our ability to commercialize tucatinib in a timely manner, or at all.

We are responsible for the manufacturing, labeling, packaging and distribution of tucatinib, which we outsource to third parties. Manufacture and supply of drug products such as tucatinib is a complex process involving multiple steps and multiple manufacturers and service providers. If our third-party manufacturers cease or interrupt production, if our third-party manufacturers and other service providers fail to supply satisfactory materials, products or services for any reason or experience performance delays or quality concerns, or if materials or products are lost in transit or in the manufacturing process, such interruptions could substantially delay progress on our programs or impact clinical trial drug supply, with the potential for additional costs and a material adverse effect on our business, financial condition and results of operations.

Our product candidates have not yet been manufactured on a commercial scale. Manufacturing at commercial scale may require, third-party manufacturers to increase manufacturing capacity, which may require the manufacturers to fund capital improvements to support the scale up of manufacturing and related activities. With respect to a product candidate, we may be required to provide all or a portion of these funds. Third-party manufacturers may not be able to successfully increase manufacturing capacity for a product candidate for which we obtain marketing approval in a timely or economic manner, or at all. If any manufacturer is unable to provide commercial quantities of a product candidate, we will need to successfully transfer manufacturing technology to a new manufacturer. Engaging a new manufacturer for a particular product candidate could require us to conduct comparative studies or use other means to determine equivalence between that product candidate manufactured by a new manufacturer and the product candidate manufactured by the existing manufacturer, which could delay or prevent commercialization of our product candidate. If any of these manufacturers is unable or unwilling to increase its manufacturing capacity or if alternative arrangements are not established on a timely basis or on acceptable terms, the development and commercialization of the particular product candidate may be delayed or there may be a shortage in supply.

Manufacturers of our product candidates and related service providers must comply with GMP requirements enforced by the FDA through its facilities inspection program or by foreign regulatory agencies. These requirements include quality control, quality assurance and the maintenance of records and documentation. Manufacturers of our products and related service providers may be unable to comply with these GMP requirements and with other FDA, state and foreign regulatory requirements. We have little control over our manufacturers' or service providers' compliance with these regulations and standards. A failure to comply with these requirements may result in fines and civil penalties, suspension of production, or restrictions on the use of products produced, suspension or delay in product approval, product seizure or recall, or withdrawal of product approval. If the safety of any quantities supplied is compromised due to our manufacturers' or other service providers' failure to adhere to GMP or other applicable laws or for other reasons, we may not be able to obtain regulatory approval for our product candidates, the development and commercialization of our product candidates may be delayed and there may be a shortage in supply, which may prevent successful commercialization of our products.

Preclinical and clinical trials are expensive and time consuming, and any failure or delay in commencing or completing clinical trials for our product candidates could severely harm our business.

We are currently conducting Phase 1b clinical trials and a pivotal Phase 2 clinical trial for tucatinib. Each of our product candidates must undergo extensive preclinical studies and clinical trials as a condition to regulatory approval. Preclinical studies and clinical trials are expensive and take many years to complete. The commencement and completion of clinical trials for our product candidates may be delayed by many factors, including:

- safety issues or side effects;
- delays in patient enrollment and variability in the number and types of patients available for clinical trials;
- poor effectiveness of product candidates during clinical trials;
- governmental or regulatory delays and changes in regulatory requirements, policy and guidelines;
- our ability to satisfy regulatory requirements to commence a clinical trial and conduct the clinical trial in accordance with good clinical practices;
- our ability to manufacture or obtain from third parties materials sufficient for use in preclinical studies and clinical trials; and
- varying interpretation of data by the FDA and similar foreign regulatory agencies.

It is possible that none of our product candidates will complete clinical trials in any of the markets in which we intend to sell those product candidates. Accordingly, we may not receive the regulatory approvals necessary to market our product candidates. Any failure or delay in commencing or completing clinical trials or obtaining regulatory approvals for product candidates would prevent or delay their commercialization and severely harm our business and financial condition.

In addition, both prior to and after regulatory approval of a product, regulatory agencies may require us to delay, restrict or discontinue clinical trials on various grounds, including a finding that the subjects or patients are being exposed to an unacceptable health risk. In addition, all statutes and regulations governing the conduct of clinical trials are subject to change in the future, which could affect the cost of such clinical trials. Any unanticipated delays in clinical studies could delay our ability to generate revenues and harm our financial condition and results of operations.

We rely on third parties to conduct our clinical trials. If these third parties do not perform as contractually required or otherwise expected, we may not be able to obtain regulatory approval for or be able to commercialize our product candidates.

We rely on third parties, such as contract research and clinical organizations, medical institutions, clinical investigators and contract laboratories, to assist in conducting our clinical trials. We have, in the ordinary course of business, entered into agreements with these third parties. Nonetheless, we are responsible for confirming that each of our clinical trials is conducted in accordance with its general investigational plan and protocol. Moreover, the FDA and foreign regulatory agencies require us to comply with regulations and standards, commonly referred to as good clinical practices, for conducting, recording and reporting the results of clinical trials to assure that data and reported results are credible and accurate and that the trial participants are adequately protected. Our reliance on third parties does not relieve us of these responsibilities and requirements. If these third parties do not successfully carry out their contractual duties or regulatory obligations or meet expected deadlines, if the third parties 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 clinical protocols or regulatory requirements or for other reasons, our clinical trials may be extended, delayed, suspended or terminated, and we may not be able to obtain regulatory approval for our product candidates.

Our product candidates may never achieve market acceptance even if we obtain regulatory approvals.

Even if we receive regulatory approvals for the commercial sale of our product candidates, the commercial success of these product candidates will depend on, among other things, their acceptance by physicians, patients, third-party payers such as health insurance companies, and other members of the medical community as a therapeutic and cost-effective alternative to competing products and treatments. New patterns of care, alternative new treatments or different reimbursement and payer paradigms, possibly due to economic conditions or governmental policies, could negatively impact the commercial viability of our product candidates. If our product candidates fail to gain market acceptance, we may be unable to earn sufficient revenue to continue our business. Market acceptance of, and demand for, any product that we may develop and commercialize will depend on many factors, including:

- our ability to provide acceptable evidence of safety and efficacy;
- the prevalence and severity of adverse side effects;
- availability, relative cost and relative efficacy of alternative and competing treatments;
- the effectiveness of our marketing and distribution strategy;
- publicity concerning our products or competing products and treatments; and
- our ability to obtain sufficient third-party insurance coverage or reimbursement.

If our product candidates do not become widely accepted by physicians, patients, third-party payers and other members of the medical community, our business, financial condition and results of operations would be materially and adversely affected.

Even if regulatory approval is received for our product candidates, we are subject to ongoing regulatory obligations that, if not met, may adversely affect our ability to commercialize an approved product.

We are subject to ongoing regulatory obligations following approval of a product including potential requirements for additional clinical trials, ongoing GMP manufacturing requirements, and other requirements. If a product is approved for commercial sale, safety concerns may arise that were not present in clinical trials or occur at higher rates than in our clinical trials of the product which may result in regulatory restrictions. In addition, reports of adverse events or safety concerns could result in the FDA or other regulatory authorities denying or withdrawing approval of the product for any or all indications. There is no assurance that patients will not experience such adverse events or safety concerns.

In addition, we will be required to comply with other limitations and restrictions imposed by U.S., state and foreign governments in connection with the marketing of an approved product and reimbursement for approved products. Our failure to meet any of these requirements may have an adverse effect on our ability to commercialize an approved product and our business would suffer.

In addition, if we fail to comply with any applicable requirements, we could be subject to penalties, including:

- warning letters;
- suspension of clinical trials;
- product liability litigation;
- total or partial suspension of manufacturing or costly new manufacturing requirements;
- fines;
- product recalls;
- withdrawal of regulatory approval;
- operating restrictions;
- disgorgement of profits;
- injunctions; and
- criminal prosecution.

Any of these penalties may result in substantial costs to us and could adversely affect our ability to commercialize an approved product and our business would suffer.

Failure to obtain regulatory approval in foreign jurisdictions would prevent us from marketing our products internationally.

We intend to have our product candidates marketed outside the United States. In order to market our products in the European Union and many other non-U.S. jurisdictions, we must obtain separate regulatory approvals and comply with numerous and varying regulatory requirements. To date, we have not filed for marketing approval for any of our product candidates and may not receive the approvals necessary to commercialize our product candidates in any market.

The approval procedure varies among countries and may include all of the risks associated with obtaining FDA approval. The time required to obtain foreign regulatory approval may differ from that required to obtain FDA approval, and additional clinical trials, testing and data review may be required. We may not obtain foreign regulatory approvals on a timely basis, if at all. Additionally, approval by the FDA does not ensure approval by regulatory agencies in other countries, and approval by one foreign regulatory authority does not ensure approval by regulatory agencies in other foreign countries or by the FDA. However, a failure or delay in obtaining regulatory approval in one jurisdiction may have a negative effect on the regulatory approval process in other jurisdictions, including approval by the FDA. The failure to obtain regulatory approval in foreign jurisdictions could limit commercialization of our products, reduce our ability to generate profits and harm our business.

We may expand our business through the acquisition of companies or businesses or by entering into collaborations or in-licensing product candidates that could disrupt our business and harm our financial condition.

We have in the past and may in the future seek to expand our pipeline and capabilities by acquiring one or more companies or businesses, entering into collaborations or in-licensing one or more product candidates. For example, in December 2014, we entered into a license agreement with Array for exclusive rights to develop and commercialize tucatinib. Acquisitions, collaborations and in-licenses involve numerous risks, including:

- substantial cash expenditures;
- potentially dilutive issuance of equity securities;
- incurrence of debt and contingent liabilities, some of which may be difficult or impossible to identify at the time of acquisition;
- potential adverse consequences if the acquired assets are worth less than we anticipated or we are unable to successfully develop and commercialize the acquired assets for any reason;
- difficulties in assimilating the operations and technology of the acquired companies;
- potential disputes, including litigation, regarding contingent consideration for the acquired assets;
- the assumption of unknown liabilities of the acquired businesses;
- diverting our management's attention away from other business concerns;
- entering markets in which we have limited or no direct experience; and
- potential loss of our key employees or key employees of the acquired companies or businesses.

Our experience in making acquisitions, entering collaborations and in-licensing product candidates is limited. We cannot assure you that any acquisition, collaboration or in-license will result in short-term or long-term benefits to us. We may incorrectly judge the value or worth of an acquired company or business or in-licensed product candidate. In addition, our future success may depend in part on our ability to manage the growth and technology integration associated with any of these acquisitions, collaborations and in-licenses. We cannot assure you that we will be able to successfully combine our business with that of acquired businesses, manage collaborations or integrate in-licensed product candidates or that such efforts would be successful. Furthermore, the development or expansion of our business or any acquired business or company or any collaboration or in-licensed product candidate may require a substantial capital investment by us. We may also seek to raise funds by selling shares of our capital stock, which could dilute our current stockholders' ownership interest, or securities convertible into our capital stock, which could dilute current stockholders' ownership interest upon conversion.

Our success depends in large part on our and our licensors' ability to obtain and maintain patent and other intellectual property protection worldwide with respect to our proprietary technology and products that are important to our business.

Our ability to successfully commercialize our technology and products and to compete effectively may be materially adversely affected if we are unable to obtain and maintain effective intellectual property rights to our technologies and product candidates throughout the world. The intellectual property position of pharmaceutical and biotechnology companies generally is highly uncertain and involves complex legal and factual questions. The process of filing patent applications in the United States and abroad is expensive and time-consuming, and we or our licensors may not be able to file and prosecute all necessary or desirable patent applications at a reasonable cost or in a timely manner.

In recent years there have been significant changes in both the patent laws and interpretation of the patent laws in the United States and other countries. As a result, the issuance, scope, validity, enforceability and commercial value of our and our licensors' patent rights are highly uncertain. Our owned and licensed patents may be challenged in the courts or patent offices in the United States and abroad. Such challenges may result in patent claims being narrowed, invalidated or held unenforceable, which could limit our ability to obtain and maintain patent protection for our products and could prevent us from effectively blocking others from commercializing competitive technologies and products or limit the duration of the patent protection for our technology and products.

Our and our licensors' pending and future patent applications may not result in patents being issued which protect our technology or products. Our competitors may be able to circumvent our owned or licensed patents by developing similar or alternative technologies or products in a non-infringing manner.

We have in-licensed or acquired a portion of our intellectual property necessary to develop certain of our product candidates. If we fail to comply with our obligations in our intellectual property licenses with third parties, we could lose such licenses or intellectual property rights that are important to our business.

We are a party to intellectual property license agreements with other parties, including with respect to tucatinib, and expect to enter into additional license agreements in the future. In some circumstances, we may not have the right to may enter into additional license agreements in the future. In some circumstances, we may not have the right to control the preparation, filing and prosecution of patent applications, or to maintain the patents, covering technology or products that we license from third parties. Therefore, we cannot be certain that these patents and applications will be prosecuted and enforced in a manner consistent with the best interests of our business. In addition, if the parties who license patents to us fail to maintain such patents, or lose rights to those patents, the rights we have licensed may be reduced or eliminated. If we fail to meet our obligations in our license agreement, our licensors may have the right to terminate these agreements, in which event we may lose intellectual property rights to a product candidate that is covered by the agreement. Termination of these licenses or reduction or elimination of our licensed rights may result in our having to negotiate new or reinstated licenses with less favorable terms or our not having sufficient intellectual property rights to operate our business.

Protection of trade secrets and confidential information is difficult and we may not be successful in protecting our rights to our unpatented proprietary know-how and trade secrets, thus harming our business and competitive position.

We rely on unpatented proprietary know-how, trade secrets and continuing technological innovations to develop and maintain our competitive position. We employ various methods, including confidentiality agreements with employees and consultants, customers, suppliers and potential collaborators to protect our know-how and trade secrets. However, these agreements may not adequately protect us or provide an adequate remedy. Our trade secrets or know-how may become known or be independently discovered by our competitors. Unpatented proprietary rights, including trade secrets and know-how, can be difficult to protect and lose their value if they are discovered or disclosed.

Further, we may not be able to deter current and former employees, contractors and other parties from breaching confidentiality agreements and misappropriating our proprietary information. It is possible that other parties may copy or otherwise obtain and use our information and proprietary technology without authorization.

We may be subject to claims that our employees have wrongfully used or disclosed intellectual property of their former employers, which may cause us to spend substantial resources and distract our personnel from their normal responsibilities.

Many of our employees were previously employed at universities or other companies, including our competitors or potential competitors. Although we try to ensure that our employees do not use the proprietary information or know-how of others, we may be subject to claims that we or our employees have used or disclosed proprietary information of a former employer. 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. Even if we are successful in defending against such claims, legal proceedings relating to the defense may cause us to incur significant expenses and. reduce our resources available for development activities.

If our trademarks are not adequately protected, we may not be able to build name recognition in our markets of interest and our business may be adversely affected.

Our trademarks, CASCADIAN THERAPEUTICS and CASCADIAN, may be challenged, infringed, circumvented or declared generic or determined to be infringing on other marks. We may not be able to protect our rights to this trademark and build name recognition in our markets of interest. Over the long term, if we are unable to establish name recognition based on our trademark, then we may not be able to compete effectively and our business may be adversely.

If we are unable to obtain intellectual property rights to develop or market our products or we infringe on a third-party patent or other intellectual property rights, we may need to alter or terminate a product development program.

If our product candidates infringe or conflict with the rights of others, we may not be able to manufacture or market our product candidates, which could have a material and adverse effect on us.

While conducting clinical trials, we are exempt from patent infringement based on the Drug Price Competition and Patent Term Restoration Act or Hatch–Waxman Act, (codified in relevant part at 35 U.S.C. §271(e)), which provides an exemption for activities conducted in order to obtain FDA approval of a drug product. However, issued patents held by others may limit our ability to develop commercial products. All issued patents are entitled to a presumption of validity under the laws of the United States. If we need licenses to such patents to permit us to develop or market our product candidates, we may be required to pay significant fees or royalties, and we cannot be certain that we would be able to obtain such licenses on commercially reasonable terms, if at all. Competitors or third parties may obtain patents that may cover subject matter we use in developing the technology required to bring our product candidates to market.

We know that others have filed patent applications in various jurisdictions that relate to several areas in which we are developing products. Some of these patent applications have already resulted in the issuance of patents and some are still pending. We may be required to alter our processes or product candidates, pay licensing fees or cease activities. Much of our technology, including tucatinib and our Chk1 kinase inhibitors, originated from third-party sources.

If use of technology incorporated into or used to produce our product candidates is challenged, or if our processes or product candidates conflict with patent rights of others, third parties could bring legal actions against us, in Europe, the United States and elsewhere, claiming damages and seeking to enjoin manufacturing and marketing of the affected products. Additionally, it is not possible to predict with certainty what patent claims may issue from pending applications. In the United States, for example, patent prosecution can proceed in secret prior to issuance of a patent. As a result, third parties may be able to obtain patents with claims relating to our product candidates or technology, which they could attempt to assert against us. Further, as we develop our products, third parties may assert that we infringe the patents currently held or licensed by them and it is difficult to predict the outcome of any such action. Ultimately, we could be prevented from commercializing a product, or forced to cease some aspect of our business operations as a result of claims of patent infringement or violation of other intellectual property rights, which could have a material and adverse effect on our business, financial condition and results of operations.

We may incur substantial costs as a result of litigation or other proceedings relating to patent and other intellectual property rights, and we may be unable to protect our rights in, or to use, our technology.

There has been significant litigation in the biopharmaceutical industry over patents and other proprietary rights and if we become involved in any litigation, it could consume a substantial portion of our resources, regardless of the outcome of the litigation. If these legal actions are successful, in addition to any potential liability for damages, we could be required to obtain a license, grant cross-licenses and pay substantial royalties in order to continue to manufacture or market the affected products.

The cost of litigation to uphold the validity of patents to prevent infringement or to otherwise protect our proprietary rights can be substantial. If the outcome of litigation is averse to us, third parties may be able to use the challenged technologies without payment to us. There is also the risk that, even if the validity of a patent were upheld, a court would refuse to stop the other party from using the inventions, including on the ground that its activities do not infringe that patent. There is no assurance that we would prevail in any legal action or that any license required under a third-party patent would be made available on acceptable terms or at all. If any of these events were to occur, our business, financial condition and results of operations would be materially and adversely effected.

If any products we develop become subject to unfavorable pricing regulations, third-party reimbursement practices or healthcare reform initiatives, our ability to successfully commercialize our products will be impaired.

Our future revenues, profitability and access to capital will be affected by the continuing efforts of governmental and private third-party payers to contain or reduce the costs of health care through various means. We expect a number of federal, state and foreign proposals to control the cost of drugs through government regulation. We are unsure of the impact that the potential repeal of recent health care reform legislation may have on our business or what actions federal, state, foreign and private payers may take or reforms that may be implemented in the future. Therefore, it is difficult to predict the effect of any potential reform on our business. Our ability to commercialize our products successfully will depend, in part, on the extent to which reimbursement for the cost of such products and related treatments will be available from government health administration authorities, such as Medicare and Medicaid in the United States, private health insurers and other organizations. Significant uncertainty exists as to the reimbursement status of newly approved health care products, particularly for indications for which there is no current effective treatment or for which medical care typically is not sought. Adequate third-party coverage may not be available to enable us to maintain price levels sufficient to realize an appropriate return on our investment in product research and development. If adequate coverage and reimbursement levels are not provided by government and third-party payers for use of our products, our products may fail to achieve market acceptance without a substantial reduction in price or at all and our results of operations will be harmed.

Governments often impose strict price controls, which may adversely affect our future profitability.

We intend to seek approval to market our future products in both the United States and foreign jurisdictions. If we obtain approval in one or more foreign jurisdictions, we will be subject to rules and regulations in those jurisdictions relating to our product. In some foreign countries, particularly in the European Union, prescription drug pricing is subject to government control. In these countries, pricing negotiations with governmental authorities can take considerable time after the receipt of marketing approval for a drug candidate. To obtain reimbursement or pricing approval in some countries, we may be required to conduct a clinical trial that compares the cost-effectiveness of our future product to other available therapies.

Domestic and foreign governments continue to propose and pass legislation designed to reduce the cost of healthcare, including drugs. In the United States, there have been, and we expect that there will continue to be, federal and state proposals to implement similar governmental control. In addition, increasing emphasis on managed care in the United States will continue to put pressure on the pricing of pharmaceutical products. While the current federal administration has indicated an intent to repeal the Patient Protection and Affordable Care Act, as amended by the Health Care and Education Affordability Reconciliation Act, or collectively, PPACA, the current administration has also indicated an intent to address prescription drug pricing and recent Congressional hearings have brought increased public attention to the costs of prescription drugs.

We anticipate that healthcare reform measures that may be adopted in the future, may result in more rigorous coverage criteria and downward pressure on the price for any approved product, and could seriously harm our prospects. Any reduction in reimbursement from Medicare or other government programs may result in a similar reduction in payments from private payers. If reimbursement of our future products is unavailable or limited in scope or amount, or if pricing is set at unsatisfactory levels, we may be unable to achieve or sustain profitability.

We face potential product liability exposure, and if successful claims are brought against us, we may incur substantial liability for a product candidate which may limit its commercial potential.

The use of tucatinib or our other product candidates in clinical trials and the sale of any products for which we obtain marketing approval expose us to the risk of product liability claims. Product liability claims might be brought against us by consumers, health care providers, pharmaceutical companies or other third parties. If we cannot successfully defend ourselves against these claims, we will incur substantial liabilities. Regardless of merit or eventual outcome, liability claims may result in:

- decreased demand for approved products;
- delay in completing or failure to complete enrollment in any clinical trial of the affected product;
- impairment of our business reputation;
- withdrawal of clinical trial participants;
- costs of related litigation;
- substantial monetary awards to patients or other claimants;
- loss of revenues; and
- the inability to commercialize our product candidates.

Although we currently have product liability insurance coverage for our clinical trials for expenses or losses up to a $10 million aggregate annual limit, our insurance coverage may not reimburse us or may not be sufficient to reimburse us for any or all expenses or losses we may suffer. Moreover, insurance coverage is becoming increasingly expensive and, in the future, we may not be able to maintain insurance coverage at a reasonable cost or in sufficient amounts to protect us against losses due to clinical trial or product liability. We intend to expand our insurance coverage to include the sale of commercial products if we obtain marketing approval for tucatinib or our other product candidates in development, but we may be unable to obtain commercially reasonable product liability insurance for any products approved for marketing. On occasion, large judgments have been awarded in class action lawsuits based on products that had unanticipated side effects. A successful product liability claim or series of claims brought against us could cause our stock price to fall and, if judgments exceed our insurance coverage, could decrease our cash and adversely affect our business.

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

The life sciences industry is highly competitive, and we face significant competition from many pharmaceutical, biopharmaceutical and biotechnology companies that are researching and marketing products designed to address cancer indications for which we are currently developing products or for which we may develop products in the future. Our future success depends on our ability to demonstrate and maintain a competitive advantage with respect to the design, development and commercialization of tucatinib and our other product candidates. We expect any product candidate that we commercialize on our own or with a collaboration partner will compete with existing, market-leading products and products in development. The following information provides a landscape view of known marketed products or programs in development that compete with our product candidates:

Tucatinib is an inhibitor of the receptor tyrosine kinase HER2, also known as ErbB2. There are multiple marketed products which target HER2, including the antibodies trastuzumab (Herceptin ®) and pertuzumab (Perjeta ®) and the antibody toxin conjugate ado-trastuzumab emtansine or T-DM1 (Kadcyla ®). In addition, lapatinib (Tykerb ®) is a dual HER1/HER2 oral kinase inhibitor for the treatment of metastatic breast cancer. Neratinib is a HER1/HER2/HER4 inhibitor and margetuximab is a HER2 targeted, Fc-optimized antibody, both of which are in late-stage clinical development.

With respect to checkpoint kinase 1 Inhibitors, there are currently no marketed drugs which specifically target Chk1. There are a few compounds in clinical trials, the most advanced of which is in a Phase 2 study. With respect to our TIGIT antibody program, no marketed products currently target TIGIT, and there is one TIGIT antibody in an early stage clinical trial and several in preclinical development.

Many of our potential competitors have substantially greater financial, technical and personnel resources than we have. In addition, many of these competitors have significantly greater commercial infrastructures than we have. Our ability to compete successfully will depend largely on our ability to:

- design and develop product candidates that are superior to other products in the market;
- attract qualified scientific, medical, sales and marketing and commercial personnel;
- obtain patent and/or other proprietary protection for our processes and product candidates;
- obtain required regulatory approvals; and
- successfully collaborate with others, as needed, in the design, development and commercialization of our product candidates.

In addition, established competitors may invest heavily to quickly discover and develop novel compounds that could make tucatinib or our other product candidates obsolete. In addition, any new product that competes with a generic market-leading product must demonstrate compelling advantages in efficacy, convenience, tolerability and safety in order to overcome severe price competition and to be commercially successful. If we are not able to compete effectively against our current and future competitors, our business will not grow and our financial condition and operations will suffer.

If we are unable to enter into agreements with partners to perform sales and marketing functions, or build these functions ourselves, we will not be able to commercialize our product candidates.

We currently do not have any internal sales, marketing or distribution capabilities. In order to commercialize tucatinib or any of our other product candidates, we must either acquire or internally develop a selling, marketing and distribution infrastructure or enter into agreements with partners to perform these services for us. We may not be able to enter into such arrangements on commercially acceptable terms, if at all. Factors that may inhibit our efforts to commercialize our product candidates without entering into arrangements with third parties include:

- our inability to recruit and retain adequate numbers of effective sales and marketing personnel;
- the inability of sales personnel to obtain access to or persuade adequate numbers of physicians to prescribe our products;

- the lack of complementary products to be offered by sales personnel, which may put us at a competitive disadvantage relative to companies with more extensive product lines; and
- unforeseen costs and expenses associated with creating a sales and marketing organization.

If we are not able to partner with a third party and are not successful in recruiting sales and marketing personnel or in building a sales and marketing and distribution infrastructure, we will have difficulty commercializing tucatinib or any of our other product candidates, which would adversely affect our business and financial condition.

If we lose key personnel, or we are unable to attract and retain highly-qualified personnel on a cost-effective basis, it will be more difficult for us to manage our existing business operations and to identify and pursue new growth opportunities.

Our success depends in large part upon our ability to attract and retain highly qualified scientific, clinical, manufacturing, and management personnel. In addition, future growth will require us to continue to implement and improve our managerial, operational and financial systems, and continue to retain, recruit and train additional qualified personnel, which may impose a strain on our administrative and operational infrastructure. Any difficulties in hiring or retaining key personnel or managing this growth could disrupt our operations. The competition for qualified personnel in the biopharmaceutical field is intense. We are highly dependent on our continued ability to attract, retain and motivate highly-qualified management, clinical and scientific personnel. Due to our limited resources, and the intense competition for qualified personnel, we may not be able to effectively recruit, train and retain additional qualified personnel. If we are unable to retain key personnel or manage our growth effectively, we may not be able to implement our business plan.

Furthermore, we have not entered into non-competition agreements with all of our key employees and we do not maintain “key person” life insurance on any of our officers, employees or consultants. The loss of the services of existing personnel, the failure to recruit additional key scientific, technical and managerial personnel in a timely manner, and the loss of our employees to our competitors would each harm our research, development and clinical programs and our business.

Our business is subject to complex environmental legislation that increases both our costs and the risk of noncompliance.

Our business involves the use of hazardous material, which requires us to comply with environmental regulations and we will be required to adjust to. new and upcoming requirements relating to the materials composition of our product candidates. If we use hazardous materials in a manner that causes contamination or injury or violates laws, we may be liable for damages. Environmental regulations could have a material adverse effect on the results of our operations and our financial position. We maintain insurance for any liability associated with our hazardous materials activities, and it is possible in the future that our coverage would be insufficient if we incurred a material environmental liability.

If we fail to establish and maintain proper and effective internal controls, our ability to produce accurate financial statements on a timely basis could be impaired, which would adversely affect our consolidated operating results, our ability to operate our business, and our stock price, and could result in litigation or similar actions.

Ensuring that we have adequate internal financial and accounting controls and procedures in place to produce accurate financial statements on a timely basis is a costly and time-consuming effort that needs to be re-evaluated frequently. Failure on our part to have effective internal financial and accounting controls would cause our financial reporting to be unreliable, could have a material adverse effect on our business, operating results, and financial condition, and could cause the trading price of our common stock to fall dramatically. Our management is responsible for establishing and maintaining adequate internal control over financial reporting to provide reasonable assurance regarding the reliability of our financial reporting and the preparation of financial statements for external purposes in accordance with U.S. GAAP. Our management does not believe that our internal control over financial reporting will prevent or detect all errors and all fraud. A control system, no matter how well designed and operated, can provide only reasonable, not absolute, assurance that the control system’s objectives will be met. Because of the inherent limitations in all control systems, no evaluation of controls can provide absolute assurance that misstatements due to error or fraud will not occur or that all control issues and instances of fraud, if any, within the company will be detected.

We cannot be certain that the actions we have taken to ensure we have adequate internal controls over financial reporting will be sufficient. In future periods, if the process required by Section 404 of the Sarbanes-Oxley Act reveals any material weaknesses or significant deficiencies, the correction of any such material weaknesses or significant deficiencies could require remedial measures which could be costly and time-consuming. In addition, in such a case, we may be unable to produce accurate financial statements on a timely basis. Any associated accounting restatement could create a significant strain on our internal resources and cause delays in our release of quarterly or annual financial results and the filing of related reports, increase our costs and cause management distraction. Any of the foregoing could cause investors to lose confidence in the reliability of our consolidated financial statements, which could cause the market price of our common stock to decline and make it more difficult for us to finance our operations and growth.

We may face risks related to securities litigation that could result in significant legal expenses and settlement or damage awards.

We have in the past been, and may in the future become, subject to claims and litigation alleging violations of the securities laws or other related claims, which could harm our business and require us to incur significant costs. We are generally obliged, to the extent permitted by law, to indemnify our current and former directors and officers who are named as defendants in these types of lawsuits. Any future litigation may require significant attention from management and could result in significant legal expenses, settlement costs or damage awards that could have a material impact on our financial position, results of operations, and cash flows.

Risks Related to the Ownership of Our Common Stock

The trading price of our common stock may be volatile.

The market prices for and trading volumes of securities of biopharmaceutical companies, including our securities, have been historically volatile. For example, we experienced significant volatility following a press release regarding our Phase 1b studies of tucatinib in December 2015. The market has from time to time experienced significant price and volume fluctuations unrelated to the operating performance of particular companies. The market price of our common shares may fluctuate significantly due to a variety of factors, including:

- the results of preclinical testing and clinical trials by us, our competitors and/or companies that are developing products that are similar to ours (regardless of whether such products are potentially competitive with ours);
- public concern as to the safety of products developed by us or others;
- our ability to timely enroll patients and complete our pivotal HER2CLIMB clinical study;
- the results of the HER2CLIMB study or other studies of tucatinib that we or investigators may undertake;
- our ability to execute our business strategies;
- technological innovations or new therapeutic products;
- governmental regulations;
- developments in patent or other proprietary rights;
- litigation;
- general market conditions in our industry or in the economy as a whole;
- comments by securities analysts;
- comments made on social media platforms, including blogs, websites, message boards and other forms of Internet-based communications;
- difficulty with the market interpreting and understanding complex data;
- the issuance of additional shares of common stock, or securities convertible into, or exercisable or exchangeable for, shares of our common stock in connection with financings, acquisitions or otherwise;
- the incurrence of debt; and
- political instability, natural disasters, war and/or events of terrorism.

We may seek to raise additional capital in the future; however, such capital may not be available to us on reasonable terms, if at all, when or as we require additional funding. If we issue additional shares of our common stock or other securities that may be convertible into, or exercisable or exchangeable for, our common stock, our existing stockholders would experience further dilution.

We expect that we will seek to raise additional capital from time to time in the future. For example, in January 2017 we sold 26,659,300 shares of our common stock and 1,818 shares of our Series E preferred stock in concurrent but separate public offerings.

Future financings may involve the issuance of debt, equity and/or securities convertible into or exercisable or exchangeable for our equity securities. These financings may not be available to us on reasonable terms or at all when and as we require funding. In addition, we will need to increase our authorized capital to ensure that we have shares of common stock available for issuance in any future equity financings. An increase in our authorized capital will require approval of a majority of our stockholders and we may not be able to obtain that approval. If we are able to consummate financings, the trading price of our common stock could be adversely affected and/or the terms of such financings may adversely affect the interests of our existing stockholders. Any failure to obtain additional working capital when required would have a material adverse effect on our business and financial condition and would be expected to result in a decline in our stock price. Any issuances of our common stock, preferred stock, or securities such as warrants or notes that are convertible into, exercisable or exchangeable for, our capital stock, would have a dilutive effect on the voting and economic interest of our existing stockholders.

Several stockholders own a significant percentage of our outstanding capital stock and will be able to influence stockholder and management decisions, which may conflict with your interests as a stockholder.

As of January 26, 2016, New Enterprise Associates and its affiliates (NEA), Baupost, Inc., and Biotechnology Value Fund and its affiliates (BVF) collectively held combined voting power over approximately 40% of the outstanding shares of our common stock. Additionally, NEA holds shares of our preferred stock convertible into up to 1,818,000 additional shares of our common stock and BVF holds shares of our preferred stock convertible into up to 5,430,601 additional shares of our common stock. As a result of their respective ownership positions, NEA, Baupost, and BVF each may have the ability to significantly influence matters requiring stockholder approval, including, without limitation, the election or removal of directors, an increase in our authorized common stock, mergers, acquisitions, changes of control of our company and sales of all or substantially all of our assets. As a result, of this concentration of ownership, these stockholders may have a significant influence in our management and affairs. This influence may delay, deter or prevent acts that may be favored by our other stockholders, as the interests of these stockholders may not always coincide with the interests of our other stockholders. In addition, this concentration of share ownership may adversely affect the trading price of our shares because it may limit the trading volume and purchase demand for outstanding shares, could adversely affect our stock price should any of these stockholders elect to sell some or all of their shares, and investors may perceive disadvantages in owning shares in a company with significant stockholders.

Because we do not expect to pay dividends on our common stock, stockholders will benefit from an investment in our common stock only if it appreciates in value.

We have never paid cash dividends on our common shares and have no present intention to pay any dividends in the future. We are not profitable and do not expect to earn any material revenues for at least several years, if at all. As a result, we intend to use all available cash and liquid assets in the development of our business. Any future determination about the payment of dividends will be made at the discretion of our board of directors and will depend upon our earnings, if any, capital requirements, operating and financial conditions and on such other factors as our board of directors deems relevant. As a result, the success of an investment in our common stock will depend upon any future appreciation in its value. There is no guarantee that our common stock will appreciate in value or even maintain the price at which stockholders have purchased their shares.

We can issue shares of preferred stock that may adversely affect the rights of a stockholder of our common stock.

Our certificate of incorporation authorizes us to issue up to 10,000,000 shares of preferred stock with designations, rights, and preferences determined from time-to-time by our board of directors. Accordingly, our board of directors is empowered, without stockholder approval, to issue preferred stock with dividend, liquidation, conversion, voting or other rights superior to those of holders of our common stock. For example, an issuance of shares of preferred stock could:

- adversely affect the voting power of the holders of our common stock;
- make it more difficult for a third party to gain control of us;
- discourage bids for our common stock at a premium;
- limit or eliminate any payments that the holders of our common stock could expect to receive upon our liquidation; or
- otherwise adversely affect the market price or our common stock.

We have in the past issued, and we may at any time in the future issue, additional shares of authorized preferred stock. As of December 31, 2016, we had outstanding preferred stock convertible into 6,680,625 shares of common stock. In January 2017, we issued additional shares of preferred stock convertible into 1,818,000 shares of common stock. If the holders of such shares of preferred stock convert their shares into common stock, existing holders of our common stock will experience dilution.

Our management has broad discretion over the use of proceeds from the sale of shares of our common and preferred stock and may not use such proceeds in ways that increase the value of our stock price.

In our June 2016 public offering, we sold 6,708,333 shares of common stock and 17,250 shares of Series D convertible preferred stock for net proceeds of approximately $43.2 million and in our January 2017 public offering, we sold 26,659,300 shares of our common stock and 1,818 shares of our Series E convertible preferred stock in concurrent but separate public offerings for net proceeds of approximately $88.3 million. We have broad discretion over the use of proceeds from the sale of these shares, and we could spend the proceeds in ways that do not improve our results of operations or enhance the value of our common stock. Our failure to apply these funds effectively could have a material adverse effect on our business, delay the development of tucatinib and our other product candidates and cause the price of our common stock to decline.

ITEM 1B. *Unresolved Staff Comments*

None.

ITEM 2. *Properties*

In May 2008, we entered into a lease for a facility in Seattle, Washington totaling approximately 17,000 square feet, which includes laboratory space, to house our research and development and administrative activities. In November 2016, we amended our lease to add approximately 2,600 square feet of office space. The lease on the premises expires in December 2018. We believe that our Seattle facility is in good condition, adequately maintained and suitable for the conduct of our current business.

ITEM 3. *Legal Proceedings*

From time to time, we may be involved in litigation relating to claims arising out of our operations in the normal course of business. We are not currently a party to any legal proceedings, the adverse outcome of which, in management's opinion, individually or in the aggregate, would have a material adverse effect on the results of our operations or financial position. There are no material proceedings to which any director, officer or any of our affiliates, any owner of record or beneficially of more than five percent of any class of our voting securities, or any associate of any such director, officer, our affiliates, or security holder, is a party adverse to us or our consolidated subsidiaries or has a material interest adverse thereto.

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 for Common Stock

Our common stock is quoted on the NASDAQ Global Market under the symbol "CASC". The following table sets forth for the indicated periods the high and low sales prices of our common stock as reported by the NASDAQ Global Market. The per share amounts are adjusted for our one-for-six reverse stock split that occurred in November 2016. Further information on the stock split can be found in Note 2, Significant Accounting Policies to the consolidated financial statements included in this report.

	High	Low
Fiscal year ended December 31, 2016:		
First Quarter	$13.14	$ 5.40
Second Quarter	8.58	4.92
Third Quarter	10.98	5.58
Fourth Quarter	6.72	5.04
Fiscal year ended December 31, 2015:		
First Quarter	$11.88	$ 8.88
Second Quarter	28.14	8.46
Third Quarter	24.12	15.78
Fourth Quarter	22.50	12.60

Dividends

We have never declared nor paid cash dividends on our common stock. We currently expect to retain future earnings, if any, to finance the operation and expansion of our business, and we do not anticipate paying any cash dividends in the foreseeable future. Any future determination related to our dividend policy will be made at the discretion of our board of directors.

Stockholders

As of February 28, 2017, there were 49,221,940 shares of our common stock outstanding held by approximately 559 stockholders of record and approximately 21,940 stockholders in nominee name.

Securities Authorized for Issuance under Equity Compensation Plans

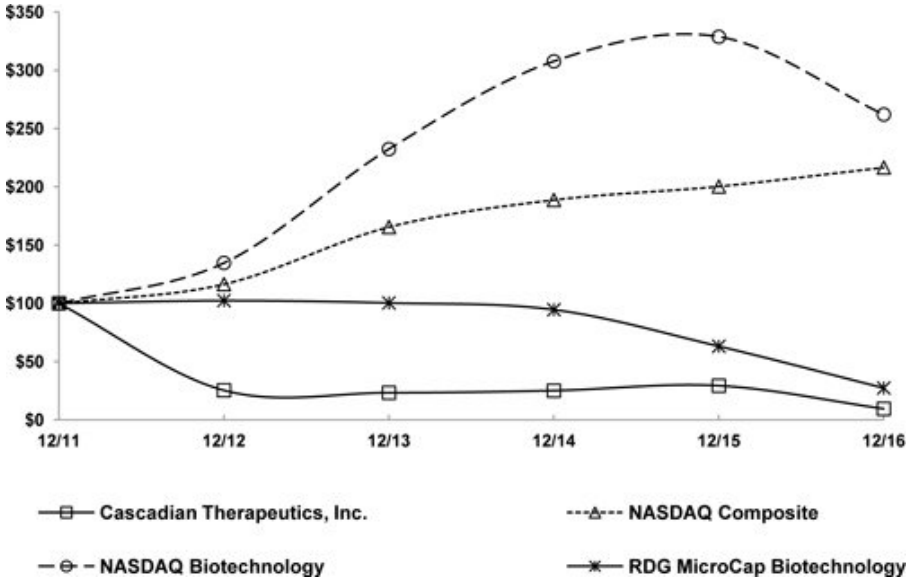
For information concerning our equity compensation plans see the section of this Annual Report on Form 10-K captioned "Part III — Item 12 — Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters."

Stock Performance Graph

The following information relating to the price performance of our common stock shall not be deemed to be "filed" with the SEC or to be "soliciting material" under the Securities Exchange Act of 1934, as amended (the Exchange Act) and it shall not be deemed to be incorporated by reference into any of our filings under the Exchange Act or the Securities Act of 1933, as amended, except to the extent we specifically incorporate it by reference into such filing.

The graph below compares the cumulative total stockholder return of our common stock with that of the NASDAQ Composite Index, NASDAQ Biotechnology Index and RDG MicroCap Biotechnology Index from December 31, 2011 through December 31, 2016. The comparisons in this graph below are based on historical data and are not intended to forecast or be indicative of future performance of our common stock. The graph assumes that $100 was invested and that all dividends were reinvested.

COMPARISON OF 5 YEAR CUMULATIVE TOTAL RETURN*
Among Cascadian Therapeutics, Inc., the NASDAQ Composite Index,
the NASDAQ Biotechnology Index and the RDG MicroCap Biotechnology Index



Unregistered Sale of Equity Securities

During the three months ended December 31, 2016, we did not issue or sell any shares of our common stock or other equity securities pursuant to unregistered transactions in reliance upon exemption from the registration requirements of the Securities Act of 1933, as amended.

Issuer Purchases of Equity Securities

We did not make any purchases of our outstanding common stock during the three months ended December 31, 2016.

ITEM 6. *Selected Financial Data*

The data set forth below is not necessarily indicative of the results of future operations and should be read in conjunction with the consolidated financial statements and notes thereto included elsewhere in this annual report on Form 10-K and also with Part II, Item 7, “Management’s Discussion and Analysis of Financial Condition and Results of Operations.”

	Year Ended December 31,				
	2016	2015	2014	2013	2012
	(Amounts in thousands, except share and per share data.)				
Consolidated Statements of Operations Data:					
Total operating expenses	**$ 64,835**	$ 32,789	$ 50,835	$ 41,223	$ 28,499
Loss from operations	**(64,835)**	(32,789)	(50,835)	(41,223)	(28,499)
Net loss attributable to common stockholders (1) (2)	**$ (60,293)**	$ (32,581)	$ (49,963)	$ (38,759)	$ (3,415)
Loss per share — basic (3)	**$ (3.13)**	$ (2.02)	$ (3.86)	$ (3.73)	$ (0.38)
Loss per share — diluted (3)	**$ (3.13)**	$ (2.02)	$ (3.86)	$ (3.73)	$ (3.16)
Weighted average number of common shares outstanding — basic (3)	**19,264,121**	16,102,860	12,936,640	10,397,941	8,954,780
Weighted average number of common shares outstanding — diluted (3)	**19,264,121**	16,102,860	12,936,640	10,397,941	9,149,994

	As of December 31,				
	2016	2015	2014	2013	2012
	(Amounts in thousands, except share data.)				
Consolidated Balance Sheet Data:					
Cash, cash equivalents and short-term investments	**$ 62,805**	$ 56,360	$ 57,671	$ 60,027	$ 81,254
Total assets (4)	**$ 83,265**	$ 96,574	$ 103,103	$ 77,512	$ 89,128
Total long-term liabilities	**$ 135**	$ 8,044	$ 7,430	$ 1,536	$ 4,041
Stockholders' equity	**$ 74,357**	$ 83,735	$ 91,266	$ 71,550	$ 82,323
Common shares outstanding (5)	**22,562,640**	15,826,985	15,266,899	11,778,861	9,536,042

(1) Net loss attributable to common stockholders includes for the year ended December 31, 2016 includes an intangible asset impairment charge of $19.7 million in connection with our termination of the STC.UNM license agreement, a deemed dividend of $2.6 million related to the beneficial conversion feature on the Series D convertible preferred stock and an income tax benefit of $6.9 million due to the reversal of its deferred tax liability, which related solely to the impairment of the indefinite-lived intangible asset..

(2) Net loss attributable to common stockholders includes income from the change in fair market value of warrant liability of $0.1 million, $0.8 million, $2.3 million and $25.5 million for the years ended December 31, 2015, 2014, 2013 and 2012, respectively. Please refer to the audited financial statements included elsewhere in this Annual Report on Form 10-K for details on net loss attributable to common stockholders for the years ended December 31, 2016, 2015 and 2014. For additional information on net loss for the years ended December 31, 2013 and 2012, please refer to our Annual Reports on Form 10-K.

(3) Basic and diluted net loss per share and shares used to compute basic and diluted net loss per share for the years ended December 31, 2016, 2015, 2014, 2013 and 2012 have been adjusted retroactively to reflect the 1-for-6 reverse stock split.

(4) In November 2015, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update (ASU) No. 2015-17, "Income Taxes (Topic 740): Balance Sheet Classification of Deferred Taxes". The standard requires that deferred tax assets and liabilities be classified as noncurrent on the balance sheet rather than being separated into current and noncurrent. We adopted the standard on a retrospective basis beginning with the year ended December 31, 2012, and applied it consistently through the year ended December 31, 2016. The adoption of this standard resulted in the classification of noncurrent deferred tax liabilities of $0.2 million, $0.3 million, $0.2 million and $0.3 million, respectively, on our consolidated balance sheets as of December 31, 2015, 2014, 2013 and 2012. The netting of noncurrent liabilities with noncurrent assets resulted in the reduction of total assets for the periods presented.

(5) Common shares outstanding as of December 31, 2016, 2015, 2014, 2013 and 2012 have been adjusted retroactively to reflect the 1-for-6 reverse stock split.

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

The following discussion and analysis of our financial condition and results of operations should be read in conjunction with our consolidated financial statements and related notes included elsewhere in this report. This discussion contains forward-looking statements that involve risks and uncertainties. Our actual results could differ materially from those discussed below. Factors that could cause or contribute to such differences include, but are not limited to, those identified below, and those discussed in the section titled "Risk Factors" included elsewhere in this report. All dollar amounts included in this discussion and analysis of our financial condition and results of operations represent U.S. dollars unless otherwise specified. Throughout this discussion, unless the context specifies or implies otherwise, the terms "Company," "Cascadian Therapeutics," "Oncothyreon," "Biomira," "we," "us," and "our" refer to Cascadian Therapeutics, Inc., its predecessors, Oncothyreon Inc. and Biomira Inc., and its subsidiaries.

Key Highlights

In 2016, we made significant progress in advancing our lead product candidate in clinical trials. Select key fiscal year 2016 highlights include:

Research and Development

- In December 2016, researchers presented updated data from the Phase 1b Triplet combination study (tucatinib with capecitabine and trastuzumab) at the 2016 San Antonio Breast Cancer Symposium. Results showed that the tucatinib containing combination continues to be well tolerated, with an updated PFS of 7.8 months, an ORR of 61% and a median duration of response of 10 months. Patients treated with the Triplet combination previously received a median of 3 HER2-targeted agents, such as trastuzumab, pertuzumab, lapatinib and T-DM1.
- In December 2016, we announced that following a meeting with the U.S. Food and Drug Administration (FDA) and discussions with our external Steering Committee, we amended the HER2CLIMB trial of tucatinib by increasing the sample size so that, if successful, the trial could serve as a single pivotal study to support a new drug application.
- In October 2016, data from our triplet combination were presented at the European Society for Medical Oncology 2016 Congress and showed clinical activity in HER2+ metastatic lesions to the skin.
- In August 2016, we announced that the United States Adopted Names (USAN) Council and the International Nonproprietary names (INN) Expert Group approved the nonproprietary name "tucatinib" for ONT-380.
- In June 2016, tucatinib was granted Fast Track designation by the FDA for the treatment of advanced HER2+ metastatic breast cancer.
- In June 2016, we presented positive results from the Phase 1b "Triplet" study of tucatinib in combination with trastuzumab and capecitabine at our R&D Day held in New York.

  In June 2016, we reported updated safety and activity data from Phase 1b combination trial of tucatinib with T-DM1 at the 2016 American Society of Clinical Oncology Annual Meeting.
- In April 2016, we reported preclinical data highlighting that our Chk1 inhibitor is active against a diverse range of cancer cell lines derived from leukemias, lymphomas and solid tumors, and demonstrate synergistic activity in combination with the chemotherapeutic drug gemcitabine. These findings were presented at the American Association for Cancer Research (AACR) Annual Meeting 2016.
- In February 2016, we initiated a randomized, double-blind, placebo-controlled Phase 2 trial evaluating tucatinb in combination with trastuzumab and capecitabine for patients with advanced HER2+ breast cancer with or without brain metastases called HER2CLIMB.

Corporate

- In June 2016, we changed our corporate name change to Cascadian Therapeutics from Oncothyreon, Inc reflecting the shift in our focus from therapeutic vaccines to advancing targeted treatments for cancer.
- In June 2016, we prioritized our pipeline to focus on tucatinib and the Chk1 cell cycle inhibitor program and ceased development of the protocell research program.
- On April 4, 2016, Scott Myers was appointed President and CEO and a member of the Board of Directors.

Financial Overview

We have incurred substantial losses since our inception. As of December 31, 2016, our accumulated deficit totaled $572.3 million. We incurred a net loss attributable to common stockholders of $60.3 million for the year ended December 31, 2016 compared to a net loss attributable to common stockholders of $32.6 million for the same period in 2015. The increase in net loss attributable to common stockholders for the year ended December 31, 2016 was primarily due to the intangible asset impairment charge of $19.7 million in connection with our termination of the STC.UNM license agreement. As a result of the termination and our intent to no longer develop, license or commercialize the protocell technology, the $19.7 million in indefinite-lived intangible assets were considered fully impaired and written-off during the year ended December 31, 2016. For additional information, please refer to "Note 8 — Collaborative and License Agreements" of the audited financial statements included in this report. In addition, the increase in loss was also due to higher research and development expenses of $4.0 million due to greater activity related to the development of our product candidates and higher general and administrative expenses of $8.3 million primarily related to the retirement and separation agreement that we entered into with our former chief executive officer in January 2016, increases in salary and benefits expense attributable to increased headcount, accrued expenses related our Retention Payment Plan and higher legal and regulatory compliance costs. We also recognized a non-cash $2.6 million deemed dividend related to the beneficial conversion feature on the Series D convertible preferred stock. The increases in net loss attributable to common stockholders were partially offset by a $6.9 million tax benefit related to the reversal of our deferred tax liability that was solely related to the indefinite-lived intangible asset that was written off due to the full impairment during the year ended December 31, 2016. In future periods, we expect to continue to incur substantial net losses as we continue our research and development activities with respect to our product candidates. From inception to date we have funded our operations principally through the sale of our equity securities, cash received through our strategic partners, government grants, debt financings and equipment financings.

Key Financial Metrics

Expenses

Research and Development. Research and development expense consists of costs associated with research activities as well as costs associated with our product development efforts, conducting preclinical studies and clinical trial and manufacturing costs. These expenses primarily include external research and development expenses incurred pursuant to collaboration agreements; agreements with third-party manufacturing and contract research organizations; technology access and licensing fees related to the use of proprietary third-party technologies; and internal expenses associated with employee related costs, including salaries, share-based compensation expense, benefits and related costs; allocated facility overhead which includes depreciation and amortization; and third-party consulting and supplier expenses. We recognize research and development expenses, including those paid to third parties, as they are incurred.

General and Administrative. General and administrative expense consists principally of salaries, benefits, share-based compensation expense and related costs for personnel in our executive, business development, finance, accounting, legal, human resource functions and information technology services. Other general and administrative expenses include professional fees for legal, consulting, accounting services and allocation of our facility costs, which includes depreciation and amortization.

Intangible Asset Impairment. Intangible assets with indefinite lives represent the value assigned to in-process research and development as of the acquisition date and are tested annually for impairment. Intangible asset impairment represent the difference between the carrying value and the fair value of the impaired asset.

Investment and Other Income (Expense), Net. Net investment and other income (expense) consisted of interest and other income on our cash and short-term investments, debt, foreign exchange gains and losses and other non-operating income (expense). Our investments consist of debt securities of U.S. government agencies and corporate bonds.

Change in Fair Value of Warrants. Warrants issued in connection with our securities offerings in May 2009 and September 2010 were classified as a liability due to their potential settlement in cash and other terms, and as such, were recorded at their estimated fair value on the date of the closing of the respective transactions. The warrants issued in connection with our May 2009 securities offering expired in May 2014 and the warrants issued in connection with our September 2010 securities offering expired in October 2015. The warrants were marked to market for each financial reporting period, with changes in estimated fair value recorded as a gain or loss in our consolidated statements of operations. The fair value of the warrants was determined using the Black-Scholes option-pricing model, which requires the use of significant judgment and estimates for the inputs used in the model. For more information, see "Note 3 — Fair Value Measurements" and "Note 6 — Share Capital" of the audited financial statements included elsewhere in this Annual Report on Form 10-K.

Income Tax Benefit (Provision) for Income Tax . Due to the $19.7 million impairment of indefinite-lived intangible assets, we reversed our deferred tax liability, which solely relates to the indefinite-lived intangible assets, and recorded a $6.9 million tax benefit in our consolidated statements of operations for the year ended December 31, 2016. For more information, see "Note 5 — Intangible Asset Impairment" of the audited financial statements included in this report.

Critical Accounting Policies and Significant Judgments and Estimates

We have prepared this management's discussion and analysis of financial condition and results of operations based on our audited consolidated financial statements, which have been included in this report beginning on page F-1 and which have been prepared in accordance with U.S. generally accepted accounting principles. These accounting principles require us to make significant estimates and judgments that can affect the reported amounts of assets and liabilities as of the dates of our consolidated financial statements as well as the reported amounts of revenue and expense during the periods presented. We believe that the estimates and judgments upon which we rely are reasonable based upon historical experience and information available to us at the time that we make these estimates and judgments. To the extent there are material differences between these estimates and actual results, our consolidated financial statements will be affected.

The SEC considers an accounting policy to be critical if it is important to a company's financial condition and results of operations and if it requires the exercise of significant judgment and the use of estimates on the part of management in its application. We have discussed the selection and development of our critical accounting policies with the audit committee of our board of directors, and our audit committee has reviewed our related disclosures in this report. Although we believe that our judgments and estimates are appropriate, actual results may differ from these estimates.

We believe the following to be our critical accounting policies because they are important to the portrayal of our financial condition and results of operations and because they require critical management judgment and estimates about matters that are uncertain:

- goodwill impairment;
- indefinite-lived intangible assets — in-process research and development (IPR&D);
- share-based compensation; and
- business combinations.

Goodwill Impairment

Goodwill is not amortized, but is reviewed annually for impairment on October 1 of each year, or more frequently when events or changes in circumstances indicate that the asset may be impaired. As of December 31, 2016, we had one reporting unit and there was an excess of fair value compared to the carrying value. There were no impairment charges recorded for any of the periods presented.

Indefinite-lived Intangible Assets — IPR&D

Intangible assets with indefinite lives represent the value assigned to IPR&D that, as of the acquisition date, we determined that technological feasibility had not been established, and the IPR&D had no alternative future use. The IPR&D will be subject to annual impairment testing until completion or abandonment of the projects. Upon completion of the project, we will make a separate determination of useful life of the IPR&D and the related amortization will be recorded as an expense over the estimated useful life. If the IPR&D is abandoned, the carrying value of the asset will be expensed. All research and development costs incurred subsequent to the acquisition of Alpine are expensed as incurred. We

perform an annual impairment assessment on October 1 of each year for the IPR&D assets, or more frequently if indicators of potential impairment exist, to determine whether it is more likely than not that the carrying value of the assets may not be recoverable. Recoverability of IPR&D is measured by comparing the carrying amount of the asset to the fair value. If we determine that an individual asset is impaired, the amount of any impairment is measured as the difference between the carrying value and the fair value of the impaired asset.

On May 5, 2016, we entered into an agreement with STC.UNM to mutually terminate the license agreement relating to protocell technology. As a result of the termination and the Company's intent to no longer develop, license or commercialize the protocell technology, the indefinite-lived intangible assets acquired in the 2014 acquisition of Alpine were considered impaired. Accordingly, $19.7 million was fully written-off and recorded as intangible asset impairment in our consolidated statements of operations for the year ended December 31, 2016. Additionally, as a result of the impairment, the deferred tax liability, which solely relates to the indefinite-lived intangible assets was reversed, resulting in a federal tax benefit of $6.9 million during the year ended December 31, 2016. See "Note 10 — Income Tax" of the audited financial statements included in this report for additional information. The impairment charge did not result in any significant cash expenditures or otherwise impact our liquidity or cash.

For the year ended December 31, 2016, a $19.7 million impairment charge was recorded in our consolidated statements of operations. No impairment charges were recorded in our consolidated statements of operations for the years ended December 31, 2015 and 2014.

Share-based Compensation

We maintain the 2016 Equity Incentive Plan (the 2016 EIP). The Company's stockholders approved the 2016 EIP on June 23, 2016. Under the 2016 EIP, an aggregate of 1,866,711 shares of common stock underlie outstanding options and, as of December 31, 2016, an aggregate of 1,053,949 shares of common stock were available for future issuance. When the 2016 EIP was approved by our stockholders, we ceased granting options under our prior Amended and Restated Share Option Plan (the Option Plan), ceased granting restricted shares units under our prior Amended and Restated RSU Plan (the RSU Plan) and transferred the remaining shares available for issuance under the Option Plan and the RSU Plan to the 2016 EIP. 1,200,905 shares of common stock were reserved for issuance under the 2016 EIP, consisting of 1,050,000 shares available for awards under the 2016 EIP plus 82,883 and 68,021 shares of common stock previously reserved but unissued under the Option Plan and the RSU Plan, respectively, that are now available for issuance under the 2016 EIP. As of December 31, 2016, there were outstanding stock options to purchase an aggregate of 1,866,711 shares of common stock and an aggregate of 1,053,949 shares of common stock were available for future issuance under the 2016 EIP.

We maintain an Employee Stock Purchase Plan (ESPP) under which a total of 150,000 shares of common stock were reserved for sale to employees of the Company. As of December 31, 2016, there were 69,673 shares reserved for future purchases under the ESPP.

We granted RSUs to non-employee directors under the RSU plan and, as of its approval on June 23, 2016, grant RSUs to our non-employee directors under the 2016 EIP. Approximately 25% of each RSU represents a contingent right to receive cash upon vesting, and we are required to deliver an amount in cash equal to the fair market value of approximately 25% of the vesting shares on the vesting date to facilitate the satisfaction of the non-employee directors' U.S. federal income tax obligation with respect to the vested RSUs. The outstanding RSU awards are required to be re-measured at each reporting date until settlement of the award, and changes in valuation are recorded as compensation expense for the period. To the extent that the liability recorded in the balance sheet for a modified award is less than the original award value, the difference is recognized in equity.

We use the closing share price of our shares in The NASDAQ Global Market at the reporting or settlement date to determine the fair value of RSUs. We use the Black-Scholes option pricing model for determining the estimated fair value for stock option awards under our 2016 EIP and its predecessor and for employee stock purchase plan awards, which requires the use of highly subjective and complex assumptions to determine the fair value of stock-based awards, including the option's expected term and the price volatility of the underlying stock. We recognize the value of the portion of the awards that is ultimately expected to vest as non-cash expense over the requisite vesting periods on a straight-line basis for the entire award in our consolidated statements of operations. Forfeitures are estimated at the time of grant and revised, if necessary, in subsequent periods if actual forfeitures differ from those estimates. We base our risk free interest rate for the expected term of the option on the yield available on a U.S. Treasury security with an equivalent expected term. The expected life of options in years represents the period of time stock-based awards are expected to be outstanding and is based on historical data. The expected volatility is based on the historical volatility of our common stock for a period equal to the stock option's expected life. For more information, see "Note 7 — Share-based Compensation" of the audited financial statements included elsewhere in this Annual Report on Form 10-K.

Business Combination

In a business combination, we determine if the acquired property and activities meet the definition of a business under current accounting guidance. If the combination meets the definition of a business, we measure the significance of the combination to determine the required reporting and disclosure requirements for the transaction. Business combinations are required to be accounted for under the acquisition method which requires that identifiable assets acquired, liabilities assumed and any noncontrolling interest in the acquiree be recognized and measured as of the acquisition date at fair value. In addition, all consideration transferred must be measured at its acquisition-date fair value.

When necessary, we use a third party valuation expert to determine the fair value of the identifiable assets and liabilities acquired. The estimated fair values of in-process research and development (IPR&D) acquired in a business combination which have not been fully developed are capitalized as indefinite-lived intangible assets and impairment testing is conducted periodically.

Results of Operations for the years ended December 31, 2016, 2015 and 2014

The following table sets forth selected consolidated statements of operations data for each of the periods indicated.

Overview

	Years Ended December 31,		
	2016	2015	2014
	(In millions)		
Operating expenses	$(64.8)	$(32.8)	$(50.8)
Change in fair value of warrant liability	$ —	$ 0.1	$ 0.8
Income tax (benefit) provision	$ (6.9)	$ —	$ —
Deemed dividend on Series D convertible preferred stock	$ (2.6)	$ —	$ —
Net loss attributable to common stockholders	$(60.3)	$(32.6)	$(50.0)

Operating expenses were higher for the year ended December 31, 2016 compared to the year ended December 31, 2015 primarily due to the intangible asset impairment charge of $19.7 million during the year ended December 31, 2016. In addition, general and administrative expenses increased by $8.3 million primarily due to compensation-related expenses in connection with management changes in the first quarter of 2016 and increases in headcount. Research and development expenses increased by $4.0 million primarily due to greater activity related to the development of our product candidates.

We also recognized a $6.9 million tax benefit during the year ended December 31, 2016, upon the reversal of our deferred tax liability, which solely relates to the impairment of our indefinite-lived intangible assets upon termination of the license agreement with STC.UNM.

We incurred a net loss attributable to common stockholders of $60.3 million for the year ended December 31, 2016 compared to a net loss attributable to common stockholders of $32.6 million for the year ended December 31, 2015. The increase in our net loss attributable to common stockholders was primarily due to increases in operating expenses of $32.1 million and a deemed dividend of $2.6 million related to the beneficial conversion feature on the Series D convertible preferred stock, partially offset by a $6.9 million tax benefit related to the impairment of our indefinite-lived intangible assets as a result of the termination of the license agreement with STC.UNM during the year ended December 31, 2016.

We incurred a net loss attributable to common stockholders of $32.6 million for the year ended December 31, 2015 compared to a net loss attributable to common stockholders of $50.0 million for the year ended December 31, 2014. The decrease in our net loss was primarily due to decreases in operating expenses, partially offset by lower non-cash income from the change in the fair value of our warrant liability, which was $0.1 million for the year ended December 31, 2015 compared to $0.8 million for the year ended December 31, 2014. Income or expense associated with the change in fair value of the warrant liability is the result of the re-measurement of the fair value of the warrant liability at each reporting date. Changes in the fair value of the warrant liability are attributable to increases or decreases in our stock price, volatility and expected life of our liability-classified warrants. In addition, the change in fair value was also due to the expiration of our September 2010 and May 2009 warrants.

Based on our development plans for our product candidates, we will continue to incur operating losses for the foreseeable future.

Research and Development

The following table summarizes research and development expenses:

	Years Ended December 31,		
	2016	2015	2014
	(In millions)		
Research and development	$ 27.5	$ 23.5	$ 41.9

Research and development expenses are related primarily to the development of our preclinical and clinical stage programs. We do not currently utilize a formal time allocation system to capture expenses on a project-by-project basis because we are organized and record expense by functional area.

The following table summarizes our research and development expenses by functional area for the years ended December 31, 2016, 2015 and 2014:

	Years Ended December 31,		
	2016	2015	2014
	(In millions)		
External expenses [1]			
Preclinical research expenses	$ 1.8	$ 1.6	$ 2.2
Clinical development expenses	7.8	6.6	5.5
Manufacturing expenses	4.5	0.8	3.1
License Fees / Milestones	(0.9)	1.4	20.1
Total external expenses	13.2	10.4	30.9
All other expenses [2]	14.3	13.1	11.0
Total research and development	27.5	23.5	41.9

1 *External expenses include costs paid to outside parties for activities associated with our preclinical, clinical and manufacturing efforts as well as costs associated with licensing agreements we have entered into with third parties.*

2 *All other expenses include personnel costs, stock compensation expenses, facility and equipment costs and other internal costs associated with our research and development activities.*

Research and development expenses incurred in the year ended December 31, 2016 increased by $4.0 million, or 17.0%, compared to the year ended December 31, 2015, due primarily to increases in contract manufacturing expenses of $3.7 million and clinical development expenses of $1.2 million related to contract clinical services associated with the ongoing clinical trials, increase in other expense of $1.2 million primarily due to increases in Retention Payment Plan expenses and increases in headcount and headcount-related expenses, and increases in preclinical research expenses of $0.2 million related to laboratory supplies and services. The increases were partially offset by decreases in license fees of $2.3 million primarily related to reversal of the previously recorded time-based milestones for license fees in connection with our termination of the STC.UNM license agreement.

Research and development expenses incurred in the year ended December 31, 2015 decreased by $18.4 million, or 43.9%, compared to the year ended December 31, 2014, due primarily to the $20.0 million upfront fee paid to Array in 2014. In addition, the decrease in research and development expenses was due to a decrease in contract manufacturing expenses of $2.3 million related to clinical materials and a decrease in preclinical research expenses of $0.6 million related to laboratory supplies and services. The decreases were partially offset by increases in clinical development expenses of $1.1 million related to contract clinical services associated with the ongoing clinical trials, license fees of $1.3 million related to the time-based milestones for license fees in connection with our termination of the STC.UNM license agreement, and other expenses of $2.1 million primarily due to increases in headcount.

General and Administrative

	Years Ended December 31,		
	2016	2015	2014
	(In millions)		
General and administrative	$ 17.6	$ 9.3	$ 9.0

The $8.3 million, or 89.2%, increase in general and administrative expenses for the year ended December 31, 2016 compared to the year ended December 31, 2015 was primarily due to increases in salaries and benefits expense related to cash severance and insurance benefits of $1.6 million, non-cash compensation expense of $2.3 million due to the acceleration of share-based compensation related to the retirement and separation agreement that we entered into with our former chief executive officer in January 2016, Retention Payment Plan expenses of $0.7 million and headcount and headcount related expenses of $1.6 million. In addition, general and administrative expenses increased due to higher professional fees of $1.7 million primarily related to legal, patent and regulatory compliance activities, higher recruiting and relocation of $0.4 million and higher share-based compensation expense of $0.4 million. These increases were partially offset by a $0.4 million decrease in director compensation that was primarily related to a change in fair value of RSUs on re-measurement together with the grant and conversion of the RSUs. The change in fair value of RSUs was attributable to the change in the price of our common stock.

The $0.3 million, or 3.3%, increase in general and administrative expense for the year ended December 31, 2015 relative to the year ended December 31, 2014 was principally due to a $0.2 million increase in director compensation that was primarily related to grants and change in fair value of RSUs on conversion and re-measurement. The change in fair value of RSUs was attributable to the change in the price of our common stock. For more information related to the liability-classified RSUs, see “Note 7 — Share-based Compensation” of the audited financial statements included in this report. In addition, the increase in general and administrative expenses was due to a $0.2 million increase in professional fees primarily related to legal, patent and regulatory compliance activities.

Intangible Asset Impairment

	Years Ended December 31,		
	2016	2015	2014
	(In millions)		
Intangible asset impairment	$ (19.7)	$ —	$ —

On May 5, 2016, we entered into an agreement with STC.UNM to mutually terminate the license agreement relating to protocell technology. As a result of the termination and our intent to no longer develop, license or commercialize the protocell technology, the indefinite-lived intangible assets, valued at $19.7 million were considered fully impaired. $19.7 million was fully written-off and recorded as intangible asset impairment in our consolidated statements of operations during the year ended December 31, 2016. The indefinite-lived intangible assets represent the value assigned to in-process research and development when we acquired the protocell technology in connection with the acquisition of Alpine in 2014. For additional information, see “Note 5 — Intangible Asset Impairment” of the audited financial statements included in this report.

No impairment charges were recorded in our consolidated statements of operations for the years ended December 31, 2015 and 2014.

Change in Fair Value of Warrant Liability

	Years Ended December 31,		
	2016	2015	2014
	(In millions)		
Change in fair value of warrant liability	$ —	$ 0.1	$ 0.8

The zero, $0.1 million and $0.8 million non-cash income recorded during the year ended December 31, 2016, 2015 and 2014, respectively, was due to the expiration of the warrants issued in connection with our September 2010 and May 2009 financing, which expired on October 12, 2015 and May 26, 2014, respectively. We determined the fair value of the warrants using the Black-Scholes model. For more information, see “Note 3 — Fair Value Measurements” of the audited financial statements included in this report.

Income Tax (Benefit) Provision

	Years Ended December 31,		
	2016	2015	2014
		(In millions)	
Income tax (benefit) provision	$ (6.9)	$ —	$ —

Due to the $19.7 million impairment of indefinite-lived intangible assets, we reversed our deferred tax liability, which solely relates to the indefinite-lived intangible assets, and recorded a $6.9 million tax benefit in our consolidated statements of operations for the year ended December 31, 2016. For additional information, see "Note 5 — Intangible Asset Impairment" of the audited financial statements included in this report.

No income tax benefit or provision were recorded in our consolidated statements of operations for the years ended December 31, 2015 and 2014.

Deemed Dividend on Series D Convertible Preferred Stock

	Years Ended December 31,		
	2016	2015	2014
		(In millions)	
Deemed dividend on Series D convertible preferred stock	$ (2.6)	$ —	$ —

We recognized a beneficial conversion feature in the amount of $2.6 million, calculated as the number of potential conversion shares multiplied by the excess of the market price of its common stock over the price per conversion share of the Series D convertible preferred stock on the commitment date. The non-cash dividend was recorded in additional paid-in capital and as a deemed dividend on the Series D convertible preferred stock, and was used in determining the net loss applicable to common stockholders in the consolidated statement of operations.

There were no deemed dividends, related to convertible preferred stock, recorded in our consolidated statements of operations for the years ended December 31, 2015 and 2014.

Liquidity and Capital Resources

Cash, Cash Equivalents, Short-Term Investments, Long-Term Investments and Working Capital

As of December 31, 2016, our principal sources of liquidity consisted of cash and cash equivalents of $13.7 million and short-term investments of $49.1 million. Our cash and cash equivalents consist of cash, money market funds and securities with an initial maturity of less than 90 days. Our short-term investments are invested in debt securities of U.S government agencies and corporate bonds with maturities not exceeding 12 months from December 31, 2016. Our long-term investments, if any, are invested in debt securities of U.S government agencies with maturities exceeding 12 months from December 31, 2016. Our primary source of cash, cash equivalents and investments has historically been proceeds from the sale of our equity securities, cash received through our strategic partners, government grants, debt financings and equipment financings. These proceeds have been used to fund our operations.

Our cash and cash equivalents were $13.7 million as of December 31, 2016 compared to $27.9 million as of December 31, 2015, a decrease of $14.2 million, or 50.9%. The decrease was the result of cash used to fund our operations of $36.8 million, net investment purchases of $20.8 million and capital equipment purchases of $0.2 million, offset by financing activities of $43.6 million that was primarily related to our June 2016 financing.

As of December 31, 2016, our working capital (defined as current assets less current liabilities) was $55.7 million compared to $53.2 million as of December 31, 2015, an increase of $2.5 million, or 4.7%. The increase in working capital was primarily attributable to a net increase in cash, cash equivalents and short-term investments of $6.4 million, partly offset by an increase in current liability of $4.0 million.

On January 27, 2017, we closed an underwritten offering of 26,659,300 shares of our common stock at a price to the public of $3.30 per share, for gross proceeds of approximately $88.0 million. The shares include 3,477,300 shares of common stock sold pursuant to the over-allotment option granted by us to the underwriters, which option was exercised in full. In addition, we closed an underwritten offering of 1,818 shares of our Series E convertible preferred stock at a price to the public of $3,300 per share, for gross proceeds of approximately $6.0 million. Each share of Series E convertible preferred stock is non-voting and convertible into 1,000 shares of our common stock, provided that conversion will be prohibited if, as a result, the holder and its affiliates would beneficially own more than 19.99% of the common stock then outstanding. Aggregate gross proceeds from the offerings, before deducting underwriting discounts, commissions and estimated expenses, were approximately $94.0 million.

On June 28, 2016, we closed an underwritten public offering of 6,708,333 shares of our common stock at a price to the public of $4.80 per share for gross proceeds of $32.2 million. The shares include 875,000 shares of common stock sold pursuant to the over-allotment option granted by us to the underwriters, which option was exercised in full. In addition, we closed a registered direct offering of 17,250 shares of our Series D convertible preferred stock at a price of $800.00 per share directly to affiliates of BVF for gross proceeds of $13.8 million. Each share of Series D convertible preferred stock is non-voting and convertible into 166.67 shares of our common stock, provided that conversion will be prohibited if, as a result, the holder and its affiliates would beneficially own more than 19.99% of the common stock then outstanding. Aggregate gross proceeds from the offerings were approximately $46.0 million. Aggregate net proceeds from the offerings, after underwriting discounts and commissions and other expenses of $2.7 million, were approximately $43.3 million.

On February 11, 2015, we closed concurrent but separate underwritten offerings of 2,250,000 shares of our common stock at a price to the public of $9.00 per share, for gross proceeds of approximately $20.3 million and 1,333 shares of our Series B convertible preferred stock at a price to the public of $1,500 per share, for gross proceeds of approximately $2.0 million. Each share of Series B convertible preferred stock is non-voting and convertible into 166.67 shares of our common stock, provided that conversion will be prohibited if, as a result, the holder and its affiliates would beneficially own more than 4.99% of the common stock then outstanding. As part of the common stock offering, we also granted the underwriters a 30-day option to purchase 337,500 additional shares of our common stock. On February 18, 2015, we closed a partial exercise of the underwriter's option to purchase 199,943 additional shares of our common stock, at a price to the public of $9.00 per share, less underwriting discounts and commissions, which resulted in net proceeds to us of approximately $1.7 million. Aggregate gross proceeds from the offerings were approximately $24.0 million. Aggregate net proceeds from the offerings, after underwriting discounts and commissions and other expenses of $1.6 million, were approximately $22.4 million.

We believe that our cash and cash equivalents and investments as of December 31, 2016, together with the net proceeds from our January 2017 offering, will be sufficient to finance our operations for at least the next 12 months to support the tucatinib development plan. Nevertheless, we expect that we will require additional capital from time to time in the future in order to continue the development of products in our pipeline. We would expect to seek additional financing from business development activities and/or the issuance of debt or equity securities.

Cash Flows from Operating Activities

Cash used in operating activities is primarily driven by our net loss. However, operating cash flows differ from net loss as a result of non-cash charges or differences in the timing of cash flows and historically from changes in warrant liabilities.

Cash used by operating activities totaled $36.8 million for the year ended December 31, 2016, compared to $28.9 million for the year ended December 31, 2015. The increase was attributable primarily to an increase in general and administrative expenses and research and development expenses.

Cash used by operating activities totaled $28.9 million for the year ended December 31, 2015, compared to $48.4 million for the year ended December 31, 2014. The decrease was attributable primarily to a decrease of $20.0 million in license fees. In December 2014, we paid Array $20.0 million upon entering into an exclusive license agreement. See "Note 8 — Collaborative and License Agreements" of the audited financial statements included elsewhere in this report for additional information. The decrease was partially offset by slight increases in general and administrative expenses of $0.4 million.

Cash Flows from Investing Activities

Cash used in investing activities was $21.0 million for the year ended December 31, 2016, compared to $23.7 million cash provided by investing activities for the year ended December 31, 2015. This change was attributable primarily to purchases of investments, net of redemption, of $20.8 million for the year ended December 31, 2016 as compared to redemption of investments, net of purchases, of $24.5 million for the year ended December 31, 2015, offset by a decrease in purchases of property and equipment of $0.6 million during the year ended December 31, 2016 compared to the same period in 2015.

Cash provided by investing activities was $23.7 million for the year ended December 31, 2015, compared to $9.2 million for the year ended December 31, 2014. This change was attributable primarily to redemption of investments, net of purchases, of $24.5 million for the year ended December 31, 2015 as compared to $9.5 million for the year ended December 31, 2014, partly offset by an increase in purchases of property and equipment of $0.4 million during the year ended December 31, 2015 compared to the same period in 2014.

Cash Flows from Financing Activities

Cash provided by financing activities was $43.6 million during the year ended December 31, 2016, which consisted primarily of $43.3 million of net proceeds from our June 2016 underwritten common stock and registered direct Series D convertible preferred stock offerings, $0.2 million of proceeds from the settlement of a short-swing profit claim in August 2016 and cash received of $0.1 million from ESPP purchases. Net proceeds from our common stock offering were $29.8 million and net proceeds from our Series D convertible preferred stock offering were approximately $13.5 million.

Cash provided by financing activities was $22.6 million during the year ended December 31, 2015, which primarily consisted of net proceeds of approximately $22.4 million from our February 2015 concurrent but separate underwritten common stock and Series B convertible preferred stock offerings. Net proceeds from our common stock offering were $20.5 million and net proceeds from our Series B convertible preferred stock offering were $1.9 million.

Cash provided by financing activities was $40.4 million during the year ended December 31, 2014, which consisted of net proceeds of approximately $40.2 million from our September 2014 concurrent but separate underwritten common stock and Series A convertible preferred stock offerings. Net proceeds from our common stock offering were $21.6 million and net proceeds from our Series A convertible preferred stock offering were $18.6 million.

Contractual Obligations and Contingencies

In our continuing operations, we have entered into long-term contractual arrangements from time to time for our facilities, the provision of goods and services, and the acquisition of technology access rights, among others. The following table presents contractual obligations arising from these arrangements as of December 31, 2016:

		Payments Due by Period			
	Total	Less than 1 Year	1 — 3 Years	3 — 5 Years	After 5 Years
		(In thousands)			
Operating leases	$ 1,423	$ 732	$ 691	$ —	$ —

In May 2008, we entered into a lease for an office and laboratory facility in Seattle, Washington totaling approximately 17,000 square feet. In November 2016, we entered into an amendment to our existing lease to add approximately 2,600 square feet of office space. The lease provides for a base monthly rent of $47,715, increasing to $57,910 in 2018. We also have entered into operating lease obligations through November 2019 for certain office equipment.

In addition to the obligations described above, under certain licensing arrangements for technologies incorporated into our product candidates, we are contractually committed to payments for licensing fees and royalties, as well as contingent payments if certain milestones (as defined in the agreements) have been achieved. The achievement of milestones is subject to numerous factors, and we cannot predict when or if such milestones will be achieved. For additional detail concerning the financial terms of our licensing arrangements, please refer to “Note 8 - Collaborative and License Agreements” of the audited financial statements included elsewhere in this Annual Report on Form 10-K.

As of December 31, 2016, none of the milestones, as defined in the agreements, were achieved and, as such, we are not currently contractually committed to any significant quantifiable payments for licensing fees, royalties or other contingent payments. $1.5 million in time-based milestones for license fees associated with our agreement with STC.UNM were reversed during the year ended December 31, 2016 in connection with our termination of the STC.UNM license agreement. No other license fees or milestones were achieved or quantifiable.

We also enter into contracts in the ordinary course of our business such as clinical research organization service contracts and manufacturing service contracts. These contracts are fee for service contracts that are terminable at will by us, and do not provide for fixed payments to be made at specific intervals. Payments for these contracts are expensed in the period that the service is incurred.

Guarantees and Indemnification

In the ordinary course of our business, we have entered into agreements with our collaboration partners, vendors, and other persons and entities that include guarantees or indemnity provisions. For example, our agreements with clinical trial sites and third party manufacturers contain certain customary indemnification provisions, and we have entered into indemnification agreements with our officers and directors. Based on information known to us as of the filing date of this report we believe that our exposure related to these guarantees and indemnification obligations is not material.

Off-Balance Sheet Arrangements

During the periods presented, we did not have any relationships with unconsolidated entities or financial partnerships, such as entities often referred to as structured finance or special purpose entities, which would have been established for the purpose of facilitating off-balance sheet arrangements or for another contractually narrow or limited purpose.

Recent Accounting Pronouncements

In August 2016, the FASB issued Accounting Standards Update (ASU) 2016-15, Statement of Cash Flows (Topic 230), a consensus of the FASB's Emerging Issues Task Force. The guidance is intended to reduce diversity in practice in how certain transactions are classified in the statement of cash flows. The guidance addresses the classification of cash flows related to (1) debt prepayment or extinguishment costs, (2) settlement of zero-coupon debt instruments, (3) contingent consideration payments made after a business combination, (4) proceeds from the settlement of insurance claims, (5) proceeds from the settlement of corporate-owned life insurance, including bank-owned life insurance, (6) distributions received from equity method investees and (7) beneficial interests in securitization transactions. The guidance requires application using a retrospective transition method and is effective for public business entities for fiscal years beginning after December 15, 2017, and interim periods within those years. Early adoption is permitted. We are currently evaluating any impact this guidance may have on our consolidated statements of cash flows.

In March 2016, the FASB issued Accounting Standards Update (ASU) 2016-09, Improvements to Employee Share-Based Payment Accounting, which amends ASC Topic 718, Compensation – Stock Compensation. The guidance will change how companies account for certain aspects of share-based payments to employees including income tax consequences, classification of awards as either equity or liabilities, and classification on the statement of cash flows. The guidance is effective for public business entities for fiscal years beginning after December 15, 2016, and interim periods within those years. We will adopt this standard as of January 1, 2017. Because we have incurred net losses since our inception and maintain a full valuation allowance on our net deferred tax assets, the adoption of this standard is not expected to have a material impact on our financial condition, results of operations and cash flows, or financial statement disclosures.

In February 2016, the FASB issued ASU No. 2016-02, Leases (Topic 842), to improve financial reporting for leasing transactions. The new standard requires lessees to recognize on the balance sheets a right of use asset and related lease liability. Lessor accounting under the new standard remains similar under current GAAP. The ASU also requires disclosures about the amount, timing, and uncertainty of cash flows arising from leases. The effective date for public entities is fiscal years beginning after December 15, 2018, including interim periods within those fiscal years. Early adoption is permitted for all entities. We are currently evaluating any impact this standard may have on our consolidated financial position and results of operations.

In January 2016, the FASB issued ASU 2016-01, Financial Instruments – Overall (Subtopic 825-10): Recognition and Measurement of Financial Assets and Financial Liabilities. The guidance will change how entities measure equity investments that do not result in consolidation and are not accounted for under the equity method and how they present changes in the fair value of financial liabilities measured under the fair value option that are attributable to their own credit. The new guidance also changes certain disclosure requirements and other aspects of current US GAAP. It does not change the guidance for classifying and measuring investments in debt securities and loans. ASU 2016-01 is effective for public business entities for fiscal years beginning after December 15, 2017, including interim periods within those fiscal years. With the exception of early application guidance outlined in this standard, early adoption is not permitted. We are currently evaluating any impact this guidance may have on our consolidated financial position and results of operations.

In August 2015, FASB issued Accounting Standards Update (ASU) 2015-14, Revenue from Contracts with Customers (Topic 606)—Deferral of the Effective Date, which defers by one year the effective date of ASU 2014-09, Revenue from Contracts with Customers. For public entities, the standard is effective for annual reporting periods beginning after December 15, 2017, including interim reporting periods within that reporting period. Early adoption is permitted as of annual reporting periods beginning after December 15, 2016, including interim reporting periods within those annual periods. As we do not currently have any revenue arrangements in the scope of the new revenue standard, we do not expect the adoption of this standard to have a material effect on our financial position or results of operations. However, if we do enter into license, collaboration or other revenue arrangements during 2017, there may be material differences in the accounting treatment under the current guidance and the new revenue standard as of the adoption date, January 1, 2018.

ITEM 7A. *Quantitative and Qualitative Disclosure About Market Risk*

Interest Rate Sensitivity

We had cash, cash equivalents and short-term investments totaling $62.8 million and $56.4 million as of December 31, 2016 and 2015, respectively. We do not enter into investments for trading or speculative purposes. We believe that we do not have any material exposure to changes in the fair value of these assets as a result of changes in interest rates since a majority of these assets are of a short term nature. Declines in interest rates, however, would reduce future investment income. A 10 basis point decline in interest rates, occurring January 1, 2016 and sustained throughout the period ended December 31, 2016, would have resulted in a decline in investment income of approximately $59,600 for that same period.

ITEM 8. *Financial Statements and Supplementary Data*

See Financial Statements beginning on page F-1.

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

Under the supervision and with the participation of our management, including our interim chief executive officer and chief financial officer, we conducted an evaluation of the effectiveness, as of the end of the period covered by this report, of 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. The purpose of this evaluation was to determine whether as of the evaluation date our disclosure controls and procedures were effective to provide reasonable assurance that the information we are required to disclose in our filings with the SEC, under the Exchange Act (1) is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms and (2) accumulated and communicated to our management, including our interim chief executive officer and chief financial officer, as appropriate to allow timely decisions regarding required disclosure. Based on this evaluation, our interim chief executive officer and chief financial officer have concluded that, as of December 31, 2016, our disclosure controls and procedures were effective.

Management's Report on Internal Control over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting as defined in Rules 13a-15(f) and 15d-15(f) of the Exchange Act. We have designed our internal controls to provide reasonable assurance that our financial statements are prepared in accordance with generally accepted accounting principles in the United States (U.S. GAAP), and include those policies and procedures that:

- pertain to the maintenance of records that in reasonable detail accurately and fairly reflect the transactions and disposition of our assets;
- provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures are being made only in accordance with authorization of our management and directors; and
- provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of our assets that could have a material effect on the financial statements.

Our management conducted an evaluation of the effectiveness of our internal controls based on the COSO criteria (2013 framework) as of December 31, 2016.

Based on our evaluation, our management concluded that our internal control over financial reporting was effective as of December 31, 2016. The effectiveness of our internal control over financial reporting as of December 31, 2016 has been audited by Ernst & Young LLP, an independent registered public accounting firm, as stated in their report thereto, appearing below.

Inherent Limitation on the Effectiveness of Internal Controls

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.

Changes in Internal Control over Financial Reporting

There have been no changes in our internal control over financial reporting during the quarter ended December 31, 2016 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Report of Independent Registered Public Accounting Firm

The Board of Directors and Stockholders of Cascadian Therapeutics Inc.

We have audited Cascadian Therapeutics, Inc.'s internal control over financial reporting as of December 31, 2016, based on criteria established in Internal Control — Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) (the COSO criteria). Cascadian Therapeutics, Inc.'s management is responsible for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting included in the accompanying Management's Report on Internal Control Over Financial Reporting. Our responsibility is to express an opinion on the company's internal control over financial reporting based on our audit.

We conducted our audit in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

A company's internal control over financial reporting is a process designed 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. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, 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.

In our opinion, Cascadian Therapeutics, Inc. maintained, in all material respects, effective internal control over financial reporting as of December 31, 2016, based on the COSO criteria.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the 2016 consolidated financial statements of Cascadian Therapeutics, Inc. and our report dated March 9, 2017 expressed an unqualified opinion thereon.

/s/ Ernst & Young LLP

Seattle, Washington
March 9, 2017

ITEM 9B. ***Other Information***

None.

PART III

Item 10. ***Directors, Executive Officers and Corporate Governance***

The information required by this item is incorporated herein by reference to our Proxy Statement with respect to our 2017 Annual Meeting of Stockholders to be filed with the SEC within 120 days of the end of the fiscal year covered by this Annual Report on Form 10-K.

I tem 11. ***Executive Compensation***

The information required by this item is incorporated herein by reference to our Proxy Statement with respect to our 2017 Annual Meeting of Stockholders to be filed with the SEC within 120 days of the end of the fiscal year covered by this Annual Report on Form 10-K.

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

The information required by this item is incorporated herein by reference to our Proxy Statement with respect to our 2017 Annual Meeting of Stockholders to be filed with the SEC within 120 days of the end of the fiscal year covered by this Annual Report on Form 10-K.

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

The information required by this item is incorporated herein by reference to our Proxy Statement with respect to our 2017 Annual Meeting of Stockholders to be filed with the SEC within 120 days of the end of the fiscal year covered by this Annual Report on Form 10-K.

Item 14. ***Principal Accounting Fees and Services***

The information required by this item is incorporated herein by reference to our Proxy Statement with respect to our 2017 Annual Meeting of Stockholders to be filed with the SEC within 120 days of the end of the fiscal year covered by this Annual Report on Form 10-K.

PART IV

ITEM 15. ***Exhibits and Financial Statement Schedules***

(a) The following documents are filed as part of this Annual Report on Form 10-K:

1. Financial Statements:

Our consolidated financial statements are contained in Item 8 of this annual report on Form 10-K.

2. Financial Statement Schedules:

All financial statement schedules have been omitted because the required information is either included in the financial statements or notes thereto, or is not applicable.

3. Exhibits:

The exhibits required by Item 601 of Regulation S-K are listed in paragraph (b) below.

(b) Exhibits:

The following exhibits are filed herewith or are incorporated by reference to exhibits previously filed with the SEC:

Exhibit No.	Exhibit Description	Incorporated by Reference			Filed/ Furnished Herewith
		Form	Exhibit No.	Filing Date	
2.1	Agreement and Plan of Reorganization, dated August 8, 2014, among Cascadian Therapeutics, AB Acquisition (DE) Corp., Alpine Biosciences, Inc. and Mitchell H. Gold, M.D., as Stockholders' Agent	8-K	2.1	August 11, 2014	
3.1	Amended and Restated Certificate of Incorporation of Cascadian Therapeutics, Inc.	S-4/A	3.1	September 27, 2007	
3.2	Certificate of Amendment to the Amended and Restated Certificate of Incorporation of Cascadian Therapeutics, Inc.	8-K	3.1	June 10, 2014	
3.3	Certificate of Amendment to the Amended and Restated Certificate of Incorporation of Cascadian Therapeutics, Inc.	8-K	3.1	June 9, 2016	
3.4	Certificate of Amendment to the Amended and Restated Certificate of Incorporation of Cascadian Therapeutics, Inc.	8-K	3.1	November 23, 2016	
3.5	Certificate of Designation of Preferences, Rights and Limitations of Series A Convertible Preferred Stock	8-K	3.1	September 23, 2014	
3.6	Certificate of Designation of Preferences, Rights and Limitations of Series B Convertible Preferred Stock	8-K	3.1	February 11, 2014	
3.7	Certificate of Designation of Preferences, Rights and Limitations of Series C Convertible Preferred Stock Limitations	8-K	3.1	May 14, 2015	
3.8	Certificate of Designation of Preferences, Rights and Limitations of Series D Convertible Preferred Stock Limitations	8-K	3.1	June 28, 2016	
3.9	Certificate of Designation of Preferences, Rights and Limitations of Series E Convertible Preferred Stock Limitations	8-K	3.1	January 27, 2017	
3.10	Bylaws of Cascadian Therapeutics, Inc.	10-Q	3.1	August 14, 2009	
3.11	Amendment to Bylaws of Cascadian Therapeutics, Inc.	8-K	3.1	February 24, 2016	
4.1	Form of registrant's common stock certificate	S-4/A	4.1	September 27, 2007	
4.2	Form of Series A Convertible Preferred Stock Certificate	8-K	4.1	September 23, 2014	
4.3	Form of Series B Convertible Preferred Stock Certificate	8-K	4.1	February 1, 2014	
4.4	Form of Series C Convertible Preferred Stock Certificate	8-K	4.1	May 14, 2015	
4.5	Form of Series D Convertible Preferred Stock Certificate	8-K	4.1	June 28, 2016	
4.6	Form of Series E Convertible Preferred Stock Certificate	8-K	4.1	January 27, 2017	

Exhibit No.	Exhibit Description	Incorporated by Reference			Filed/ Furnished Herewith
		Form	Exhibit No.	Filing Date	
4.7	Form of Warrant issued by Cascadian Therapeutics, to BVF Partners L.P. and certain of its affiliates.	8-K	4.1	May 30, 2013	
4.8	Form of Registration Rights Agreement.	8-K	10.1	January 27, 2017	
10.1*	Amended and Restated Share Option Plan.	10-K	10.1	March 10, 2015	
10.2*	Form of Stock Option Agreement under the Amended and Restated Share Option Plan.	10-K	10.2	March 10, 2015	
10.3*	Amended and Restated Restricted Share Unit Plan.	S-8	99.2	June 6, 2014	
10.4*	Form of Restricted Share Unit Agreement under the Amended and Restated Restricted Share Unit Plan.	10-K	10.4	March 9, 2012	
10.5*	2010 Employee Stock Purchase Plan.	8-K	10.1	June 8, 2010	
10.6*	Form of Subscription Agreement and Notice of Withdrawal under the 2010 Employee Stock Purchase Plan.	8-K	10.2	June 8, 2010	
10.7*	2016 Equity Incentive Plan.	DEF14A	Appendix B	May 6, 2016	
10.8*	Form of Stock Option Agreement under the 2016 Equity Incentive Plan.	10-Q	10.5	August 8, 2016	
10.9*	Form of Restricted Share Unit Agreement under the 2016 Equity Incentive Plan.	10-Q	10.6	August 8, 2016	
10.10*	Form of Restricted Share Unit Agreement (Non-Employee Director) under the 2016 Equity Incentive Plan.	10-Q	10.7	August 8, 2016	
10.11*	Form of Inducement Stock Option Grant.	10-Q	10.2	March 29, 2016	
10.12*	Form of Indemnification Agreement.	S-4/A	10.1	September 27, 2007	
10.13*	Offer Letter of Employment by and between Cascadian Therapeutics, Inc. and Scott Myers.	8-K	10.1	March 29, 2016	
10.14*	Form of Executive Employment Agreement.	8-K	10.1	May 19, 2016	
10.15	Lease Agreement between Selig Holdings Company and Cascadian Therapeutics, Inc., dated May 9, 2008.	10-Q	10.3	November 10, 2008	
10.17†	License Agreement, dated December 11, 2014, between Cascadian Therapeutics, Inc. and Array BioPharma Inc.	10-K	10.26	March 10, 2015	
21.1	Subsidiaries of Cascadian Therapeutics, Inc.				X
23.1	Consent of Independent Registered Public Accounting Firm.				X
24.1	Power of Attorney (included on signature page).				X
31.1	Certification of Scott D. Myers, President and Chief Executive Officer, pursuant to Exchange Act Rules 13a-14(a) and 15d-14(a), as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.				X

Exhibit No.	Exhibit Description	Incorporated by Reference			Filed/ Furnished Herewith
		Form	Exhibit No.	Filing Date	
31.2	Certification of Julia Eastland, Chief Financial Officer, pursuant to Exchange Act Rules 13a-14(a) and 15d-14(a), as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.				X
32.1	Certification of Scott D. Myers, President and Chief Executive Officer, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002(1).				X
32.2	Certification of Julia Eastland, Chief Financial Officer, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002(1).				X
101.INS	XBRL Instance Document.				X
101.SCH	XBRL Taxonomy Extension Schema Document.				X
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document.				X
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document.				X
101.LAB	XBRL Taxonomy Extension Labels Linkbase Document.				X
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document.				X

(1) This certification is deemed not filed for purposes of section 18 of the Securities Exchange Act of 1934, as amended, or Exchange Act, or otherwise subject to the liability of that section, nor shall it be deemed incorporated by reference into any filing under the Securities Act of 1933, as amended, or Securities Act or the Exchange Act.

* Executive Compensation Plan or Agreement.

† Confidential treatment has been granted for portions of this exhibit pursuant to Rule 24b-2 under the Exchange Act. The omitted portions of this exhibit have been filed separately with the SEC.

ITEM 16. ***Form 10-K Summary***

None.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of 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 in the City of Seattle, County of King, State of Washington on March 9, 2017.

CASCADIAN THERAPEUTICS INC.

By: /s/ Scott D. Myers
Scott D. Myers,
President and Chief Executive Officer
(Principal Executive Officer)

POWER OF ATTORNEY

Each person whose signature appears below hereby constitutes and appoints Christopher Henney, Ph.D and Julia M. Eastland and each of them, his or her true and lawful attorneys-in-fact and agents, with full power to act without the other and with full power of substitution and resubstitution, to execute in his or her name and on his or her behalf, individually and in each capacity stated below, any and all amendments and supplements to this Report, and any and all other instruments necessary or incidental in connection herewith, and to file the same with the Commission.

Pursuant to the requirements of the Securities Exchange Act of 1934, this Report has been signed below by the following persons on behalf of the Registrant and in the capacities and on the dates indicated.

Signature	Title	Date
/s/ Scott D. Myers Scott D. Myers	President and Chief Executive Officer (Principal Executive Officer)	March 9, 2017
/s/ Julia M. Eastland Julia M. Eastland	Chief Financial Officer, Chief Business Officer and Secretary (Principal Financial and Accounting Officer)	March 9, 2017
/s/ Christopher Henney, Ph.D. Christopher Henney, Ph.D.	Director	March 9, 2017
/s/ Gwen A. Fyfe, M.D. Gwen A. Fyfe, M.D.	Director	March 9, 2017
/s/ Steven P. James Steven P. James	Director	March 9, 2017
/s/ Ted W. Love, M.D. Ted W. Love, M.D.	Director	March 9, 2017
/s/ Daniel K. Spiegelman Daniel K. Spiegelman	Director	March 9, 2017

INDEX TO CONSOLIDATED FINANCIAL STATEMENTS

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and Stockholders of
Cascadian Therapeutics Inc.

We have audited the accompanying consolidated balance sheets of Cascadian Therapeutics, Inc. as of December 31, 2016 and 2015, and the related consolidated statements of operations, comprehensive loss, stockholders' equity, and cash flows for each of the three years in the period ended December 31, 2016. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the consolidated financial position of Cascadian Therapeutics, Inc. at December 31, 2016 and 2015, and the consolidated results of its operations and its cash flows for each of the three years in the period ended December 31, 2016, in conformity with U.S. generally accepted accounting principles.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), Cascadian Therapeutics Inc.'s internal control over financial reporting as of December 31, 2016, based on criteria established in Internal Control — Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) and our report dated March 9, 2017 expressed an unqualified opinion thereon.

/s/ Ernst & Young LLP
Seattle, Washington

March 9, 2017

CASCADIAN THERAPEUTICS, INC.

Consolidated Balance Sheets

(In thousands, except share and per share amounts)

	As of December 31, 2016	2015
ASSETS		
Current:		
Cash and cash equivalents	**$ 13,721**	$ 27,850
Short-term investments	**49,084**	28,510
Accounts and other receivables	**238**	200
Prepaid and other current assets	**1,411**	1,418
Total current assets	**64,454**	57,978
Property and equipment, net	**1,402**	1,845
Indefinite-lived intangible assets	**—**	19,738
Goodwill	**16,659**	16,659
Other assets	**750**	354
Total assets	**$ 83,265**	$ 96,574
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current:		
Accounts payable	**$ 824**	$ 439
Accrued and other liabilities	**3,323**	2,689
Accrued compensation and related liabilities	**4,274**	1,522
Current portion of restricted share unit liability	**352**	145
Total current liabilities	**8,773**	4,795
Other liabilities	**105**	743
Restricted share unit liability	**—**	363
Deferred tax liability	**—**	6,908
Class UA preferred stock, 12,500 shares authorized, 12,500 shares issued and outstanding	**30**	30
Commitments and contingencies		
Stockholders' equity:		
Preferred stock, $0.0001 par value; 10,000,000 shares authorized as of December 31, 2016 and 2015; Series A Convertible Preferred Stock – 10,000 shares issued and outstanding as of December 31, 2016 and 2015; Series B Convertible Preferred Stock – 5,333 shares issued and outstanding as of December 31, 2016 and 2015; Series C Convertible Preferred Stock – 7,500 shares issued and outstanding as of December 31, 2016 and 2015; Series D Convertible Preferred Stock – 17,250 shares and zero shares issued and outstanding as of December 31, 2016 and 2015, respectively	**—**	—
Common stock, $0.0001 par value; 66,666,667 shares and 33,333,333 shares authorized as of December 31, 2016 and 2015, respectively; 22,562,640 shares and 15,826,985 shares issued and outstanding as of December 31, 2016 and 2015, respectively (1)	**353,849**	353,856
Additional paid-in capital	**297,922**	249,572
Accumulated deficit	**(572,334)**	(514,629)
Accumulated other comprehensive loss	**(5,080)**	(5,064)
Total stockholders' equity	**74,357**	83,735
Total liabilities and stockholders' equity	**$ 83,265**	$ 96,574

(1) Common stock shares authorized, issued and outstanding as of December 31, 2015 have been adjusted retroactively to reflect the 1-for-6 reverse stock split.

See accompanying notes to the consolidated financial statements

CASCADIAN THERAPEUTICS, INC.

Consolidated Statements of Operations

(In thousands, except share and per share amounts)

	Years Ended December 31,		
	2016	2015	2014
Operating expenses			
Research and development	**$ 27,467**	$ 23,468	$ 41,884
General and administrative	**17,630**	9,321	8,951
Intangible asset impairment	**19,738**	—	—
Total operating expenses	**64,835**	32,789	50,835
Loss from operations	**(64,835)**	(32,789)	(50,835)
Other income (expense)			
Investment and other income (expense), net	**222**	80	76
Change in fair value of warrant liability	**—**	128	796
Total other income (expense), net	**222**	208	872
Loss before income taxes	**(64,613)**	(32,581)	(49,963)
Income tax (benefit) provision	**(6,908)**	—	—
Net loss	**(57,705)**	(32,581)	(49,963)
Deemed dividend related to beneficial conversion feature on Series D convertible preferred stock	**(2,588)**	—	—
Net loss attributable to common stockholders	**$ (60,293)**	$ (32,581)	$ (49,963)
Net loss per share — basic and diluted (1)	**$ (3.13)**	$ (2.02)	$ (3.86)
Shares used to compute basic and diluted net loss per share (1)	**19,264,121**	16,102,860	12,936,640

(1) Basic and diluted net loss per share, and shares to used compute basic and diluted net loss per share for the years ended December 31, 2015 and 2014 have been adjusted retroactively to reflect the 1-for-6 reverse stock split.

See accompanying notes to the consolidated financial statements

CASCADIAN THERAPEUTICS, INC.

Consolidated Statements of Comprehensive Loss

(In thousands)

	Years Ended December 31,		
	2016	2015	2014
Net loss	**$(57,705)**	$(32,581)	$(49,963)
Other comprehensive income (loss):			
Available-for-sale securities:			
Unrealized gains (loss) during the period, net	**(16)**	27	(34)
Reclassification adjustment	**—**	—	(6)
Other comprehensive income (loss)	**(16)**	27	(40)
Comprehensive loss	**$(57,721)**	$(32,554)	$(50,003)

See accompanying notes to the consolidated financial statements

CASCADIAN THERAPEUTICS, INC.

Consolidated Statements of Stockholders' Equity

(In thousands, except share amounts)

	Common Stock		Preferred Stock					
	Shares (1)	Amount	Shares	Amount	Additional Paid-in Capital	Accumulated Deficit	Accumulated Other Comprehensive Loss	Stockholders' Equity
Balance at December 31, 2013	**11,778,861**	**$353,854**	**—**	**$ —**	**$ 154,832**	**$ (432,085)**	**$ (5,051)**	**$ 71,550**
Net loss	—	—	—	—	—	(49,963)	—	(49,963)
Unrealized losses on available-for-sale securities	—	—	—	—	—	—	(40)	(40)
Common stock issued, net of offering costs of $1.4 million	1,919,580	1	—	—	21,552	—	—	21,553
Series A Convertible Preferred Stock issued, net of offering costs of $1.4 million	—	—	10,000	—	18,693	—	—	18,693
Acquisition of Alpine Biosciences, Inc. (Alpine)	1,540,891	1	—	—	27,232	—	—	27,233
Issuances under employee stock purchase plan	12,802	—	—	—	114	—	—	114
Restricted stock units converted	13,764	—	—	—	287	—	—	287
Share-based compensation expense	—	—	—	—	1,832	—	—	1,832
Stock options exercised	1,001				7			7
Balance at December 31, 2014	**15,266,899**	**353,856**	**10,000**	**—**	**224,549**	**(482,048)**	**(5,091)**	**91,266**
Net loss	—	—	—	—	—	(32,581)	—	(32,581)
Unrealized gains on available-for-sale securities	—	—	—	—	—	—	27	27
Common stock issued, net of offering costs of $1.5 million	2,449,943	1	—	—	20,557	—	—	20,558
Series B Convertible Preferred Stock issued, net of offering costs of $0.1 million	(666,667)	—	5,333	—	1,863	—	—	1,863
Series C Convertible Preferred Stock issued	(1,250,000)	(1)	7,500	—	—	—	—	(1)
Issuances under employee stock purchase plan	11,255	—	—	—	112	—	—	112
Restricted stock units converted	12,231	—	—	—	278	—	—	278
Share-based compensation expense	—	—	—	—	2,179	—	—	2,179
Stock options exercised	3,324	—	—	—	34	—	—	34
Balance at December 31, 2015	**15,826,985**	**353,856**	**22,833**	**—**	**249,572**	**(514,629)**	**(5,064)**	**83,735**
Net loss	—	—	—	—	—	(57,705)	—	(57,705)
Unrealized loss on available-for-sale securities	—	—	—	—	—	—	(16)	(16)
Common stock issued, net of offering costs of $2.4 million	6,708,333	4	—	—	29,820	—	—	29,824
Series D Convertible Preferred Stock issued, net of offering costs of $0.3 million	—	—	17,250	—	13,458	—	—	13,458
Beneficial conversion feature related to the issuance of Series D preferred stock	—	—	—	(2,588)	2,588	—	—	—
Deemed dividend related to beneficial conversion feature of Series D preferred stock	—	—	—	2,588	(2,588)	—	—	—
Reverse stock split adjustment	(7)	(11)	—	—	11	—	—	—
Issuances under employee stock purchase plan	19,161	—	—	—	91	—	—	91
Restricted stock units converted	8,168	—	—	—	60	—	—	60
Share-based compensation expense	—	—	—	—	4,685	—	—	4,685
Recovery of related party short-swing profit	—	—	—	—	225	—	—	225
Balance at December 31, 2016	**22,562,640**	**$353,849**	**40,083**	**$ —**	**$ 297,922**	**$ (572,334)**	**$ (5,080)**	**$ 74,357**

(1) Common stock shares for the years ended December 31, 2015, 2014 and 2013 have been adjusted retroactively to reflect the 1-for-6 reverse stock split.

See accompanying notes to the consolidated financial statements

CASCADIAN THERAPEUTICS, INC.

Consolidated Statements of Cash Flows

(In thousands)

	Years Ended December 31,		
	2016	2015	2014
Cash flows from operating activities			
Net loss	**$(57,705)**	$(32,581)	$(49,963)
Adjustments to reconcile net loss to net cash used in operating activities:			
Depreciation and amortization	**642**	613	512
Amortization of premiums and accretion of discounts on securities	**238**	305	533
Share-based compensation expense	**4,609**	2,748	2,187
Change in fair value of warrant liability	**—**	(128)	(796)
Cash settled on conversion of restricted share units	**(20)**	(93)	(96)
Intangible assets impairment	**19,738**	—	—
Income tax (benefit) provision	**(6,908)**	—	—
Other	**69**	(7)	(1)
Net changes in assets and liabilities:			
Accounts and other receivables	**(38)**	98	(101)
Prepaid and other current assets	**7**	(530)	(168)
Other long-term assets	**(396)**	(124)	(9)
Accounts payable	**385**	(250)	144
Accrued and other liabilities	**514**	765	(810)
Accrued compensation and related liabilities	**2,752**	(92)	303
Other long-term liabilities	**(638)**	406	(102)
Net cash used in operating activities	**(36,751)**	(28,870)	(48,367)
Cash flows from investing activities			
Purchases of investments	**(92,268)**	(61,556)	(62,411)
Redemption of investments	**71,440**	86,027	71,861
Purchases of property and equipment	**(147)**	(771)	(380)
Cash assumed in connection with the acquisition of Alpine	**—**	—	104
Net cash provided by (used in) investing activities	**(20,975)**	23,700	9,174
Cash flows from financing activities			
Proceeds from issuance of common stock and warrants, net of issuance costs	**29,914**	20,669	21,668
Proceeds from issuance of convertible preferred stock, net of issuance cost	**13,458**	1,863	18,693
Proceeds from stock options exercised	**—**	34	7
Recovery of related party short-swing profit	**225**	—	—
Net cash provided by financing activities	**43,597**	22,566	40,368
Increase (decrease) in cash and cash equivalents	**(14,129)**	**17,396**	**1,175**
Cash and cash equivalents, beginning of year	**27,850**	**10,454**	**9,279**
Cash and cash equivalents, end of year	**$ 13,721**	**$ 27,850**	**$ 10,454**
Supplemental disclosures of non-cash investing and financing activities:			
Accretion on Series D convertible preferred stock associated with beneficial conversion feature	**$ 2,588**	$ —	$ —
Issuance of common stock in connection with the acquisition of Alpine	**$ —**	$ —	$ 27,233

See accompanying notes to the consolidated financial statements

CASCADIAN THERAPEUTICS, INC.

Notes to the Consolidated Financial Statements

1. DESCRIPTION OF BUSINESS

Cascadian Therapeutics, Inc. (the Company) is a clinical-stage biopharmaceutical company incorporated in the State of Delaware on September 7, 2007 and is listed on the NASDAQ Global Select Market under the ticker symbol "CASC." The Company is focused primarily on the development of targeted therapeutic products for the treatment of cancer. The Company's goal is to develop and commercialize compounds that have the potential to improve the lives and outcomes of cancer patients. The Company's operations are not subject to any seasonality or cyclicality factors.

2. SIGNIFICANT ACCOUNTING POLICIES

Basis of presentation

These consolidated financial statements have been prepared using accounting principles generally accepted in the United States of America (U.S. GAAP) and reflect the following significant accounting policies.

Reverse Stock Split and Change in Authorized Shares

On November 29, 2016, the Company effected a one-for-six reverse stock split of its outstanding common stock. As a result of the reverse stock split, each six outstanding shares of the Company's common stock were combined into one outstanding share of common stock. The reverse stock split was effective November 29, 2016, and trading of the Company's common stock on the NASDAQ Global Select Market began on a split-adjusted basis on November 29, 2016. No fractional share was issued in connection with the reverse stock split. The Company will pay in cash the fair value of such fractional shares to the common stock shareholders who are entitled to receive such fractional shares. All per share and share amounts for all periods presented have been adjusted retrospectively to reflect the 1-for-6 reverse stock split.

On November 18, 2016, the Company's stockholders approved a decrease in the Company's authorized shares of common stock from 200,000,000 to 66,666,667 shares. On a split-effected basis, authorized shares increased from 33,333,333 to 66,666,667 shares.

Basis of consolidation

The Company's consolidated financial statements include the accounts of the company and its wholly-owned subsidiaries, including Protocell Therapeutics Inc., Oncothyreon Canada Inc., Biomira Management Inc., ProlX Pharmaceuticals Corporation, Biomira BV and Oncothyreon Luxembourg. All intercompany balances and transactions have been eliminated upon consolidation.

Accounting estimates

The preparation of financial statements in accordance with U.S. GAAP requires management to make complex and subjective judgments and estimates that affect the reported amounts of assets and liabilities, the disclosure of contingent assets and liabilities at the date of the financial statements, and the reported amounts of revenues and expenses during the reporting period. By their nature, these judgments are subject to an inherent degree of uncertainty and as a consequence actual results may differ from those estimates.

Cash and cash equivalents

Cash equivalents include short-term, highly liquid investments that are readily convertible to known amounts of cash with original maturities of 90 days or less at the time of purchase. At December 31, 2016, cash and cash equivalents was comprised of $7.2 million in cash, and $6.5 million in money market funds and government securities. As of December 31, 2015, cash and cash equivalents was comprised of $6.2 million in cash and $21.7 million in money market funds. The carrying value of cash equivalents approximates their fair value.

Investments

Investments are classified as available-for-sale securities and are carried at fair value with unrealized temporary holding gains and losses excluded from net income or loss and reported in other comprehensive income or loss and also as a net amount in accumulated other comprehensive income or loss until realized. Available-for-sale securities are written down

to fair value through income whenever it is necessary to reflect other-than-temporary impairments. The Company determined that the unrealized losses on its marketable securities as of December 31, 2016 were temporary in nature, and the Company currently does not intend to sell these securities before recovery of their amortized cost basis. All short-term investments are limited to a final maturity of less than one year from the reporting date. The Company's long-term investments are investments with maturities exceeding 12 months but less than five years from the reporting date. The Company is exposed to credit risk on its cash equivalents, short-term investments and long-term investments in the event of non-performance by counterparties, but does not anticipate such non-performance and mitigates exposure to concentration of credit risk through the nature of its portfolio holdings. If a security falls out of compliance with the Company's investment policy, it may be necessary to sell the security before its maturity date in order to bring the investment portfolio back into compliance. The cost basis of any securities sold is determined by specific identification. The fair value of available-for-sale securities is based on prices obtained from a third-party pricing service. The Company utilizes third-party pricing services for all of its marketable debt security valuations. The Company reviews the pricing methodology used by the third-party pricing services including the manner employed to collect market information. On a periodic basis, the Company also performs review and validation procedures on the pricing information received from the third-party pricing services. These procedures help ensure that the fair value information used by the Company is determined in accordance with applicable accounting guidance. The amortized cost, unrealized gain or losses and fair value of the Company's cash, cash equivalents and investments for the periods presented are summarized below:

	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value
		(In thousands)		
As of December 31, 2016:				
Cash	**$ 7,162**	**$ —**	**$ —**	**$ 7,162**
Money market funds	**6,559**	**—**	**—**	**6,559**
Debt securities of U.S. government agencies	**38,387**	**1**	**(10)**	**38,378**
Corporate bonds	**10,711**	**—**	**(5)**	**10,706**
Total	**$ 62,819**	**$ 1**	**$ (15)**	**$ 62,805**
As of December 31, 2015:				
Cash	$ 6,152	$ —	$ —	$ 6,152
Money market funds	9,199	—	—	9,199
Debt securities of U.S. government agencies	31,511	3	(7)	31,507
Corporate bonds	9,496	7	(1)	9,502
Total	$ 56,358	$ 10	$ (8)	$ 56,360

The following table summarizes the Company's available for sale securities by contractual maturity:

	As of December 31, 2016		As of December 31, 2015	
	Amortized Cost	Fair Value	Amortized Cost	Fair Value
		(In thousands)		
Less than one year	**$ 55,657**	**$ 55,643**	$ 50,206	$ 50,208

Warrants

Warrants issued in connection with the Company's September 2010 financings are recorded as liabilities as both have the potential for cash settlement upon the occurrence of a fundamental transaction (as defined in the warrant; see "Note 6 — Share Capital"). Changes in the fair value of the warrants are recognized as other income (expense) in the consolidated statements of operations. Warrants issued in connection with the Company's September 2010 financing expired on October 12, 2015. None of the liability-classified warrants were outstanding as of December 31, 2016.

Accounts and other receivables

Accounts and other receivables are reviewed whenever circumstances indicate that the carrying amount of the receivable may not be recoverable. At this time, the Company does not deem an allowance to be necessary.

Property and equipment, depreciation and amortization

Property and equipment are recorded at cost and depreciated over their estimated useful lives on a straight-line basis, as follows:

Scientific and office equipment	5 years
Computer software and equipment	3 years
Leasehold improvements and leased equipment	Shorter of useful life or the term of the lease

Long-lived assets

Long-lived assets, such as property and equipment, are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. If circumstances require a long-lived asset be tested for impairment, the Company first compares the undiscounted cash flows expected to be generated by the asset to the carrying value of the asset. If the carrying value of the long-lived asset is not recoverable on an undiscounted cash flow basis, impairment is recognized to the extent that the carrying value exceeds its estimated fair value. Fair value is determined by management through various valuation techniques, including discounted cash flow models, quoted market values and third-party independent appraisals, as considered necessary. No impairment charges were recorded for any of the periods presented.

Indefinite-lived intangible assets — IPR&D

Intangible assets related to In Process Research & Development (IPR&D) are considered to be indefinite-lived until the completion or abandonment of the associated research and development efforts. Upon completion of the project, the Company will make a separate determination of useful life of the IPR&D and the related amortization will be recorded as an expense over the estimated useful life. If the IPR&D is abandoned, the carrying value of the asset will be expensed. During the period the assets are considered indefinite-lived, they will not be amortized but will be tested for impairment on October 1 of each year or more frequently when events or changes in circumstances indicate that the asset may be impaired. In the event that the carrying value of IPR&D exceeds its fair value, an impairment loss would be recognized. Subsequent research and development costs associated with the initial recognition of IPR&D assets are expensed as incurred.

Goodwill

Goodwill is not amortized, but is reviewed annually for impairment on October 1 of each year or more frequently when events or changes in circumstances indicate that the asset may be impaired. In the event that the carrying value of goodwill exceeds its fair value, an impairment loss would be recognized. No impairment charges were recorded for any of the periods presented.

Other liabilities

Other liabilities includes the long-term portion of accrued milestone payments and deferred rent. Certain milestone payments under our previous agreement with STC.UNM are accrued on a straight-line basis from initiation of the license agreement to the milestone payment date. Also included in this line item is the long-term portion of deferred rent. Rent expense is recognized on a straight-line basis over the term of the lease. Lease incentives, including rent holidays provided by lessors, and rent escalation provisions are accounted for as deferred rent.

Revenue recognition

The Company recognizes revenue when there is persuasive evidence that an arrangement exists, delivery has occurred, the price is fixed and determinable, and collection is reasonably assured.

Research and development costs

Research and development expenses include personnel and facility related expenses, which includes depreciation and amortization, outside contract services including clinical trial costs, manufacturing and process development costs, research costs and other consulting services. Research and development costs are expensed as incurred. In instances where the Company enters into agreements with third parties for clinical trials, manufacturing and process development,

research, licensing arrangements and other consulting activities, costs are expensed as services are performed. Amounts due under such arrangements may be either fixed fee or fee for service, and may include upfront payments, monthly payments, and payments upon the completion of milestones or receipt of deliverables.

The Company's accruals for clinical trials are based on estimates of the services received and pursuant to contracts with numerous clinical trial centers and clinical research organizations. In the normal course of business, the Company contracts with third parties to perform various clinical trial activities in the ongoing development of potential products. The financial terms of these agreements are subject to negotiation and variation from contract to contract and may result in uneven payment flows. Payments under the contracts depend on factors such as the achievement of certain events, the successful accrual of patients, and the completion of portions of the clinical trial or similar conditions. The objective of the Company's accrual policy is to match the recording of expenses in its consolidated financial statements to the period in which they are incurred. As such, expense accruals related to clinical trials are recognized based on its estimate of the degree of completion of the event or events specified in the specific clinical study or trial contract.

Income or loss per share

Basic net loss per share is calculated by dividing net loss attributable to common stockholders, which may include a deemed dividend from the amortization of a beneficial conversion feature, by the weighted average number of shares outstanding for the period. Diluted net loss per share is calculated by adjusting the numerator and denominator of the basic net loss per share calculation for the effects of all potentially dilutive common shares. Potential dilutive shares of the Company's common stock include stock options, restricted share units, warrants, Series A, B, C and D convertible preferred stock and shares granted under the 2010 Employee Stock Purchase Plan (ESPP). The calculation of diluted loss per share requires that, to the extent the average market price of the underlying shares for the reporting period exceeds the exercise price of the warrants and the presumed exercise of such securities are dilutive to loss per share for the period, adjustments to net loss used in the calculation are required to remove the change in fair value of the warrants for the period. Furthermore, adjustments to the denominator are required to reflect the addition of the related dilutive shares. Shares used to calculate basic and dilutive net loss per share for the years ended December 31, 2016, 2015 and 2014, were the same, since all potentially dilutive shares were anti-dilutive. Basic and diluted net loss per share for all periods presented have been adjusted retrospectively to reflect the 1-for-6 reverse stock split. For additional information regarding the income or loss per share, see "Note 6 — Share Capital."

Income taxes

The Company follows the asset and liability method of accounting for income taxes. Under this method, deferred tax assets and liabilities are recognized for the future income tax consequences attributable to differences between the carrying amounts and tax bases of assets and liabilities and losses carried forward and tax credits. Deferred tax assets and liabilities are measured using enacted tax rates and laws applicable to the years in which the differences are expected to reverse. 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 provided to the extent that it is more likely than not that deferred tax assets will not be realized.

The Company recognizes the financial statement effects of a tax position when it is more likely than not, based on the technical merits, that the position will be sustained upon examination. The Company does not believe any uncertain tax positions currently pending will have a material adverse effect on its consolidated financial statements nor expects any material change in its position in the next twelve months. Penalties and interest, of which there are none, would be reflected in income tax expense. Tax years are open to the extent the Company has net operating loss carryforwards available to be utilized currently.

Accumulated other comprehensive income (loss)

Comprehensive income or loss is comprised of net income or loss and other comprehensive income or loss. Other comprehensive income or loss includes unrealized gains and losses on the Company's available-for-sale investments. In addition to unrealized gains and losses on investments, accumulated other comprehensive income or loss consists of foreign currency translation adjustments which arose from the conversion of the Canadian dollar functional currency consolidated financial statements to the U.S. dollar reporting currency consolidated financial statements prior to January 1, 2008. Should the Company liquidate or substantially liquidate its investments in its foreign subsidiaries, the Company would be required to recognize the related cumulative translation adjustments pertaining to the liquidated or substantially liquidated subsidiaries, as a charge to earnings in the Company's consolidated statements of operations and comprehensive loss.

There were no reclassifications out of accumulated other comprehensive loss during the years ended December 31, 2016 and 2015. $6,000 was reclassified out of accumulated other comprehensive loss during the year ended December 31, 2014. The table below shows the changes in accumulated balances of each component of accumulated other comprehensive loss for the years ended December 31, 2016, 2015 and 2014:

	Net Unrealized Gains/(losses) on Available-for-Sale Securities	Foreign Currency Translation Adjustment	Accumulated Other Comprehensive Loss
		(In thousands)	
Balance at December 31, 2013	15	(5,066)	(5,051)
Other comprehensive loss	(40)	—	(40)
Balance at December 31, 2014	$ (25)	$ (5,066)	$ (5,091)
Other comprehensive income	27	—	27
Balance at December 31, 2015	$ 2	$ (5,066)	$ (5,064)
Other comprehensive income	(16)	—	(16)
Balance at December 31, 2016	$ (14)	$ (5,066)	$ (5,080)

Share-based compensation

The Company recognizes in the statements of operations the estimated grant date fair value of share-based compensation awards granted to employees over the requisite service period. Share-based compensation expense in the consolidated statements of operations is recorded on a straight-line basis over the requisite service period for the entire award, which is generally the vesting period, with the offset to additional paid-in capital. The Company uses the Black-Scholes option pricing model to estimate the fair value of stock options granted to employees. Forfeitures are estimated at the time of grant and revised, if necessary, in subsequent periods if actual forfeitures differ from those estimates.

On June 23, 2016, the Company's stockholders approved a new 2016 Equity Incentive Plan (2016 EIP). As of that date, the Company ceased granting options under its Amended and Restated Share Option Plan (the Option Plan) and transferred the remaining shares available for issuance under the Option Plan to the 2016 EIP.

For non-employee directors, the Company sponsors a RSU Plan that was established in 2005. According to an amendment to the RSU Plan in October 2011, approximately 25% of each RSU represents a contingent right to receive cash upon vesting, and the Company is required to deliver an amount in cash equal to the fair market value of the shares on the vesting date to facilitate the satisfaction of the non-employee directors' U.S. federal income tax obligation with respect to the vested RSUs. This amendment resulted in the RSUs being classified as a liability. The outstanding RSU awards are required to be re-measured at each reporting date until settlement of the award, and changes in valuation are recorded as compensation expense for the period. To the extent that the liability recorded in the balance sheet is less than the original award value, the difference is recognized in equity. The Company uses the closing share price of its shares on the NASDAQ Global Market at the reporting or settlement date to determine the fair value of RSUs. In June 2014, the Company's stockholders approved an increase of 83,333 shares in the number of shares of the Company's common stock reserved for issuance under the RSU Plan. On June 23, 2016, the stockholders approved the 2016 EIP and the Company ceased granting RSUs under the RSU Plan and transferred the remaining shares available for issuance under the RSU Plan to the 2016 EIP.

The Company maintains an ESPP under which a total of 150,000 shares of common stock were reserved for sale to employees of the Company. The Company recognizes in the statement of operations the estimated fair value of the ESPP, which is determined by the Black-Scholes option pricing model.

For additional information regarding share-based compensation, see "Note 7 — Share-based Compensation."

Business Combinations

In a business combination, the Company determines if the acquired property and activities meet the definition of a business under current accounting guidance. If the combination meets the definition of a business, the Company measures the significance of the combination to determine the required reporting and disclosure requirements for the transaction. Business combinations are required to be accounted for under the acquisition method which requires that

identifiable assets acquired, liabilities assumed and any non-controlling interest in the acquiree be recognized and measured as of the acquisition date at fair value. In addition, all consideration transferred must be measured at its acquisition-date fair value.

When necessary, the Company uses a third party valuation expert to determine the fair value of the identifiable assets and liabilities acquired. The estimated fair values of in-process research and development acquired in a business combination which have not been fully developed are capitalized as indefinite-lived intangible assets and impairment testing is conducted periodically.

Segment information

The Company operates in a single business segment — research and development of therapeutic products for the treatment of cancer.

Recent accounting pronouncements

In August 2016, the FASB issued Accounting Standards Update (ASU) 2016-15, Statement of Cash Flows (Topic 230), a consensus of the FASB's Emerging Issues Task Force. The guidance is intended to reduce diversity in practice in how certain transactions are classified in the statement of cash flows. The guidance addresses the classification of cash flows related to (1) debt prepayment or extinguishment costs, (2) settlement of zero-coupon debt instruments, (3) contingent consideration payments made after a business combination, (4) proceeds from the settlement of insurance claims, (5) proceeds from the settlement of corporate-owned life insurance, including bank-owned life insurance, (6) distributions received from equity method investees and (7) beneficial interests in securitization transactions. The guidance requires application using a retrospective transition method and is effective for public business entities for fiscal years beginning after December 15, 2017, and interim periods within those years. Early adoption is permitted. The Company is currently evaluating any impact this guidance may have on its consolidated statements of cash flows.

In March 2016, the FASB issued ASU 2016-09, Improvements to Employee Share-Based Payment Accounting, which amends ASC Topic 718, Compensation – Stock Compensation. The guidance will change how companies account for certain aspects of share-based payments to employees including income tax consequences, classification of awards as either equity or liabilities, and classification on the statement of cash flows. The guidance is effective for public business entities for fiscal years beginning after December 15, 2016, and interim periods within those years. The Company will adopt this standard as of January 1, 2017. Because the Company has incurred net losses since its inception and maintains a full valuation allowance on its net deferred tax assets, the adoption of this standard is not expected to have a material impact on the Company's financial condition, results of operations and cash flows, or financial statement disclosures.

In February 2016, the FASB issued ASU No. 2016-02, Leases (Topic 842), to improve financial reporting for leasing transactions. The new standard requires lessees to recognize on the balance sheets a right of use asset and related lease liability. Lessor accounting under the new standard remains similar under current GAAP. The ASU also requires disclosures about the amount, timing, and uncertainty of cash flows arising from leases. The effective date for public entities is fiscal years beginning after December 15, 2018, including interim periods within those fiscal years. Early adoption is permitted for all entities. The Company is currently evaluating any impact this standard may have on its consolidated financial position and results of operations.

In January 2016, the FASB issued ASU 2016-01, Financial Instruments – Overall (Subtopic 825-10): Recognition and Measurement of Financial Assets and Financial Liabilities. The guidance will change how entities measure equity investments that do not result in consolidation and are not accounted for under the equity method and how they present changes in the fair value of financial liabilities measured under the fair value option that are attributable to their own credit. The new guidance also changes certain disclosure requirements and other aspects of current US GAAP. It does not change the guidance for classifying and measuring investments in debt securities and loans. ASU 2016-01 is effective for public business entities for fiscal years beginning after December 15, 2017, including interim periods within those fiscal years. With the exception of early application guidance outlined in this standard, early adoption is not permitted. The Company is currently evaluating any impact this guidance may have on its consolidated financial position and results of operations.

In August 2015, FASB issued Accounting Standards Update (ASU) 2015-14, Revenue from Contracts with Customers (Topic 606)—Deferral of the Effective Date, which defers by one year the effective date of ASU 2014-09, Revenue from Contracts with Customers. For public entities, the standard is effective for annual reporting periods beginning after

December 15, 2017, including interim reporting periods within that reporting period. Early adoption is permitted as of annual reporting periods beginning after December 15, 2016, including interim reporting periods within those annual periods. As the Company does not currently have any revenue arrangements in the scope of the new revenue standard, it does not expect the adoption of this standard to have a material effect on its financial position or results of operations. However, if the Company does enter into license, collaboration or other revenue arrangements during 2017, there may be material differences in the accounting treatment under the current guidance and the new revenue standard as of the adoption date, January 1, 2018.

3. FAIR VALUE MEASUREMENTS

The Company measures certain financial assets and liabilities at fair value in accordance with a hierarchy which requires an entity to maximize the use of observable inputs which reflect market data obtained from independent sources and minimize the use of unobservable inputs. There are three levels of inputs that may be used to measure fair value:

- Level 1 — quoted prices in active markets for identical assets or liabilities;
- Level 2 — observable inputs other than Level 1 prices such as quoted prices for similar assets or liabilities, quoted prices in markets that are not active, or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the assets or liabilities; and
- Level 3 — unobservable inputs that are supported by little or no market activity and that are significant to the fair value of the assets or liabilities.

The Company's financial assets and liabilities measured at fair value on a recurring basis consisted of the following as of December 31, 2016 and 2015:

	December 31, 2016				December 31, 2015			
	Level 1	Level 2	Level 3	Total	Level 1	Level 2	Level 3	Total
	(In thousands)							
Financial Assets:								
Money market funds	**$6,559**	**$ —**	**$ —**	**$ 6,559**	$9,199	$ —	$ —	$ 9,199
Debt securities of U.S. government agencies	**—**	**38,378**	**—**	**38,378**	—	31,507	—	31,507
Corporate bonds	**—**	**10,706**	**—**	**10,706**	—	9,502	—	9,502
	$6,559	**$49,084**	**$ —**	**$55,643**	$9,199	$41,009	$ —	$50,208
Financial Liability:								
Restricted Share Units	**$ 352**	**$ —**	**$ —**	**$ 352**	$ 508	$ —	$ —	$ 508

If quoted market prices in active markets for identical assets are not available to determine fair value, then the Company uses quoted prices of similar instruments and other significant inputs derived from observable market data obtained from third-party data providers. These investments are included in Level 2 and consist of debt securities of U.S government agencies and corporate bonds.

There were no transfers between Level 1 and Level 2 during 2016. The Company classified its warrant liability within Level 3 because the warrant liability was valued using valuation models with significant unobservable inputs. The estimated fair value of warrants accounted for as liabilities was determined on the issuance date and are subsequently re-measured to fair value at each reporting date. The warrants issued from a September 2010 financing expired on October 12, 2015. None of the liability-classified warrants were outstanding as of December 31, 2016.

The change in fair value of the warrants is recorded in the statement of operations as other income or other expense by using the Black-Scholes option-pricing model.

The table below shows the reconciliation of the warrant liability measured and recorded at fair value on a recurring basis, using significant unobservable inputs (Level 3):

	Years Ended December 31,	
	2016	2015
	(In thousands)	
Balance at beginning of period	$ —	$ 128
Change in fair value of warrant liability included in Other expense (income)	—	(128)
Balance at the end of period	$ —	$ —

4. PROPERTY AND EQUIPMENT

The table below outlines the cost, accumulated depreciation and amortization and net carrying value of the Company's property and equipment for the years ended December 31, 2016 and 2015:

	2016		
	Cost	Accumulated Depreciation and Amortization	Net Carrying Value
		(In thousands)	
Scientific equipment	**$3,077**	**$ (2,241)**	**$ 836**
Leasehold improvements	**1,627**	**(1,269)**	**358**
Computer software and equipment	**390**	**(315)**	**75**
Office equipment	**170**	**(37)**	**133**
	$5,264	**$ (3,862)**	**$ 1,402**

	2015		
	Cost	Accumulated Depreciation and Amortization	Net Carrying Value
		(In thousands)	
Scientific equipment	$3,155	$ (1,847)	$ 1,308
Leasehold improvements	1,590	(1,109)	481
Computer software and equipment	375	(320)	55
Office equipment	34	(33)	1
	$5,154	$ (3,309)	$ 1,845

Depreciation and leasehold improvement amortization expense was $0.6 million, $0.6 million and $0.5 million for the years ended December 31, 2016, 2015 and 2014, respectively.

5. INTANGIBLE ASSET IMPAIRMENT

On May 5, 2016, the Company entered into an agreement with STC.UNM to mutually terminate the license agreement relating to protocell technology. As a result of the termination and the Company's intent to no longer develop, license or commercialize the protocell technology, the indefinite-lived intangible assets acquired in the 2014 acquisition of Alpine Biosciences, Inc. (Alpine) were considered impaired. Accordingly, $19.7 million was fully written-off and recorded as intangible asset impairment in the Company's consolidated statements of operations for the year ended December 31, 2016. The indefinite-lived intangible assets represented the value assigned to in-process research and development when the Company acquired the protocell technology. Additionally, as a result of the impairment, the deferred tax liability, which solely relates to the indefinite-lived intangible assets was reversed, resulting in a federal tax benefit of $6.9 million during the year ended December 31, 2016. See "Note 10 — Income Tax". The impairment charge did not result in any significant cash expenditures or otherwise impact the Company's liquidity or cash.

6. SHARE CAPITAL

The Company has the authority to issue a total of 76,679,167 shares of capital stock divided into three classes as follows:

- 66,666,667 shares of Common Stock, $0.0001 par value per share.
- 10,000,000 shares of Preferred Stock (1) , $0.0001 par value per share
- 12,500 shares of Class UA Preferred Stock, no par value (the "Class UA Preferred Stock").

(1) The Preferred Stock may be issued from time to time in one or more series pursuant to a resolution or resolutions providing for such issue duly adopted by the Board of Directors (authority to do so being hereby expressly vested in the Board of Directors). The Board of Directors is further authorized, subject to limitations prescribed by law, to fix by resolution or resolutions the designations, powers, preferences and rights, and the qualifications, limitations or restrictions thereof, of any wholly unissued series of Preferred Stock, including without limitation authority to fix by resolution or resolutions the dividend rights, dividend rate, conversion rights, voting rights, rights and terms of redemption (including sinking fund provisions), redemption price or prices, and liquidation preferences of any such series, and the number of shares constituting any such series and the designation thereof, or any of the foregoing

Class UA preferred stock

As of December 31, 2016 and 2015, the Company had 12,500 shares of Class UA preferred stock authorized, issued and outstanding. The Class UA preferred stock has the following rights, privileges, and limitations:

Voting. Each share of Class UA preferred stock will not be entitled to receive notice of, or to attend and vote at, any Stockholder meeting unless the meeting is called to consider any matter in respect of which the holders of the shares of Class UA preferred stock would be entitled to vote separately as a class, in which case the holders of the shares of Class UA preferred stock shall be entitled to receive notice of and to attend and vote at such meeting. Amendments to the certificate of incorporation of Cascadian Therapeutics that would increase or decrease the par value of the Class UA preferred stock or alter or change the powers, preferences or special rights of the Class UA preferred stock so as to affect them adversely would require the approval of the holders of the Class UA preferred stock.

Conversion. The Class UA preferred stock is not convertible into shares of any other class of Cascadian Therapeutics capital stock.

Dividends. The holders of the shares of Class UA preferred stock will not be entitled to receive dividends.

Liquidation preference. In the event of any liquidation, dissolution or winding up of the Company, the holders of the Class UA preferred stock will be entitled to receive, in preference to the holders of the Company's common stock, an amount equal to the lesser of (1) 20% of the after tax profits ("net profits"), determined in accordance with Canadian generally accepted accounting principles, where relevant, consistently applied, for the period commencing at the end of the last completed financial year of the Company and ending on the date of the distribution of assets of the Company to its stockholders together with 20% of the net profits of the Company for the last completed financial year and (2) CDN $100 per share.

Holders of Class UA preferred stock are entitled to mandatory redemption of their shares if the Company realizes "net profits" in any year. For this purpose, "net profits … means the after tax profits determined in accordance with generally accepted accounting principles, where relevant, consistently applied." The Company has taken the position that this applies to Canadian GAAP and, accordingly, there have been no redemptions to date.

Redemption. The Company may, at its option and subject to the requirements of applicable law, redeem at any time the whole or from time to time any part of the then-outstanding shares of Class UA preferred stock for CDN $100 per share. The Company is required each year to redeem at CDN $100 per share that number of shares of Class UA preferred stock as is determined by dividing 20% of the net profits by CDN $100.

The difference between the redemption value and the book value of the Class UA preferred stock will be recorded at the time that the fair value of the shares increases to redemption value based on the Company becoming profitable as measured using Canadian GAAP.

Preferred stock

As of December 31, 2016 and 2015, the Company had authorized 10,000,000 shares of undesignated preferred stock, $0.0001 par value per share. As of December 31, 2016, the Company had 10,000 shares of Series A convertible preferred stock, 5,333 shares of Series B convertible preferred stock, 7,500 shares of Series C convertible preferred stock and 17,250 shares of Series D convertible preferred stock issued and outstanding. As of December 31, 2015, the Company had 10,000 shares of Series A convertible preferred stock, 5,333 shares of Series B convertible preferred stock and 7,500 shares of Series C convertible preferred stock issued and outstanding. Shares of preferred stock may be issued in one or more series from time to time by the board of directors of the Company, and the board of directors is expressly authorized to fix by resolution or resolutions the designations and the powers, preferences and rights, and the qualifications, limitations and restrictions thereof, of the shares of each series of preferred stock. Subject to the determination of the board of directors of the Company, the preferred stock would generally have preferences over common stock with respect to the payment of dividends and the distribution of assets in the event of the liquidation, dissolution or winding up of the Company.

Series A Convertible Preferred Stock

As of December 31, 2016 and 2015, the Company had 10,000 shares of Series A convertible preferred stock issued and outstanding.

On September 22, 2014, in connection with the public offering of 10,000 shares of the Company's Series A convertible preferred stock, the Company designated 10,000 shares of its authorized and unissued preferred stock as Series A convertible preferred stock and filed a Certificate of Designation of Preferences, Rights and Limitations of Series A Convertible Preferred Stock with the Delaware Secretary of State. Each share of Series A convertible preferred stock is convertible into 166.67 shares of the Company's common stock at any time at the holder's option. The holder, however, will be prohibited from converting Series A convertible preferred stock into shares of common stock if, as a result of such conversion, the holder, together with its affiliates, would own more than 4.99% of the shares of the Company's common stock then issued and outstanding. In the event of the Company's liquidation, dissolution, or winding up, holders of Series A convertible preferred stock will receive a payment equal to $0.0001 per share of Series A convertible preferred stock before any proceeds are distributed to the holders of common stock, after any proceeds are distributed to the holder of the Company's Class UA preferred stock and on parity with any distributions to the holders of the Company's Series B convertible preferred stock and Series C convertible preferred stock. Shares of Series A convertible preferred stock will generally have no voting rights, except as required by law and except that the consent of holders of a majority of the outstanding Series A convertible preferred stock will be required to amend the terms of the Series A convertible preferred stock. Shares of Series A convertible preferred stock will not be entitled to receive any dividends, unless and until specifically declared by the Company's board of directors, and will rank:

- senior to all common stock;
- senior to any class or series of capital stock created specifically ranking by its terms junior to the Series A convertible preferred stock;
- on parity with the Company's Series B convertible preferred stock, Series C convertible preferred stock and any class or series of capital stock created specifically ranking by its terms on parity with the Series A convertible preferred stock; and
- junior to the Company's Class UA preferred stock and any class or series of capital stock created specifically ranking by its terms senior to the Series A convertible preferred stock;

in each case, as to distribution of assets upon the Company's liquidation, dissolution or winding up whether voluntarily or involuntarily.

Series B Convertible Preferred Stock

As of December 31, 2016 and 2015, the Company had 5,333 shares of Series B convertible preferred stock issued and outstanding.

On February 11, 2015, in connection with the public offering of 1,333 shares of the Company's Series B convertible preferred stock, the Company designated 5,333 shares of its authorized and unissued preferred stock as Series B convertible preferred stock and filed a Certificate of Designation of Preferences, Rights and Limitations of Series B Convertible Preferred Stock with the Delaware Secretary of State. Each share of Series B convertible preferred stock is convertible into 166.67 shares of the Company's common stock at any time at the holder's option. The holder, however, will be prohibited from converting Series B convertible preferred stock into shares of common stock if, as a result of such conversion, the holder, together with its affiliates, would own more than 4.99% of the shares of the Company's common stock then issued and outstanding. In the event of the Company's liquidation, dissolution, or winding up, holders of Series B convertible preferred stock will receive a payment equal to $0.0001 per share of Series B convertible preferred stock

before any proceeds are distributed to the holders of common stock, after any proceeds are distributed to the holder of the Company's Class UA preferred stock and on parity with any distributions to the holders of the Company's Series A convertible preferred stock and Series C convertible preferred stock. Shares of Series B convertible preferred stock will generally have no voting rights, except as required by law and except that the consent of holders of a majority of the outstanding Series B convertible preferred stock will be required to amend the terms of the Series B convertible preferred stock. Shares of Series B convertible preferred stock will not be entitled to receive any dividends, unless and until specifically declared by the Company's board of directors, and will rank:

- senior to all common stock;
- senior to any class or series of capital stock created specifically ranking by its terms junior to the Series B convertible preferred stock;
- on parity with the Company's Series A convertible preferred stock, Series C convertible preferred stock and any class or series of capital stock created specifically ranking by its terms on parity with the Series B convertible preferred stock; and
- junior to the Company's Class UA preferred stock and any class or series of capital stock created specifically ranking by its terms senior to the Series B convertible preferred stock;

in each case, as to distributions of assets upon the Company's liquidation, dissolution or winding up whether voluntarily or involuntarily.

Series C Convertible Preferred Stock

As of December 31, 2016 and 2015, the Company had 7,500 shares of Series C convertible preferred stock issued and outstanding.

On May 14, 2015, the Company designated 7,500 shares of its authorized and unissued preferred stock as Series C Convertible Preferred Stock and filed a Certificate of Designation of Preferences, Rights and Limitations of Series C Convertible Preferred Stock with the Delaware Secretary of State. The Company entered into an exchange agreement with certain affiliates of Biotechnology Value Fund (BVF) to exchange 1,245,022 shares of common stock previously purchased by BVF for 7,500 shares of Series C Convertible Preferred Stock. Each share of Series C Convertible Preferred Stock is convertible into 166.67 shares of the Company's Common Stock at any time at the holder's option. The holder, however, will be prohibited from converting Series C Convertible Preferred Stock into shares of common stock if, as a result of such conversion, the holder, together with its affiliates, would own more than 9.99% of the shares of the Company's Common Stock then issued and outstanding. In the event of the Company's liquidation, dissolution, or winding up, holders of Series C Convertible Preferred Stock will receive a payment equal to $0.0001 per share of Series C Convertible Preferred Stock before any proceeds are distributed to the holders of common stock, after any proceeds are distributed to the holder of the Company's Class UA Preferred Stock and on parity with any distributions to the holders of the Company's Series A Convertible Preferred Stock and Series B Convertible Preferred Stock. Shares of Series C Convertible Preferred Stock will generally have no voting rights, except as required by law and except that the consent of holders of a majority of the outstanding Series C Convertible Preferred Stock will be required to amend the terms of the Series C Convertible Preferred Stock. Shares of Series C Convertible Preferred Stock will not be entitled to receive any dividends, unless and until specifically declared by the Company's board of directors, and will rank:

- senior to all common stock;
- senior to any class or series of capital stock hereafter created specifically ranking by its terms junior to the Series C Convertible Preferred Stock;
- on parity with the Company's Series A Convertible Preferred Stock, Series B Convertible Preferred Stock and any class or series of capital stock hereafter created specifically ranking by its terms on parity with the Series C Convertible Preferred Stock; and
- junior to the Company's Class UA Preferred Stock and any class or series of capital stock hereafter created specifically ranking by its terms senior to the Series C Convertible Preferred Stock;

in each case, as to distributions of assets upon the Company's liquidation, dissolution or winding up whether voluntarily or involuntarily.

Series D Convertible Preferred Stock

As of December 31, 2016 and 2015, the Company had 7,500 shares and zero shares of Series D convertible preferred stock issued and outstanding.

On June 28, 2016, the Company closed a registered direct offering of 17,250 shares of its Series D Convertible Preferred Stock at a price of $800.00 per share directly to affiliates of BVF Partners L.P. (BVF), which are existing stockholders and affiliates of a member of the board of directors, for gross proceeds of $13.8 million. The Company designated 17,250 shares of its authorized and unissued preferred stock as Series D convertible preferred stock and filed a Certificate of Designation of Preferences, Rights and Limitations of Series D Convertible Preferred Stock with the Delaware Secretary of State.

Each share of Series D Convertible Preferred Stock is convertible into 166.67 shares of the Company's Common Stock at any time at the holder's option. The holder, however, will be prohibited from converting Series D Convertible Preferred Stock into shares of common stock if, as a result of such conversion, the holder, together with its affiliates, would own more than 19.99% of the shares of the Company's Common Stock then issued and outstanding, which percentage may change at the holders' election to any other number less than or equal to 19.99% upon 61 days' notice to the Company. In the event of the Company's liquidation, dissolution, or winding up, holders of Series D Convertible Preferred Stock will receive a payment equal to $0.0001 per share of Series D Convertible Preferred Stock before any proceeds are distributed to the holders of common stock, after any proceeds are distributed to the holder of the Company's Class UA Preferred Stock and on parity with any distributions to the holders of the Company's Series A Convertible Preferred Stock, Series B Convertible Preferred Stock and Series C Convertible Preferred Stock. Shares of Series D Convertible Preferred Stock will generally have no voting rights, except as required by law and except that the consent of holders of a majority of the outstanding Series D Convertible Preferred Stock will be required to amend the terms of the Series D Convertible Preferred Stock. Shares of Series D Convertible Preferred Stock will not be entitled to receive any dividends, unless and until specifically declared by the Company's board of directors, and will rank:

- senior to all common stock;
- senior to any class or series of capital stock created that specifically ranks by its terms junior to the Series D convertible preferred stock;
- on parity with the Company's Series A convertible preferred stock, Series B Convertible Preferred Stock and Series C convertible preferred stock, and any class or series of capital stock created that specifically ranks by its terms on parity with the Series D convertible preferred stock; and
- junior to the Company's Class UA preferred stock and any class or series of capital stock created that specifically ranks by its terms senior to the Series D convertible preferred stock;

in each case, as to distributions of assets upon the Company's liquidation, dissolution or winding up, whether voluntarily or involuntarily.

Beneficial Conversion Feature

A beneficial conversion feature exists when the effective conversion price of a convertible security is less than the market price per share on the commitment date, creating a discount. The value of the discount is determined by the difference between the market price and the conversion price multiplied by the potential conversion shares purchased. The discount is recognized as a non-cash deemed dividend from the date of issuance to the earliest conversion date.

The Company recognized a beneficial conversion feature in the amount of $2.6 million, calculated as the number of potential conversion shares multiplied by the excess of the market price of its common stock over the price per conversion share of the Series D convertible preferred stock on the commitment date. The non-cash deemed dividends of $2.6 million was recorded in additional paid-in capital and as a deemed dividend on the Series D convertible preferred stock, and was used in determining the net loss applicable to common stockholders in the consolidated statement of operations for the year ended December 31, 2016.

Common stock

On November 18, 2016, the Company's stockholders approved a 1-for-6 reverse stock split and separately approved a decrease in the Company's authorized shares of common stock from 200,000,000 to 66,666,667 shares. On a split-effected basis, authorized shares increased from 33,333,333 to 66,666,667 shares. The reverse stock split became effective on November 29, 2016.

As of December 31, 2016 and 2015, the Company had 66,666,667 shares and 33,333,333 shares of common stock, $0.0001 par value per share, authorized, respectively. The holders of common stock are entitled to receive such dividends or distributions as are lawfully declared on the Company's common stock, to have notice of any authorized meeting of stockholders, and to exercise one vote for each share of common stock on all matters which are properly submitted to a vote of the Company's stockholders. As a Delaware corporation, the Company is subject to statutory limitations on the declaration and payment of dividends. In the event of a liquidation, dissolution or winding up of the Company, holders of common stock have the right to a ratable portion of assets remaining after satisfaction in full of the prior rights of creditors, including holders of the Company's indebtedness, all liabilities and the aggregate liquidation preferences of any outstanding shares of preferred stock. The holders of common stock have no conversion, redemption, preemptive or cumulative voting rights.

Amounts pertaining to issuances of common stock are classified as common stock on the consolidated balance sheet, approximately $2,256 and $1,583 of which represents par value of common stock as of December 31, 2016 and 2015, respectively. Additional paid-in capital primarily relates to amounts for equity financings and share-based compensation.

Warrants

In connection with certain equity and debt financings, the Company issued warrants to purchase shares of its common stock. The shares and prices of the warrants have been adjusted to reflect the 1-for-6 reverse stock split.

Warrants to purchase 530,358 shares of the Company's common stock from a September 2010 financing expired on October 12, 2015.

In February 2011, the Company issued 8,116 warrants, which were classified as equity, to purchase shares of common stock in connection with a Loan and Security Agreement entered into with General Electric Capital Corporation.

In June 2013, the Company issued warrants to purchase 833,333 shares of common stock, which were classified as equity, in connection with a registered direct offering to Biotechnology Value Fund, L.P. and other affiliates of BVF Partners L.P. (collectively, "BVF").

A summary of outstanding warrants as of December 31, 2016 and 2015 and changes during the years are presented below.

	2016 Shares Underlying Warrants	2015 Shares Underlying Warrants
Balance, beginning of year	**841,449**	**1,371,807**
Warrants expired	**—**	**(530,358)**
Balance, end of year	**841,449**	**841,449**

The following table summarizes information regarding warrants outstanding at December 31, 2016:

Exercise Prices	Shares Underlying Outstanding Warrants	Expiry Date
$18.48	8,116	February 8, 2018
$30.00	833,333	December 5, 2018
	841,449	

	Years Ended December 31,	
	2016	2015
Shares underlying warrants outstanding classified as equity	841,449	841,449

Equity Financings

On June 28, 2016, the Company closed an underwritten public offering of 6,708,333 shares of our common stock at a price to the public of $4.80 per share for gross proceeds of $32.2 million. The shares include 875,000 shares of common stock sold pursuant to the over-allotment option granted by the Company to the underwriters, which option was exercised in full. In addition, the Company closed a registered direct offering of 17,250 shares of our Series D convertible preferred stock at a price of $800.00 per share directly to affiliates of BVF for gross proceeds of $13.8 million. Each share of Series D convertible preferred stock is non-voting and convertible into 1,000 shares of our common stock, provided that conversion will be prohibited if, as a result, the holder and its affiliates would beneficially own more than 19.99% of the common stock then outstanding. Aggregate gross proceeds from the offerings were approximately $46.0 million. Aggregate net proceeds from the offerings, after underwriting discounts and commissions and other expenses of $2.7 million, were approximately $43.3 million.

On February 6, 2015, the Company entered into two underwriting agreements with Jefferies LLC, as underwriter, for separate but concurrent offerings of the Company's securities. On February 11, 2015, the Company closed concurrent but separate underwritten offerings of 2,250,000 shares of its common stock at a price to the public of $9.00 per share, for gross proceeds of approximately $20.3 million and 1,333 shares of its Series B convertible preferred stock at a price to the public of $1,500 per share, for gross proceeds of approximately $2.0 million. Each share of Series B convertible preferred stock is non-voting and convertible into 166.67 shares of the Company's common stock, provided that conversion will be prohibited if, as a result, the holder and its affiliates would beneficially own more than 4.99% of the common stock then outstanding. As part of the common stock offering, the Company also granted the underwriters a 30-day option to purchase 337,500 additional shares of its common stock. On February 18, 2015, the Company closed a partial exercise of the underwriter's option to purchase 199,943 additional shares of its common stock, at a price to the public of $9.00 per share, less underwriting discounts and commissions, which resulted in net proceeds to the Company of approximately $1.7 million. Aggregate gross proceeds from the offerings were approximately $24.0 million. Aggregate net proceeds from the offerings, after underwriting discounts and commissions and estimated expenses of $1.6 million, were approximately $22.4 million.

On September 18, 2014, the Company entered into two underwriting agreements with Cowen and Company, LLC as representative of the underwriters named therein for concurrent but separate offerings of the Company's securities. On September 23, 2014, the Company closed concurrent but separate underwritten offerings of 1,666,667 shares of its common stock at a price of $12.00 per share, for gross proceeds of $20 million, and 10,000 shares of its Series A convertible preferred stock at a price of $2,000 per share, for gross proceeds of $20 million. Each share of Series A convertible preferred stock is non-voting and convertible into 166.67 shares of the Company's common stock at any time at the option of the holder, provided that conversion will be prohibited if, as a result, the holder and its affiliates would beneficially own more than 4.99% of the common stock then outstanding. As part of the common stock offering, the Company also granted the underwriters, and the underwriters exercised, a 30-day option to purchase 250,000 additional shares of the Company's common stock. Aggregate gross proceeds from the offerings were approximately $43.0 million. Aggregate net proceeds from the offerings, after commissions and estimated expenses of $2.8 million, was approximately $40.2 million which included $21.6 million from the Company's common stock offering and $18.6 million from the Company's Series A convertible preferred stock offering.

"At-the-Market" Equity Offering Program

On June 2, 2016, the Company entered into a Sales Agreement (the Sales Agreement) with Cowen and Company, LLC (Cowen) to sell shares of the Company's common stock, par value $0.0001 per share, having aggregate sales proceeds of up to $50,000,000, from time to time, through an "at the market" equity offering program under which Cowen will act as sales agent. Under the Sales Agreement, the Company will set the parameters for the sale of shares, including the number of shares to be issued, the time period during which sales are requested to be made, any limits on the number of shares that may be sold in any one trading day and any minimum price below which sales may not be made. The Sales Agreement provides that Cowen will be entitled to compensation for its services equal to 3.0% of the gross proceeds from the sale of shares sold pursuant to the Sales Agreement. Sales under the ATM are limited by the greater of (i) the number of shares that are available to be issued or (ii) $50 million. The Company has no obligation to sell any shares under the Sales Agreement, and may at any time suspend solicitations and offers under the Sales Agreement. The Company terminated the Sales Agreement effective as of the close of business on January 23, 2017. No shares had been sold under the Sales Agreement since inception.

Net loss per share

Basic net loss per share is calculated by dividing net loss attributable to common stockholders, which may include a deemed dividend from the amortization of a beneficial conversion feature, by the weighted average number of shares outstanding for the period. Diluted net loss per share is calculated by adjusting the numerator and denominator of the basic net loss per share calculation for the effects of all potentially dilutive common shares. Potential dilutive shares of the Company's common stock include stock options, restricted share units, warrants, Series A, B, C and D convertible preferred stock and shares granted under the 2010 ESPP. The calculation of diluted loss per share requires that, to the extent the average market price of the underlying shares for the reporting period exceeds the exercise price of the warrants and the presumed exercise of such securities are dilutive to loss per share for the period, adjustments to net loss used in the calculation are required to remove the change in fair value of the warrants for the period. Furthermore, adjustments to the denominator are required to reflect the addition of the related dilutive shares. Shares used to calculate basic and dilutive net loss per share for the years ended December 31, 2016, 2015 and 2014 were the same, since all potentially dilutive shares were anti-dilutive.

The following table is a reconciliation of the numerators and denominators used in the calculation of basic and diluted net loss per share computations for the years ended December 31, 2016, 2015 and 2014. Basic and diluted net loss per share and shares to used compute basic and diluted net loss per share for the years ended December 31, 2016, 2015 and 2014 have been adjusted retroactively to reflect the 1-for-6 reverse stock split.

	Years Ended December 31,		
	2016	**2015**	**2014**
	(in thousands, except share and per share amounts)		
Numerator:			
Net loss attributable to common stockholders used to compute net loss per share			
Basic	**$ (60,293)**	$ (32,581)	$ (49,963)
Diluted	**$ (60,293)**	$ (32,581)	$ (49,963)
Denominator:			
Weighted average shares outstanding used to compute net loss per share:			
Basic	**19,264,121**	16,102,860	12,936,640
Diluted	**19,264,121**	16,102,860	12,939,640
Net loss per share—basic and diluted	**$ (3.13)**	$ (2.02)	$ (3.86)

The following table presents the number of shares that were excluded from the number of shares used to calculate diluted net loss per share. The share data for the years ended December 31, 2016, 2015 and 2014 has been adjusted to reflect the 1-for-6 reverse stock split.

	Years Ended December 31,		
	2016	2015	2014
Director and employee stock options	**1,866,711**	1,225,194	869,685
Warrants	**841,449**	841,449	1,371,806
Series A convertible preferred stock (as converted to common stock)	**1,666,697**	1,666,697	1,666,697
Series B convertible preferred stock (as converted to common stock)	**888,851**	888,851	—
Series C convertible preferred stock (as converted to common stock)	**1,250,022**	1,250,022	—
Series D convertible preferred stock (as converted to common stock)	**2,875,055**	—	—
Non-employee director restricted share units	**81,619**	38,157	27,207
Employee stock purchase plan	**1,830**	449	666

7. SHARE-BASED COMPENSATION

At the opening of trading on November 29, 2016, the Company effected a 1-for-6 reverse stock split of its issued common stock. The per share price and the share amounts under the Company's share-based compensation plans have been adjusted to reflect the 1-for-6 reverse stock split.

2016 Equity Incentive Plan

On June 23, 2016, the Company's stockholders approved a new 2016 EIP. As of that date, the Company ceased granting options under its Amended and Restated Share Option Plan (the Option Plan), ceased granting restricted shares units under its Amended and Restated RSU Plan (the RSU Plan) and transferred the remaining shares available for issuance under the Option Plan and the RSU Plan to the 2016 EIP. 1,200,905 shares of common stock were reserved for issuance under the 2016 EIP, consisting of 1,050,000 shares available for awards under the 2016 EIP plus 82,884 and 68,021 shares of common stock previously reserved but unissued under the Option Plan and the RSU Plan, respectively, that were available for issuance under the 2016 EIP on the effective date of the 2016 EIP. All grants under the 2016 EIP may have a term up to ten years from the date of grant. Vesting schedules are determined by the compensation committee of the board of directors or its designee when each award is granted. During the year ended December 31, 2016, the Company granted 92,608 stock options under the 2016 EIP. No stock options were exercised under the 2016 EIP during the year ended December 31, 2016. During the year ended December 31, 2016, the Company granted 54,348 RSUs with a fair value of $300,000 under the 2016 EIP.

Share option plan

The Company sponsored an Option Plan under which a maximum fixed reloading percentage of 10% of the issued and outstanding common shares of the Company may be granted to employees, directors, and service providers. Prior to April 1, 2008, options were granted with a per share exercise price, in Canadian dollars, equal to the closing market price of the Company's shares of common stock on the Toronto Stock Exchange on the date immediately preceding the date of the grant. After April 1, 2008, options were granted with a per share exercise price, in U.S. dollars, equal to the closing price of the Company's shares of common stock on The NASDAQ Global Market on the date of grant. Canadian dollar amounts reflected in the tables below, which approximates their U.S. dollar equivalents as differences between the U.S. dollar and Canadian dollar exchange rates for the periods reflected below are not material. During the year ended December 31, 2016, the Company granted 313,040 stock options under the Option Plan. No stock options were exercised under the Option Plan during the year ended December 31, 2016. On June 23, 2016, the stockholders approved the 2016 EIP and the Company ceased granting options under the Option Plan. Options granted under the Option Plan prior to January 2010 began vesting after one year from the date of grant, are exercisable in equal amounts over four years on the anniversary date of the grant, and expire eight years following the date of grant. Options granted to employees under the Option Plan after January 2010 vest 25% on the first anniversary of the vesting commencement date, with the balance vesting in monthly increments for 36 months following the first anniversary of grant, and expire eight years following the date of grant. Due to the adoption of the 2016 EIP on June 23, 2016, all shares remaining for future grant under the Option Plan were transferred to the 2016 EIP plan leaving no shares of common stock available for future grant under the Option Plan.

Inducement Grant

On April 4, 2016, the Company made an inducement stock option grant (Inducement Grant) of 474,810 options. Options granted under the Inducement Grant vest 25% on the first anniversary of the vesting commencement date, with the balance vesting in monthly increments for 36 months following the first anniversary of grant, and expire ten years following the date of grant. No stock options were exercised under the inducement grant during the year ended December 31, 2016.

As of December 31, 2016, 1,053,949 shares of common stock remain available for future grant under the 2016 EIP. A summary of option activity under the 2016 EIP, Inducement Grant and Option Plan as of December 31, 2016, and changes during such year is presented below. As described above, prior to April 1, 2008, exercise prices were denominated in Canadian dollars and in U.S. dollars thereafter. The weighted average exercise prices listed below are in their respective dollar denominations.

Options	Stock Options	Weighted Average Exercise Price	Weighted Average Remaining Contractual Term	Aggregate Intrinsic Value
In Canadian dollars ($CDN):				
Outstanding at January 1, 2016	750	$ 27.6		
Granted	—	—		
Exercised	—	—		
Forfeited	—	—		
Expired	(750)	27.6		
Outstanding at December 31, 2016	—	$ —	—	$ —
Vested or expected to vest at December 31, 2016	—	$ —	—	$ —
Vested and exercisable at December 31, 2016	—	$ —	—	$ —
In US dollars ($US):				
Outstanding at January 1, 2016	1,224,444	$ 19.10		
Granted	880,458	6.83		
Exercised	—	—		
Forfeited	(225,355)	18.61		
Expired	(12,836)	20.58		
Outstanding at December 31, 2016	1,866,711	$ 13.36	6.60	$ —
Vested or expected to vest at December 31, 2016	1,751,629	$ 13.72	6.47	$ —
Vested and exercisable at December 31, 2016	800,586	$ 18.98	4.54	$ —

The weighted average grant-date fair values of options granted were $4.53, $13.40 and $7.46, for the years ended December 31, 2016, 2015 and 2014, respectively.

The aggregate intrinsic value is calculated as the difference between the exercise price of the underlying awards and the quoted price of the Company's common stock for all options that were in-the-money at December 31, 2016. Under the 2016 EIP, Option Plan and Inducement Grant, the total fair value of stock options vested during the years ended December 31, 2016, 2015 and 2014 was $10.6 million, $8.0 million and $6.3 million, respectively. There were zero, 3,324 and 1,001 stock options exercised for the year ended December 31, 2016, 2015 and 2014, respectively. Cash received from stock option exercises and the total intrinsic value of stock option exercises for the year ended December 31, 2016 was zero. Cash received from stock option exercises and the total intrinsic value of stock option exercises for all periods presented were immaterial. As of December 31, 2016, there was no exercisable, in-the-money stock options based on the Company's closing share price of $4.31 on The NASDAQ Global Market.

Share-based compensation expense related to the 2016 EIP, the Option Plan and Inducement Grant of $4.6 million, $2.1 million and $1.7 million was recognized for the years ended December 31, 2016, 2015 and 2014, respectively. The stock compensation expense during the year ended December 31, 2016 included the acceleration of share-based compensation expense related to the retirement of the Company's former chief executive officer in January 2016. Total compensation cost related to non-vested stock options not yet recognized was $4.7 million as of December 31, 2016, which is expected to be recognized over the next 35 months on a weighted-average basis. The Company uses the Black-Scholes option pricing model to value options upon grant date, under the following weighted average assumptions:

	2016	2015	2014
Expected dividend rate	**0.00%**	0.00%	0.00%
Expected volatility	**74.63%**	72.15%	78.67%
Risk-free interest rate	**1.46%**	1.63%	1.65%
Expected life of options in years	**6.22**	6.00	5.82

The expected life represents the period that the Company's stock options are expected to be outstanding and is based on historical data. The expected volatility is based on the historical volatility of the Company's common stock for a period equal to the stock option's expected life. The risk-free interest rate is based on the yield at the time of grant of a U.S. Treasury security with an equivalent expected term of the option. The Company does not expect to pay dividends on its common stock. The amounts estimated according to the Black-Scholes option pricing model may not be indicative of the actual values realized upon the exercise of these options by the holders.

Share-based compensation guidance requires forfeitures to be estimated at the time of grant and revised, if necessary, in subsequent periods if actual forfeitures differ from estimates. The Company estimates forfeitures based on its historical experience.

Restricted share unit plan

The RSU Plan was established in 2005 for non-employee directors. On June 23, 2016, the stockholders approved the 2016 EIP and the Company ceased granting RSUs under the RSU Plan.

The RSU Plan provided for grants to be made from time to time by the board of directors or a committee thereof. Each restricted stock unit (RSU) granted was made in accordance with the RSU Plan and terms specific to that grant. Outstanding RSUs under the RSU Plan have a vesting term of one to two years. Approximately 75% of each RSU represents a contingent right to receive approximately 0.75 of a share of the Company's common stock upon vesting. Approximately 25% of each RSU represents a contingent right to receive cash upon vesting, and the Company is required to deliver an amount in cash equal to the fair market value of these shares on the vesting date to facilitate the satisfaction of the non-employee directors' U.S. federal income tax obligation with respect to the vested RSUs. The outstanding RSU awards are required to be re-measured at each reporting date until settlement of the award, and changes in valuation are recorded as compensation expense for the period. The fair value of the outstanding RSUs on the reporting date is determined to be the closing trading price of the Company's common shares on that date.

On June 6, 2014, the Company's stockholders approved an increase of 83,333 shares in the number of shares of the Company's common stock reserved for issuance under the RSU Plan. Upon vesting, RSUs of 10,893, 16,308 and 18,351 with a weighted average fair value of $18.36, $22.75 and $20.85 were converted into 10,893, 16,308 and 18,351 shares of common stock for the years ended December 31, 2016, 2015 and 2014, respectively. Pursuant to an October 2011 amendment to the Company's RSU Plan, the Company withheld 2,723 shares of the 10,893 RSUs for the year ended December 31, 2016, 4,078 shares of the 16,308 RSUs for the year ended December 31, 2015 and 4,588 shares of the 18,351 RSUs for the year ended December 31, 2014. The Company delivered to non-employee directors cash totaling $20,098, $92,759 and $95,653, which was equal to the fair value of the shares withheld on the vesting date in order to facilitate satisfaction of the non-employee directors' income tax obligation with respect to the vested RSUs for the years ended December 31, 2016, 2015 and 2014, respectively.

Upon the adoption of the 2016 EIP on June 23, 2016, all shares remaining for future grant under the RSU Plan became available for issuance under the 2016 EIP plan and the Company ceased granting RSUs under the RSU Plan.

The fair value of each RSU has been determined to be the closing trading price of the Company's common shares on the date of grant as quoted in NASDAQ Global Market.

A summary of the RSU activity under the Company's 2016 EIP and RSU Plan as of December 31, 2016, and changes during such year is presented below:

Restricted Share Units	Restricted Share Units	Weighted Average Fair Value per Unit
Non-vested at January 1, 2016	38,164	$ 13.32
Granted	54,348	5.52
Converted	(10,893)	18.36
Non-vested at December 31, 2016	81,619	$ 4.31
Expected to vest at December 31, 2016	81,619	$ 4.31

As of December 31, 2016, there was no unrecognized compensation cost related to unvested RSUs. The re-measurement of the outstanding RSUs together with the grant and conversion of the RSUs resulted in a reduction of $0.1 million in share-based compensation expense recorded in general and administrative expenses in the consolidated statement of operations for the years ended December 31, 2016 and an additional $0.6 million and $0.4 million in share-based compensation expense recorded in general and administrative expenses in the consolidated statement of operations for the years ended December 31, 2015 and 2014, respectively.

Employee Stock Purchase Plan (ESPP)

The Company adopted an ESPP on June 3, 2010, pursuant to which a total of 150,000 shares of common stock were reserved for sale to employees of the Company. The ESPP is administered by the compensation committee of the board of directors and is open to all eligible employees of the Company. Under the terms of the ESPP, eligible employees may purchase shares of the Company's common stock at six month intervals during 18-month offering periods through their periodic payroll deductions, which may not exceed 15% of any employee's compensation and may not exceed a value of $25,000 in any calendar year, at a price not less than the lesser of an amount equal to 85% of the fair market value of the Company's common stock at the beginning of the offering period or an amount equal to 85% of the fair market value of the Company's common stock on each purchase date. The maximum aggregate number of shares that may be purchased by each eligible employee during each offering period is 15,000 shares of the Company's common stock.

Fair value of shares purchases under the Company's ESPP was estimated at subscription dates using a Black-Scholes valuation model, which requires the input of highly subjective assumptions including expected stock price volatility and expected term. The expected volatility is based on the historical volatility of the Company's common stock for a period equal to the ESPP's expected term, which is determined by length of time between the subscription date and the purchase date. The risk-free interest rate is based on the yield at the time of grant of a U.S. Treasury security with an equivalent expected term of the ESPP. The Company does not expect to pay dividends on its common stock.

For the year ended December 31, 2016, 2015 and 2014, expense related to this plan was $120,540, $95,764 and $101,796, respectively. As of December 31, 2016, there are 69,673 shares reserved for future purchases and there was approximately $149,000 of unrecognized compensation cost related to the ESPP, which is expected to be recognized over an estimated weighted-average period of 1.50 years. The following table summarizes information for shares issued under the ESPP for the years ended December 31, 2016, 2015 and 2014:

	Shares Issued for the Years Ended December 31,		
Purchase Prices	**2016**	**2015**	**2014**
$4.45	**10,900**	—	—
$5.10	**8,261**	—	—
$8.94	**—**	4,698	12,801
$9.72	**—**	1,899	—
$11.10	**—**	4,656	—
Total	**19,161**	11,253	12.801

8. COLLABORATIVE AND LICENSE AGREEMENTS

Array BioPharma, Inc.

On December 11, 2014, the Company entered into a License Agreement (the License Agreement) with Array BioPharma Inc. (Array). Pursuant to the License Agreement, Array granted the Company an exclusive license to develop, manufacture and commercialize tucatinib (previously known as ONT-380), an orally active, reversible and selective small-molecule HER2 inhibitor.

Under the terms of the License Agreement, the Company paid Array an upfront fee of $20 million, which was recorded as part of research and development expense upon initiation of the exclusive license agreement. In addition, if the Company sublicenses rights to tucatinib to a third party, the Company will pay Array a percentage of any sublicense payments it receives, with the percentage varying according to the stage of development of tucatinib at the time of the sublicense. If the Company is acquired within three years of the effective date of the License Agreement, and tucatinib has not been sublicensed to another entity prior to such acquisition, then the acquirer will be required to make certain milestone payments of up to $280 million to Array, which are primarily based on potential tucatinib sales. Array is also entitled to receive up to a double-digit royalty based on net sales of tucatinib.

The License Agreement will expire on a country-by-country basis ten years following the first commercial sale of the product in each respective country, but may be terminated earlier by either party upon material breach of the License Agreement by the other party or the other party's insolvency, or by the Company on 180 days' notice to Array. The Company and Array have also agreed to indemnify the other party for certain of their respective warranties and obligations under the License Agreement.

STC.UNM

Effective June 30, 2014, Alpine entered into an exclusive license agreement with STC.UNM, by assignment from The Regents of the University of New Mexico, to license the rights to use certain technology relating to protocells, a mesoporous silica nanoparticle delivery platform. The Company subsequently acquired Alpine in August 2014. Under the terms of the license agreement, the Company, as successor to Alpine, had the right to conduct research, clinical development and commercialize all inventions and products that are developed from the platform technology in certain fields of use as described in the license agreement. In exchange for the exclusive license, the Company was obligated to make a series of payments including on-going annual license payments, reimbursement of patent costs, success and time-based milestones up to $5 million. Royalty obligations under the license agreement included a double-digit royalty on commercial sublicensing income and a low single-digit royalty based on net sales.

On May 5, 2016, the Company entered into an agreement with STC.UNM to terminate the license agreement relating to protocell technology. The agreement provided for a mutual release of claims and payment of a termination and license fee totaling $325,000. As a result of the termination and the Company's intent to no longer develop, license or commercialize the protocell technology, the indefinite-lived intangible assets acquired in the 2014 acquisition of Alpine were considered impaired. Accordingly, $19.7 million was fully written-off and recorded as intangible asset impairment in the Company's consolidated statements of operations for the year ended December 31, 2016. The indefinite-lived intangible assets represent the value assigned to in-process research and development when the Company acquired the protocell technology. The Company also recognized a $6.9 million tax benefit during the year ended December 31, 2016, upon the reversal of its deferred tax liability, which solely relates to the indefinite-lived intangible assets. In addition, $1.5 million of previously recorded time-based milestones for license fees associated with the STC.UNM license agreement was reversed from research and development expenses during year ended December 31, 2016. The impairment charge did not result in any significant future cash expenditures, or otherwise impact the Company's liquidity or cash. See the "Note 5 – Intangible Asset Impairment" and "Note 10 — Income Tax" of the audited financial statements included in this report for additional information.

Sentinel Oncology Ltd.

In April 2014, the Company entered into an exclusive license and research collaboration agreement with Sentinel Oncology Limited (Sentinel) for the development of novel small molecule Chk1 kinase inhibitors. Under the agreement, the Company has made payments to Sentinel to support their chemistry research. The Company is responsible for preclinical and clinical development, manufacturing and commercialization of any resulting compounds. Sentinel is eligible to receive success-based development and commercial milestone payments up to approximately $90 million based on development and commercialization events, including a $1.0 million milestone for the initiation of GLP toxicology studies, the initiation of certain clinical trials, regulatory approval and first commercial sale. Sentinel is also entitled to a single-digit royalty based on net sales.

Merck KGaA

In May 2001, the Company and Merck KGaA entered into a collaborative arrangement to pursue joint global product research, clinical development and commercialization for two product candidates, including tecemotide (formerly known as L-BLP25 or Stimuvax), a MUC1-based liposomal cancer vaccine. This collaboration agreement was subsequently revised and ultimately replaced in 2008 with a license agreement. Under the 2008 license agreement, (1) the Company licensed to Merck KGaA the exclusive right to develop, commercialize and manufacture tecemotide and the right to sublicense to other persons all rights licensed to Merck KGaA by the Company, (2) the Company transferred certain manufacturing know-how, (3) the Company agreed not to develop any product, other than ONT-10, that is competitive with tecemotide and (4) if the Company intends to license the development or commercialization rights to ONT-10, Merck KGaA will have a right of first negotiation with respect to such rights. In 2014, Merck KGaA announced that it does not intend to continue the clinical development of tecemotide.

9. NET INVESTMENT AND OTHER INCOME (EXPENSE)

Net investment and other income (expense) include the following components for the periods indicated:

	Years Ended December 31,		
	2016	2015	2014
	(In thousands)		
Investment income, net	$ 240	$ 73	$ 73
Net foreign exchange gain (loss)	1	(5)	(4)
Gain (loss) on sale of equipment	(69)	7	1
Gain on sale of investment	—	—	6
Other income	50	5	—
Total investment and other income (expense), net	$ 222	$ 80	$ 76

10. INCOME TAX

The provision (benefit) for income taxes consists of the following:

	2016	2015	2014
	(In thousands)		
Current income tax expense (benefit)	$ —	$ —	$ —
Deferred income tax expense (benefit)	(6,908)	—	—
Total income tax expense (benefit)	$(6,908)	$ —	$ —

The Company recorded an income tax benefit of $6.9 million in 2016 due to the reversal of its deferred tax liability, which related solely to the impairment of the indefinite-lived intangible asset.

The provision for income taxes was different from the expected statutory federal income tax rate as follows:

	2016	2015	2014
Tax benefit at statutory rate	35.0%	35.0%	35.0%
Change in fair value of warrant liability	0.0	0.1	0.6
Stock based compensation	(0.9)	0.8	(2.1)
Other	0.4	0.4	(0.5)
Change in valuation allowance	(23.7)	(40.0)	(30.1)
Net operating loss expiration and true ups	0.0	3.7	(2.9)
Income tax benefit (provision)	10.8%	0.0%	0.0%

The Company's net deferred tax assets and deferred tax liabilities were recorded in other assets and accrued and other liabilities, respectively on the Consolidated Balance Sheets and consist of the following as of December 31, 2016 and 2015:

	2016	2015
	(In thousands)	
Deferred tax assets		
Accrued expenses and other	$ 1,510	$ 602
Tax benefits from losses carried forward and tax credits	147,001	130,602
Stock based compensation	4,119	3,143
Intangible assets	9,776	11,049

	2016	2015
	(In thousands)	
Other	**207**	167
Total deferred tax assets	**$ 162,613**	$ 145,563
Valuation allowance	**(162,414)**	(145,370)
Net deferred tax assets	**199**	193
Deferred tax liabilities		
Prepaid expenses	**199**	193
Intangible asset	**—**	6,908
Total deferred tax liabilities	**199**	7,101
Net deferred tax liability	**$ —**	$ 6,908

Based on the available evidence, the Company has recorded a full valuation allowance against its net deferred income tax assets as it is more likely than not that the benefit of these deferred tax assets will not be realized. The valuation allowance increased by $17.0 million and increased by $5.4 million during the years ended December 31, 2016 and December 31, 2015, respectively.

The Company has recorded the following reserve for uncertain tax positions as of December 31, 2016, 2015 and 2014:

	2016	2015	2014
		(In thousands)	
Balance at January 1	**$662**	$545	$ 662
Increase related to prior year tax positions		117	—
Decrease related to current year tax positions	**—**	—	(117)
Lapses of statute of limitations	**—**	—	—
Balance at December 31	**$662**	$662	$ 545

None of the unrecognized tax benefits that, if recognized, would affect the effective tax rate due to valuation allowance. We are currently not under audit by the federal, state and foreign tax authorities. We do not believe that it is reasonably possible that the total amounts of unrecognized tax benefit will materially increase or decrease within the next 12 months.

United States

The Company has accumulated net operating losses of $260.0 million and $218.7 million for United States federal tax purposes at December 31, 2016 and 2015, respectively, some of which are restricted pursuant to Section 382 of the Internal Revenue Code, and which may not be available entirely for use in future years. These losses expire in fiscal years 2018 through 2036. The Company has federal research and development tax credit carryforwards of $0.7 million that will expire in fiscal years 2018 through 2029, if not utilized.

Canada

The Company has unclaimed Canada federal investment tax credits of $15.2 million and $14.7 million at December 31, 2016 and 2015, respectively, that expire in fiscal years 2018 through 2028. The Company has scientific research & experimental development expenditures of $102.1 million and $99.0 million for Canada federal purposes and $44.7 million and $43.3 million for provincial purposes at December 31, 2016 and 2015, respectively. These expenditures may be utilized in any period and may be carried forward indefinitely. The Company also has Canada federal capital losses of $140.6 million and $134.5 million and provincial capital losses of $140.7 million and $134.5 million at December 31, 2016 and 2015, respectively, which can be carried forward indefinitely to offset future capital gains. The Company has accumulated net operating losses of $4.8 million and $4.7 million at December 31, 2016 and 2015 for Canada federal tax purposes and $3.1 million and $3.0 million at December 31, 2016 and 2015 for provincial purposes which expire between 2026 and 2036. The Company is subject to examination by the Canada Revenue Agency for years after 2008. However, carryforward attributes that were generated prior to 2008 may still be adjusted by a taxing authority upon examination if the attributes have been or will be used in a future period.

Other

The Company files federal and foreign income tax returns in the United States and abroad. For U.S. federal income tax purposes, the statute of limitations is open for 1998 and onward for the United States and Canada due to net operating loss carried forwards.

11. CONTINGENCIES, COMMITMENTS, AND GUARANTEES

On January 9, 2016, the Company adopted a Retention Payment Plan, effective as of January 11, 2016 (Retention Plan), to provide cash retention payments to certain employees in order to induce such employees to remain employed through January 10, 2017 (Retention Date). Any employee who participates in the Retention Plan and (i) remains continuously employed by the Company through the Retention Date or (ii) has been terminated by the Company other than for cause prior to the Retention Date, and (iii) signs a general release of claims shall be paid a lump-sum cash payment as determined on an individual basis. If such employee's service is terminated for cause or the employee voluntarily resigns prior to the Retention Date, no such payments shall be made. As of December 31, 2016, $2.3 million was accrued in compensation and related liabilities pursuant to the Retention Plan.

Royalties

Pursuant to various license agreements, the Company may be obligated to make payments based on the achievement of certain event based milestones, a percentage of revenues derived from the licensed technology and royalties on net sales. As of December 31, 2016, no payments were obligated as there were no milestones achieved, no technology licensed and the Company had no net sales, as defined in the agreements. As such, the Company is not currently contractually committed to any significant quantifiable payments for licensing fees, royalties or other contingent payments.

Employee benefit plan

Under a defined contribution plan available to permanent employees, the Company is committed to matching employee contributions up to limits set by the terms of the plan, as well as limits set by U.S. tax authorities. The Company's matching contributions to the plan totaled $0.2 million for each of the years ended December 31, 2016, 2015 and 2014. There were no changes to the plan during the year ended December 31, 2016.

Lease obligations — operating leases

The Company is committed to annual minimum payments under operating lease agreements for its office and laboratory space and equipment) as follows (in thousands):

Year Ending December 31,	
2017	$ 732
2018	689
Thereafter	2
Total	$1,423

Rental expense for operating leases in the amount of $0.5 million has been recorded in the consolidated statements of operations for each of the years ended December 31, 2016, 2015 and 2014. In May 2008, the Company entered into a lease agreement to lease office and laboratory space for its headquarters in Seattle, Washington totaling approximately 17,000 square feet. In November 2016, the Company entered into an amendment to the existing lease to add approximately 2,600 square feet of office space. The amended lease, which expires in December 2018, provides for a monthly base rent of $47,715 increasing to $57,910 in 2018. The Company has also entered into operating lease obligations through November 2019 for certain office equipment, which are included in the table above.

Guarantees

In the normal course of operations, the Company indemnifies counterparties in transactions such as purchase and sale contracts for assets or shares, manufacturing and other service agreements, license agreements, director/officer contracts and leasing transactions. These indemnification agreements may require the Company to compensate the counterparties for costs incurred to third parties as a result of various events, including changes in (or in the interpretation of) laws and

regulations, the Company's breach of contract or negligence, environmental liabilities, or as a result of litigation claims or statutory sanctions that may be suffered by the counterparties as a consequence of the transaction. The terms of these indemnification agreements vary based upon the contract, the nature of which prevents the Company from making a reasonable estimate of the maximum potential amount that could be required to pay to counterparties. Historically, the Company has not made any significant payments under such indemnification agreements and no amounts have been accrued in the accompanying consolidated financial statements with respect to these indemnification agreements.

12. RELATED PARTY TRANSACTIONS

Certain of the Company's affiliates participated in the Company's recent public underwritten offerings and registered direct offering. In February 2015, the Company closed concurrent but separate underwritten offerings of 2,250,000 shares of its common stock at a price of $9.00 per share, for gross proceeds of $20.3 million, and 1,333 shares of its Series B convertible preferred stock at a price of $1,500 per share for gross proceeds of $2.0 million. In this offering, affiliates of BVF, a holder of more than 5% of the Company's outstanding common stock, purchased 1,333 shares of the Company's Series B preferred stock for an aggregate purchase price of $2.0 million. Separate but concurrent with these offerings, affiliates of BVF also exchanged 666,667 shares of common stock for 4,000 shares of Series B preferred stock. In addition, in May 2015, the Company entered into an exchange agreement with certain affiliates of BVF to exchange 1,250,000 shares of common stock previously purchased by BVF for 7,500 shares of Series C Convertible Preferred Stock, and in June 2016, the Company closed a registered direct offering in which affiliates of BVF purchased 17,250 shares of the Company's Series D preferred stock for an aggregate purchase price of $13.8 million.

In January 2016, the Company appointed Mr. Mark Lampert as a member of the board of directors as a Class I director of the Company. Mr. Lampert is an affiliate of BVF. On January 17, 2017, Mr. Mark Lampert resigned from the Board of Directors of the Company.

In January 2016, the Company appointed Dr. Gwen Fyfe as a member of the board of directors as a Class III director of the Company. Dr. Fyfe is also a consultant to the Company.

Mr. Scott Myers, the Company's President, Chief Executive Officer and a member of the board of directors, purchased 10,416 shares of the Company's common stock in the June 2016 public underwritten offering.

Recovery of Stockholder Short-Swing Profit

In August 2016, the Company received a payment of $0.2 million from a related-party stockholder in settlement of a short-swing profit claim under Section 16(b) of the Securities Exchange Act of 1934. The Company recognized these proceeds as a capital contribution from a stockholder, and recorded it as an increase to additional paid-in capital in its Consolidated Balance Sheets as of December 31, 2016.

13. SUBSEQUENT EVENTS

On January 27, 2017, the Company closed an underwritten offering of 26,659,300 shares of our common stock at a price to the public of $3.30 per share, for gross proceeds of approximately $88.0 million. The shares include 3,477,300 shares of common stock sold pursuant to the over-allotment option granted by the Company to the underwriters, which option was exercised in full. In addition, the Company closed an underwritten offering of 1,818 shares of its Series E convertible preferred stock at a price to the public of $3,300 per share, for gross proceeds of approximately $6.0 million. Each share of Series E convertible preferred stock is non-voting and convertible into 1,000 shares of our common stock, provided that conversion will be prohibited if, as a result, the holder and its affiliates would beneficially own more than 19.99% of the common stock then outstanding. Aggregate gross proceeds from the offerings, before deducting underwriting discounts, commissions and estimated expenses, were approximately $94.0 million.

14. CONDENSED QUARTERLY FINANCIAL DATA (unaudited)

The following table contains selected unaudited statement of operations information for each quarter of 2016 and 2015. The unaudited information should be read in conjunction with the Company's audited financial statements and related notes included elsewhere in this report. The Company believes that the following unaudited information reflects all normal recurring adjustments necessary for a fair presentation of the information for the periods presented. The operating results for any quarter are not necessarily indicative of results for any future period.

Quarterly Financial Data:

	Three Months Ended,			
	March 31	June 30	September 30	December 31
	(In thousands, except per share data)			
2016				
Operating expenses(1)	**$ 12,970**	**$ 30,483**	**$ 10,792**	**$ 10,590**
Net loss attributable to common stockholders(5)	**(12,887)**	**(25,132)**	**(11,762)**	**(10,512)**
Net loss per share — basic and diluted(4)	**(0.81)**	**(1.57)**	**(0.52)**	**(0.47)**
2015				
Operating expenses(2)	$ 8,079	$ 8,337	$ 7,222	$ 9,151
Net loss attributable to common stockholders(3)	(7,935)	(10,896)	(4,619)	(9,131)
Net loss per share — basic and diluted(4)	(0.48)	(0.66)	(0.29)	(0.58)

(1) Operating expenses for the three months ended March 31, 2016 includes a cash severance and insurance benefits of $1.6 million and non-cash compensation expense of $2.3 million due to the acceleration of share-based compensation related to the retirement and separation agreement that the Company entered into with its former chief executive officer in January 2016. Operating expenses for the three months ended June 30, 2016 includes an intangible asset impairment charge of $19.7 million in connection with our termination of the STC.UNM license agreement and a $1.5 million reversal of the previously recorded time-based milestones for license fees in connection with the termination of the STC.UNM license agreement (see Note 8).

(2) Operating expenses for the three months ended December 31, 2015 includes a $1.0 million cumulative adjustment related to the STC.UNM milestones (see Note 8).

(3) Net loss attributable to common stockholders for the three months ended March 31, June 30, September 30 and December 31, 2015 includes change in fair value of warrants income (expense) of approximately $0.1 million, $(2.6) million, $2.6 million and zero respectively (see Note 3).

(4) Basic and diluted net loss per share for all periods presented have been adjusted retroactively to reflect the 1-for-6 reverse stock split.

(5) Net loss attributable to common stockholders for the three months ended June 30, 2016 included an income tax benefit of $6.9 million due to the reversal of its deferred tax liability, which related solely to the impairment of the indefinite-lived intangible asset (see Note 8), and a $1.6 million deemed dividend related to the beneficial conversion feature on our Series D convertible preferred stock. Net loss attributable to common stockholders for the three months ended September 30, 2016 included a $1.0 million deemed dividend.

EXHIBIT 21.1

SUBSIDIARIES OF CASCADIAN THERAPEUTICS, INC.

Name of Subsidiary	Jurisdiction of Incorporation
Oncothyreon Canada ULC	Alberta
Biomira Management, Inc.	Delaware
ProlX Pharmaceuticals Corporation	Delaware
0811769 B.C. ULC	British Columbia
Oncothyreon Luxembourg s.a.r.l.	Luxembourg
Protocell Therapeutics Inc.	Delaware

EXHIBIT 23.1

Consent of Independent Registered Public Accounting Firm

We consent to the incorporation by reference in the following Registration Statements:

(1) Registration Statement Nos. 333-215675 and 333-201317 of Cascadian Therapeutics, Inc. on Form S-3,

(2) Registration Statement Nos. 333-167302, 333-162640, 333-172814, 333-180025, 333-187257, 333-196581, 333-202647 and 333-212201 of Cascadian Therapeutics, Inc. on Form S-8

of our reports dated March 9, 2017, with respect to the consolidated financial statements of Cascadian Therapeutics, Inc. and the effectiveness of internal control over financial reporting of Cascadian Therapeutics, Inc. included in this Annual Report (Form 10-K) for the year ended December 31, 2016.

/s/ Ernst & Young LLP

Seattle, Washington
March 9, 2017

EXHIBIT 31.1

CERTIFICATION

I, Scott D. Myers, certify that:

1. I have reviewed this annual report on Form 10-K of Cascadian Therapeutics, Inc., (the "Registrant");

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. The Registrant's other certifying officer and I are 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 our supervision, to ensure that material information relating to the Registrant, including its consolidated subsidiaries, is made known to us 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 our 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 our 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. The Registrant's other certifying officer and I have disclosed, based on our 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 reporting.

March 9, 2017

/s/ Scott D. Myers

Scott D. Myers
President and Chief Executive Officer
(Principal Executive Officer)

EXHIBIT 31.2

CERTIFICATION

I, Julia M. Eastland, certify that:

1. I have reviewed this annual report on Form 10-K of Cascadian Therapeutics, Inc., (the "Registrant");

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. The Registrant's other certifying officer and I are 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 our supervision, to ensure that material information relating to the Registrant, including its consolidated subsidiaries, is made known to us 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 our 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 our 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. The Registrant's other certifying officer and I have disclosed, based on our 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 reporting.

March 9, 2017

/s/ Julia M. Eastland

Julia M. Eastland,
Chief Financial Officer, Chief Business Officer and Secretary
(Principal Financial and Accounting Officer)

EXHIBIT 32.1

CERTIFICATION PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002
(18 U.S.C. SECTION 1350)

I, Scott D. Myers, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that the Annual Report of Cascadian Therapeutics, Inc. on Form 10-K for the fiscal year ended December 31, 2016, fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934 and that information contained in such Annual Report on Form 10-K fairly presents, in all material respects, the financial condition and results of operations of Cascadian Therapeutics, Inc.

March 9, 2017

/s/ Scott D. Myers
Scott D. Myers
President and Chief Executive Officer (Principal Executive Officer)

A signed original of this written statement required by Section 906 of the Sarbanes-Oxley Act of 2002 has been provided to Cascadian Therapeutics, Inc. and will be retained by Cascadian Therapeutics, Inc. and furnished to the Securities and Exchange Commission or its staff upon request.

This certification accompanies this Report on Form 10-K pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 and shall not, except to the extent required by such Act, be deemed filed by Cascadian Therapeutics, Inc. for purposes of Section 18 of the Securities Exchange Act of 1934, as amended (the "Exchange Act"). Such certification will not be deemed to be incorporated by reference into any filing under the Securities Act of 1933, as amended, or the Exchange Act, except to the extent that Cascadian Therapeutics, Inc. specifically incorporates it by reference.

EXHIBIT 32.2

CERTIFICATION PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002
(18 U.S.C. SECTION 1350)

I, Julia M. Eastland, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that the Annual Report of Cascadian Therapeutics, Inc. on Form 10-K for the fiscal year ended December 31, 2016, fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934 and that information contained in such Annual Report on Form 10-K fairly presents, in all material respects, the financial condition and results of operations of Cascadian Therapeutics, Inc.

March 9, 2017

/s/ Julia M. Eastland

Julia M. Eastland,
Chief Financial Officer, Chief Business Officer and Secretary (Principal Financial and Accounting Officer)

A signed original of this written statement required by Section 906 of the Sarbanes-Oxley Act of 2002 has been provided to Cascadian Therapeutics, Inc. and will be retained by Cascadian Therapeutics, Inc. and furnished to the Securities and Exchange Commission or its staff upon request.

This certification accompanies this Report on Form 10-K pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 and shall not, except to the extent required by such Act, be deemed filed by Cascadian Therapeutics, Inc. for purposes of Section 18 of the Securities Exchange Act of 1934, as amended (the "Exchange Act"). Such certification will not be deemed to be incorporated by reference into any filing under the Securities Act of 1933, as amended, or the Exchange Act, except to the extent that Cascadian Therapeutics, Inc. specifically incorporates it by reference.