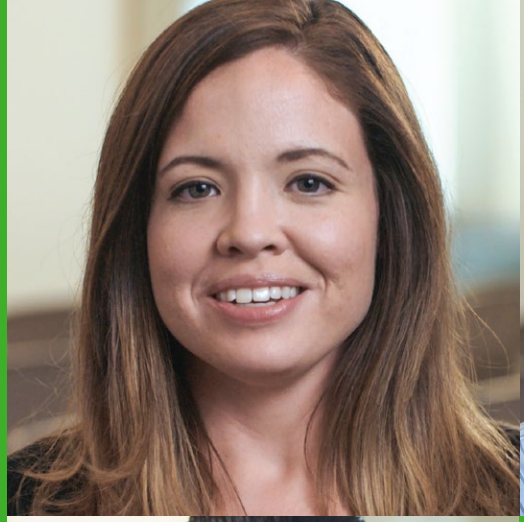
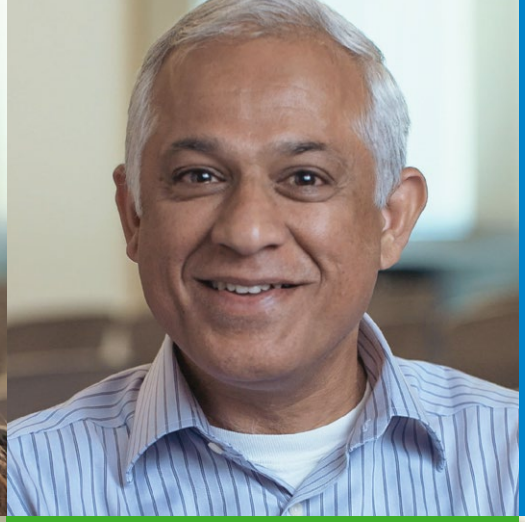
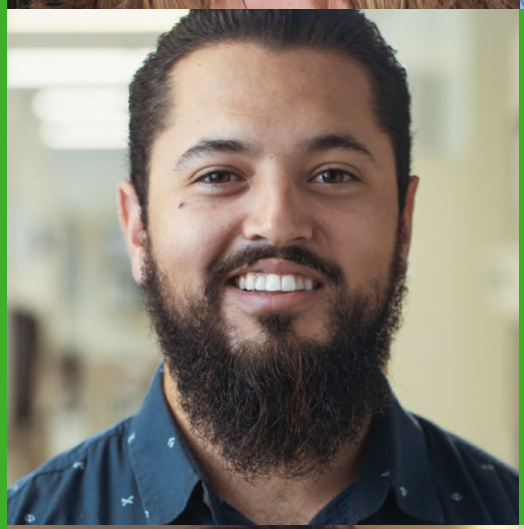
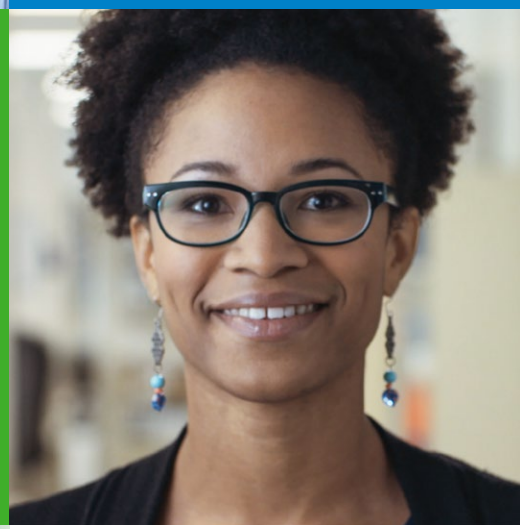



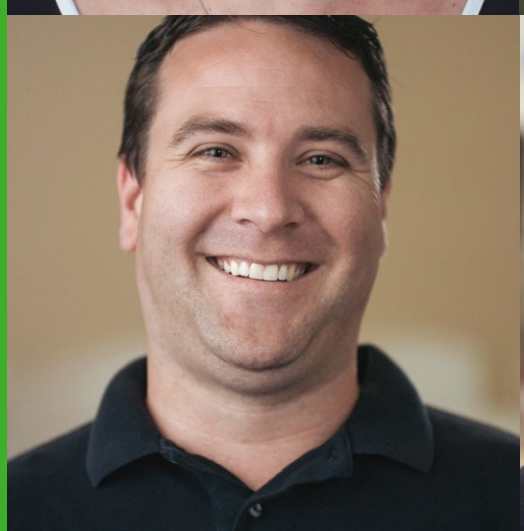
WE ARE HALOZYME.



2015
annual report



Halozyme



Dear Fellow Shareholders,

KEY EVENTS

MARCH
Janssen announces the first product candidate with the ENHANZE™ collaboration will be daratumumab for multiple myeloma patients.

MAY
Ventana Collaboration Agreement for the PEGPH20 companion diagnostic announced.

JUNE
Global licensing and collaboration agreement with AbbVie announced.

JULY
Clinical collaboration formed with Eisai to study PEGPH20 with HALAVEN® (eribulin) in breast cancer patients.

OCTOBER
First patient dosed in the Phase 1 study with Pfizer's rivipansel and ENHANZE™ technology for the treatment of vaso-occlusive crisis due to sickle cell disease.

Halozyme entered 2015 with a sharp focus on our two value-creating pillars and during the course of the year executed well against our plans. My conviction has never been stronger regarding the quality of our science and the potential to create long-term value for shareholders and employees as we invest behind this two-pillar strategy to develop world-class oncology therapies for patients.

The first pillar is our oncology business, with our investigational drug, PEGPH20, at the core. PEGPH20 temporarily degrades or breaks down hyaluronan, or HA, a glycosaminoglycan or chain of natural sugars in the body that accumulate around certain tumors and can increase the pressure in and around the tumor, constrict the tumor vasculature and limit access of cancer therapies getting to the tumor to combat the disease. We are evaluating the ability of PEGPH20 to increase the effectiveness of co-administered cancer treatments in pancreatic, non-small cell lung and gastric cancer patients, but see broader potential applicability for its use in multiple tumor types in combination with immuno-oncology agents, monoclonal antibodies and chemotherapies.

Our work in oncology is funded in part by the second pillar of our strategy, which is centered on our licensing agreements with marquee partners, including Roche, Baxalta, Pfizer, Janssen, AbbVie and Lilly. These partners co-formulate or co-administer their therapies with our ENHANZE™ technology platform, which temporarily degrades HA under the skin to enable larger fluid volumes or molecules to be delivered with a subcutaneous injection or on a less frequent dosing schedule. Both ENHANZE and PEGPH20 are based on our proprietary rHuPH20 enzyme.

We believe in the potential of both pillars and have multiple 2015 highlights to celebrate, each of which drives our strong momentum as we enter 2016.

- We reached target enrollment in our Phase 2 study of PEGPH20 in metastatic pancreatic cancer patients and advanced its study in other tumors and with other therapies. Advances included initiation of a second Phase 1b study in non-small cell lung and gastric cancer, and progress toward the 2016 initiation of a study in metastatic HER2-negative breast cancer patients in combination with eribulin. Our study in breast cancer is made possible by the signing of our first-ever clinical collaboration in 2015, with Eisai, a leading global pharmaceutical company;

- We laid an important foundation for the future of PEGPH20 by establishing a partnership with Ventana to develop a companion diagnostic that will enable us to identify patients with high levels of HA, thereby targeting those that are most likely to respond to our therapy;

- We finalized design elements and site selections for our pivotal Phase 3 trial, set to initiate at the end of March 2016. Strong execution of this trial at the approximately 200 planned global sites will be our top priority in 2016;

- In the ENHANZE pillar, we signed major collaboration and licensing agreements during the year with AbbVie in June and Lilly in December that included a combined $48 million in upfront payments and the potential for additional payments of up to $130 million and $160 million per target, respectively, for

the achievement of clinical, regulatory and commercial milestones. In the fourth quarter, Janssen initiated a clinical study with daratumumab and Pfizer with rivipansel, both promising new therapies co-formulated with the ENHANZE platform. That partner momentum carried into 2016 as AbbVie advanced into clinic with HUMIRA® and Pfizer with their PCSK9-inhibitor bococizumab, also co-formulated therapies on our ENHANZE platform;

- We advanced our preclinical and early pipeline development programs in multiple areas, including the ongoing study of PEGPH20 in new tumor types, advancing our study of the tumor microenvironment and its immunology, and characterizing two potential novel cancer therapies;

- Revenue for the year was $135.1 million, a 79 percent increase over 2014, and we exited the year with $108 million in cash. We began 2016 well financed through the strength of our unique business model, which continues to generate cash from royalty revenue, milestone payments and upfront payments associated with our ENHANZE platform business. Through this business model, we raised $150 million in non-dilutive debt financing that was secured by our growing royalty revenue stream.

Of all our accomplishments during the year, I am most proud of the capabilities we built through the talented team we are assembling. We have added key personnel in areas that are critical to our long-term success and to achieve our goal of becoming a leading global oncology biotechnology company. In 2016, we have made a commitment to invest behind that strategy as we further build our capabilities, initiate our pivotal Phase 3 trial of PEGPH20 and continue to drive growth in our ENHANZE platform with new products moving into the clinic and with innovative new partnerships.

We believe our business model is an important differentiator and driver of value for investors. I am very optimistic about the progress we are making in both pillars and the ability of our talented team to create even greater value for the future. We thank you, our shareholders, for supporting us on this important journey.

Sincerely,

Helen Torley

Helen Torley, M.B. Ch. B., M.R.C.P.
President and Chief Executive Officer

NOVEMBER
Janssen dosed first patient in a clinical trial evaluating daratumumab with our ENHANZE™ technology in multiple myeloma patients.

First patient dosed with PEGPH20 in combination with Merck's KEYTRUDA® (pembrolizumab) in a study for patients with advanced non-small cell lung and gastric cancers.

DECEMBER
Global licensing and collaboration agreement announced with Lilly.

Halozyme opens San Francisco office.

Achieved target enrollment in Stage 2 of Study 202 for PEGPH20 in metastatic pancreatic ductal adenocarcinoma patients.

WE ARE HALOZYME.

We're a biopharmaceutical company on the forefront of cancer research. With our novel oncology and drug delivery therapies, we help break down tumor defenses and make existing treatments more effective.

8 clinical trials to study the pan-tumor potential of PEGPH20

229% increase in ENHANZE™ platform royalties in FY2015

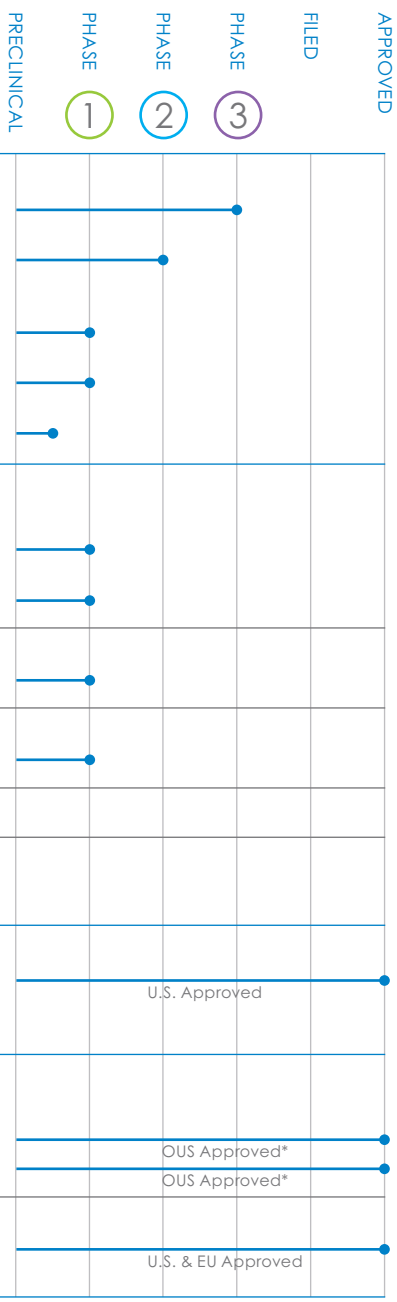
4 new clinical trials to study therapies co-formulated with our ENHANZE™ platform

Diversified Pipeline

Broad Range of Partnered and Proprietary Products

PRODUCT, COLLABORATION PRODUCTS AND PRODUCT CANDIDATES	THERAPEUTIC AREA	RESEARCH FOCUS
ONCOLOGY PIPELINE AND PRODUCT CANDIDATES		
PEGPH20 with ABRAXANE® (nab-paclitaxel) and gemcitabine	Oncology	Pancreatic Cancer
PEGPH20 with modified FOLFIRINOX	Oncology	Pancreatic Cancer *(Investigator Sponsored Trial with SWOG)*
PEGPH20 with docetaxel	Oncology	Non-Small Cell Lung Cancer (PRIMAL)
PEGPH20 with KEYTRUDA® (pembrolizumab)	Oncology	Gastric/Non-Small Cell Lung Cancer
PEGPH20 with HALAVEN® (eribulin)	Oncology	Breast Cancer (Eisai)
ENHANZE™ COLLABORATION PRODUCT CANDIDATES		
Pfizer (up to 6 potential targets)		
rivipansel	Hematology	Vaso-occlusive crisis in Sickle Cell Anemia
PCSK-9 (bococizumab)	Cardiovascular	Cholesterol Lowering
Janssen (up to 5 potential targets)	Various	
daratumumab/CD38	Oncology	Multiple Myeloma
AbbVie (up to 9 potential targets)		
HUMIRA® (adalimumab)	Various	
Lilly (up to 5 potential targets, 2 specified)	Various	

PRODUCT, COLLABORATION PRODUCTS AND PRODUCT CANDIDATES	THERAPEUTIC AREA	APPROVED INDICATION
PROPRIETARY APPROVED PRODUCT		
HYLENEX® recombinant *(hyaluronidase human injection)*	Various	Adjuvant for Sub-Q fluid delivery for dispersion and absorption of other injected drugs
ENHANZE™ COLLABORATION APPROVED PRODUCTS		
Roche (up to 8 potential targets)		
Herceptin® SC (trastuzumab)	Oncology	Breast Cancer
MabThera® SC (rituximab)	Oncology	Non-Hodgkin's Lymphoma
Baxalta		
HYQVIA® [Immune Globulin Infusion 10% (Human) with Recombinant Human Hyaluronidase]	Immunology	Primary Immunodeficiency



*Approved in EU and other countries outside of U.S.

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

FORM 10-K

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

For the fiscal year ended December 31, 2015

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: 001-32335

Halozyme Therapeutics, Inc.

(*Exact name of registrant as specified in its charter*)

Delaware	**88-0488686**
(State or other jurisdiction of incorporation or organization)	*(I.R.S. Employer Identification No.)*
11388 Sorrento Valley Road, San Diego, California	**92121**
(Address of principal executive offices)	*(Zip Code)*

(858) 794-8889
(Registrant's Telephone Number, Including Area Code)

Securities registered under Section 12(b) of the Act:

Title of Each Class	**Name of Each Exchange on Which Registered**
Common Stock, $0.001 Par Value	The NASDAQ Stock Market, LLC

Securities registered under 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 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 (§232.405 of this chapter) 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 this 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 ☐ Smaller reporting company ☐

(Do not check if a 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 common equity held by non-affiliates of the registrant as of June 30, 2015 was approximately $2.4 billion based on the closing price on the NASDAQ Global Select Market reported for such date. Shares of common stock held by each officer and director and by each person who is known to own 10% or more of the outstanding common stock have been excluded in that such persons may be deemed to be affiliates of the registrant. This determination of affiliate status is not necessarily a conclusive determination for other purposes.

As of February 22, 2016, there were 129,061,401 shares of the registrant's common stock issued, $0.001 par value per share, and outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the registrant's definitive Proxy Statement to be filed subsequent to the date hereof with the Securities and Exchange Commission pursuant to Regulation 14A in connection with the registrant's 2016 Annual Meeting of Stockholders are incorporated by reference into Part III of this Annual Report.

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This Annual Report on Form 10-K contains "forward-looking statements" within the meaning of the "safe harbor" provisions of Section 21E of the Securities Exchange Act of 1934, as amended, and Section 27A of the Securities Act of 1933, as amended. All statements, other than statements of historical fact, included herein, including without limitation those regarding our future product development and regulatory events and goals, product collaborations, our business intentions and financial estimates and anticipated results, are forward-looking statements. Words such as "expect," "anticipate," "intend," "plan," "believe," "seek," "estimate," "think," "may," "could," "will," "would," "should," "continue," "potential," "likely," "opportunity" and similar expressions or variations of such words are intended to identify forward-looking statements, but are not the exclusive means of identifying forward-looking statements in this Annual Report. Additionally, statements concerning future matters such as the development or regulatory approval of new products, enhancements of existing products or technologies, third party performance under key collaboration agreements, revenue and expense levels and other statements regarding matters that are not historical are forward-looking statements.

Although forward-looking statements in this Annual Report reflect the good faith judgment of our management, such statements can only be based on facts and factors currently known by us. Consequently, forward-looking statements are inherently subject to risks and uncertainties and actual results and outcomes may differ materially from the results and outcomes discussed in or anticipated by the forward-looking statements. Factors that could cause or contribute to such differences in results and outcomes include without limitation those discussed under the heading "Risk Factors" in Part I, Item 1A below, as well as those discussed elsewhere in this Annual Report. Readers are urged not to place undue reliance on these forward-looking statements, which speak only as of the date of this Annual Report. We undertake no obligation to revise or update any forward-looking statements in order to reflect any event or circumstance that may arise after the date of this Annual Report. Readers are urged to carefully review and consider the various disclosures made in this Annual Report, which attempt to advise interested parties of the risks and factors that may affect our business, financial condition, results of operations and prospects.

References to "Halozyme," "the Company," "we," "us," and "our" refer to Halozyme Therapeutics, Inc. and its wholly owned subsidiary, Halozyme, Inc., and Halozyme, Inc.'s wholly owned subsidiaries, Halozyme Holdings Ltd. and Halozyme Royalty LLC. References to "Notes" refer to the Notes to Consolidated Financial Statements included herein (refer to Part II, Item 8).

PART I

Item 1. *Business*

Overview

Halozyme Therapeutics, Inc. is a biotechnology company focused on developing and commercializing novel oncology therapies. We are seeking to translate our unique knowledge of the tumor microenvironment to create therapies that have the potential to improve cancer patient survival. Our research primarily focuses on human enzymes that alter the extracellular matrix and tumor microenvironment. The extracellular matrix is a complex matrix of proteins and carbohydrates surrounding the cell that provides structural support in tissues and orchestrates many important biological activities, including cell migration, signaling and survival. Over many years, we have developed unique technology and scientific expertise enabling us to pursue this target-rich environment for the development of therapies.

Our proprietary enzymes are used to facilitate the delivery of injected drugs and fluids, potentially enhancing the efficacy and the convenience of other drugs or can be used to alter tissue structures for potential clinical benefit. We exploit our technology and expertise using a two pillar strategy that we believe enables us to manage risk and cost by: (1) developing our own proprietary products in therapeutic areas with significant unmet medical needs, with a focus on oncology, and (2) licensing our technology to biopharmaceutical companies to collaboratively develop products that combine our technology with the collaborators' proprietary compounds.

The majority of our approved product and product candidates are based on rHuPH20, our patented recombinant human hyaluronidase enzyme. rHuPH20 is the active ingredient in our first commercially approved product, *Hylenex*® recombinant, and it works by temporarily breaking down hyaluronan (or HA), a naturally occurring complex carbohydrate that is a major component of the extracellular matrix in tissues throughout the body such as skin and cartilage. We believe this temporary degradation creates an opportunistic window for the improved subcutaneous delivery of injectable biologics, such as monoclonal antibodies and other large therapeutic molecules, as well as small molecules and fluids. We refer to the application of rHuPH20 to facilitate the delivery of other drugs or fluids as our ENHANZE™ Technology. We license the ENHANZE Technology to form collaborations with biopharmaceutical companies that develop or market drugs requiring or benefiting from injection via the subcutaneous route of administration.

We currently have ENHANZE collaborations with F. Hoffmann-La Roche, Ltd. and Hoffmann-La Roche, Inc. (Roche), Baxalta US Inc. and Baxalta GmbH (Baxalta), Pfizer Inc. (Pfizer), Janssen Biotech, Inc. (Janssen), AbbVie, Inc. (AbbVie), and Eli Lilly and Company (Lilly). We receive royalties from two of these collaborations, including royalties from sales of one product

approved in both the United States and outside the United States from the Baxalta collaboration and from sales of two products approved for marketing outside the United States from the Roche collaboration. Future potential revenues from the sales and/or royalties of our approved products, product candidates, and ENHANZE collaborations will depend on the ability of Halozyme and our collaborators to develop, manufacture, secure and maintain regulatory approvals for approved products and product candidates and commercialize product candidates.

Our proprietary development pipeline consists primarily of clinical stage product candidates in oncology. Our lead oncology program is PEGPH20 (PEGylated recombinant human hyaluronidase), a molecular entity we are developing for the systemic treatment of tumors that accumulate HA. When HA accumulates in a tumor, it can cause higher pressure in the tumor, reducing blood flow into the tumor and with that, reduced access of cancer therapies to the tumor. PEGPH20 works by temporarily degrading HA surrounding cancer cells resulting in reduced pressure and increased blood flow to the tumor thereby enabling increased amounts of anticancer treatments administered concomitantly gaining access to the tumor. We are currently in Phase 2 and Phase 3 clinical testing for PEGPH20 in stage IV pancreatic ductal adenocarcinoma (PDA) (Studies 109-202 and 109-301), in Phase 1b clinical testing in non-small cell lung cancer (Study 107-201) and in Phase 1b clinical testing in non-small cell lung cancer and gastric cancer (Study 107-101).

Our principal offices and research facilities are located at 11388 Sorrento Valley Road, San Diego, California 92121. Our telephone number is (858) 794-8889 and our e-mail address is *info@halozyme.com*. Our website address is *www.halozyme.com*. Information found on, or accessible through, our website is not a part of, and is not incorporated into, this Annual Report on Form 10-K. Our periodic and current reports that we filed with the SEC are available on our website at *www.halozyme.com*, free of charge, as soon as reasonably practicable after we have electronically filed such material with, or furnished them to, the SEC, including our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K and any amendments to those reports. Further copies of these reports are located at the SEC's Public Reference Room at 100 F Street, N.W., Washington, D.C. 20549, and online at *http://www.sec.gov*.

Technology

rHuPH20 can be applied as a drug delivery platform to increase dispersion and absorption of other injected drugs and fluids that are injected under the skin or in the muscle thereby potentially enhancing efficacy or convenience. For example, rHuPH20 has been used to convert drugs that must be delivered intravenously into subcutaneous injections or to reduce the number of subcutaneous injections needed for effective therapy. When ENHANZE Technology is applied subcutaneously, the rHuPH20 acts locally and has a tissue half-life of less than 15 minutes. HA at the local site reconstitutes its normal density within a few days and, therefore, we anticipate that any effect of rHuPH20 on the architecture of the subcutaneous space is temporary.

Additionally, we are expanding our scientific work to develop other enzymes and agents that target the extracellular matrix's unique aspects, giving rise to potentially new molecular entities with a particular focus on oncology. We are developing a PEGylated version of the rHuPH20 enzyme (PEGPH20), that lasts for an extended period in the bloodstream (half-life of one to two days), and may therefore better target solid tumors that accumulate HA by degrading the surrounding HA and reducing the interstitial fluid pressure within malignant tumors to allow better penetration by co-administered agents.

Strategy

During 2015, we continued our strategy of focusing on developing our PEGPH20 product candidate for oncology as well as entering into new collaborations for ENHANZE Technology. This business model allows for growth in which revenue garnered from collaboration products helps fund our investment in PEGPH20 clinical development, with the goal of a future product approval that will support sustained growth.

Key aspects of our corporate strategy include the following:

- Focus on developing PEGPH20, our investigational new drug candidate, in multiple different tumors that accumulate high levels of HA. PEGPH20 is in Phase 2 and Phase 3 development in stage IV PDA and in Phase 1b development in non-small cell lung cancer and gastric cancer. Over time, it is our goal to study additional types of cancer and to advance this program toward regulatory approval and commercial launch.
- Focus on ENHANZE collaborations. We currently have six collaborations with three current product approvals and additional product candidates in development. We intend to work with our existing collaborators to expand our collaborations to add new targets and product candidates under the terms of the operative agreements. In addition, we will continue our efforts to enter into new collaborations to further exploit and derive additional value from our proprietary technology.

Product and Product Candidates

We have one marketed proprietary product and one proprietary product candidate targeting several indications in various stages of development. The following table summarizes our proprietary product and product candidate as well as products and product candidates under development with our collaborators:

Product, Collaboration Products and Product Candidates	Therapeutic Area	Research Focus	Preclinical	Phase 1	Phase 2	Phase 3	Filed	Approved
ONCOLOGY PIPELINE AND PRODUCT CANDIDATES								
PEGPH20 with ABRAXANE® (nab-paclitaxel) & gemcitabine	Oncology	Pancreatic Cancer						
PEGPH20 with modified FOLFIRINOX	Oncology	Pancreatic Cancer *(Investigator Sponsored Trial with SWOG)*						
PEGPH20 with docetaxel	Oncology	Non-Small Cell Lung Cancer (PRIMAL)						
PEGPH20 with KEYTRUDA® (pembrolizumab)	Oncology	Gastric/Non-Small Cell Lung Cancer						
PEGPH20 with HALAVEN® (eribulin)	Oncology	Breast Cancer (Eisai)						

Product, Collaboration Products and Product Candidates	Therapeutic Area	Approved Indication	Preclinical	Phase 1	Phase 2	Phase 3	Filed	Approved
PROPRIETARY APPROVED PRODUCT								
HYLENEX® recombinant *(hyaluronidase human injection)*	Various	Adjuvant for Sub-Q fluid delivery for dispersion & absorption of other injected drugs						U.S. & EU Approved
ENHANZE™ COLLABORATION APPROVED PRODUCTS								
Roche (up to 8 potential targets)								
Herceptin® SC (trastuzumab)	Oncology	Breast Cancer						EU Approved
MabThera® SC (rituximab)	Oncology	Non-Hodgkin's Lymphoma						EU Approved
Baxalta								
HYQVIA® [Immune Globulin Infusion 10% (Human) with Recombinant Human Hyaluronidase]	Immunology	Primary Immunodeficiency						U.S. & EU Approved

Product, Collaboration Products and Product Candidates	Therapeutic Area	Research Focus	Preclinical	Phase 1	Phase 2	Phase 3	Filed	Approved
ENHANZE™ COLLABORATION PRODUCT CANDIDATES								
Pfizer (up to 6 potential targets)								
rivipansel	Hematology	Vaso-occlusive crisis in Sickle Cell Anemia						
PCSK-9 (bococizumab)	Cardiovascular	Cholesterol Lowering						
Janssen (up to 5 potential targets)	Various							
daratumumab/CD38	Oncology	Multiple Myeloma						
AbbVie (up to 9 potential targets)	Various							
HUMIRA® (adalimumab)								
Lilly (up to 5 potential targets, 2 specified)	Various							

Proprietary Pipeline

Hylenex Recombinant (hyaluronidase human injection)

Hylenex recombinant is a formulation of rHuPH20 that has received FDA approval to facilitate subcutaneous fluid administration for achieving hydration, to increase the dispersion and absorption of other injected drugs and, in subcutaneous urography, to improve resorption of radiopaque agents. *Hylenex* recombinant is currently the number one prescribed branded hyaluronidase.

PEGPH20

We are developing PEGPH20 as a candidate for the systemic treatment of tumors that accumulate HA in combination with currently approved cancer therapies. 'PEG' refers to the attachment of polyethylene glycol to rHuPH20, thereby creating PEGPH20. One of the novel properties of PEGPH20 is that it lasts for an extended duration in the bloodstream and, therefore, can be administered systemically to maintain its therapeutic effect to treat disease.

Cancer malignancies, including pancreatic, lung, breast, gastric, colon and prostate cancers can accumulate high levels of HA and therefore we believe that PEGPH20 has the potential to help patients with these types of cancer when used with currently approved cancer therapies. Among solid tumors, PDA has been reported to be associated with the highest frequency of HA accumulation. Approximately 90,000 patients in the United States and the European Union will be diagnosed with PDA in 2016.

The pathologic accumulation of HA, along with other matrix components, creates a unique microenvironment for the growth of tumor cells compared to normal cells. We believe that depleting the HA component of the tumor microenvironment with PEGPH20 remodels the tumor microenvironment, resulting in tumor growth inhibition in animal models. Removal of HA from the tumor microenvironment results in expansion of previously constricted blood vessels allowing increased blood flow, potentially increasing the access of activated immune cells and factors in the blood into the tumor microenvironment. If PEGPH20 is administered in conjunction with other anti-cancer therapies, the increase in blood flow may allow anti-cancer therapies to have greater access to the tumor, which may enhance the treatment effect of therapeutic modalities like chemotherapies, monoclonal antibodies and other agents.

Study Halo 109-201:

In January 2015, we presented the final results from Study 109-201, a multi-center, international open label dose escalation Phase 1b clinical study of PEGPH20 in combination with gemcitabine for the treatment of patients with stage IV PDA at the 2015 Gastrointestinal Cancers Symposium (also known as ASCO-GI meeting). This study enrolled 28 patients with previously untreated stage IV PDA. Patients were treated with one of three doses of PEGPH20 (1.0, 1.6 and 3.0 μg/kg twice weekly for four weeks, then weekly thereafter) in combination with gemcitabine 1000 mg/m2 administered intravenously. In this study, the confirmed overall response rate (complete response + partial response confirmed on a second scan as assessed by an independent radiology review) was 29 percent (7 of 24 patients) for those treated at therapeutic dose levels of PEGPH20 (1.6 and 3.0 μg/kg). Median progression-free survival (PFS) was 154 days (95% CI, 50-166) in the efficacy-evaluable population (n = 24). Among efficacy-evaluable patients with baseline tumor HA staining (n = 17), the median PFS in patients with high baseline tumor HA staining (6/17 patients) was substantially longer, 219 days, than in the patients with low baseline tumor HA staining (11/17 patients), 108 days. Median overall survival (OS) was 200 days (95% CI, 123-370) in the efficacy-evaluable population (n = 24). Among efficacy-evaluable patients with baseline tumor HA staining (n = 17), the median OS in patients with high baseline tumor HA staining (6/17 patients) was substantially longer, 395 days, than in the patients with low baseline tumor HA staining (11/17 patients), 174 days. The most common treatment-emergent adverse events (occurring in ≥ 15% of patients) were peripheral edema, muscle spasms, thrombocytopenia, fatigue, myalgia, anemia, and nausea. Thromboembolic (TE) events were reported in 8 patients (28.6%) and musculoskeletal events were reported in 21 patients (75%) which were generally grade 1/2 in severity.

Study Halo 109-202:

In the second quarter of 2013, we initiated Study 109-202, a Phase 2 multicenter randomized clinical trial evaluating PEGPH20 as a first-line therapy for patients with stage IV PDA. The study was designed to enroll patients who would receive gemcitabine and nab-paclitaxel (ABRAXANE®) either with or without PEGPH20. The primary endpoint is to measure the improvement in PFS in patients receiving PEGPH20 plus gemcitabine and nab-paclitaxel compared to those who are receiving gemcitabine and nab-paclitaxel alone. In April 2014, after 146 patients had been enrolled, the trial was put on clinical hold by Halozyme and the FDA to assess a question raised by the Data Monitoring Committee regarding a possible difference in the TE events rate between the group of patients treated with PEGPH20, nab-paclitaxel and gemcitabine (PAG arm) versus the group of patients treated with nab-paclitaxel and gemcitabine without PEGPH20 (AG arm). This portion of the study and patients in this portion are now referred to as Stage 1. It should be noted that at the time of the clinical hold all patients remaining in the study continued on gemcitabine and nab-paclitaxel. In July 2014, the Study 109-202 was reinitiated (Stage 2) under a revised protocol, which excludes patients that are expected to be at a greater risk for TE events. The revised protocol provides for thromboembolism prophylaxis of all patients in both arms of the study with low molecular weight heparin, and adds evaluation of the TE events rate in Stage 2 PEGPH20-

treated patients as a co-primary end point. Stage 2 of Study 109-202 enrolled an additional 133 patients, to add to the 146 patients already accrued in the clinical trial, with a 2:1 randomization for PAG compared to AG. We project to present mature PFS data and overall response rate in the fourth quarter of 2016.

In May 2015, interim findings from the ongoing Phase 2 clinical study of PEGPH20 for the potential treatment of patients with stage IV PDA were presented at the American Society of Clinical Oncology annual meeting. The trial included 135 treated patients in Stage 1, of whom a total of 44 patients -- 23 receiving PEGPH20 in combination with ABRAXANE® and gemcitabine (PAG treatment arm) and 21 receiving ABRAXANE and gemcitabine alone (AG treatment arm) -- had available biopsies that were determined utilizing the Halozyme prototype HA assay in a retrospective analysis to have high levels of hyaluronan. PEGPH20 targets HA to help improve cancer therapy access to tumor cells. Results reported include:

- A more than doubling of median PFS of 9.2 months versus 4.3 months in high-HA patients treated with PAG vs. AG (hazard ratio of 0.39; p-value of 0.05);
- A more than doubling of overall response rate of 52 percent versus 24 percent (p-value of 0.038) and a duration of response of 8.1 months compared to 3.7 months in high-HA patients treated with PAG versus AG;
- In the 30 high-HA patients (15 PAG treatment arm versus 15 AG treatment arm) who were evaluated for response prior to the April 2014 clinical hold and subsequent PEGPH20 treatment discontinuation, the overall response rate was 73 percent versus 27 percent (p-value of 0.01), respectively, consistent with findings presented in January;
- A trend toward improvement in median overall survival of 12 months compared to 9 months in high-HA patients treated with PAG versus AG (hazard ratio of 0.62) despite discontinuation of PEGPH20 in more than half of the PAG-treated patients at the time of the clinical hold in April 2014.

Data was also presented on the rate of TE events in 55 patients treated in Stage 2 of the trial, which is currently randomizing patients at a 2:1 ratio of PAG versus AG. As noted above, Stage 2 began after a protocol amendment in July 2014, excluding patients at high risk of TE events and adding prophylaxis with low molecular weight heparin (enoxaparin) to all patients in both treatment arms. Reported results included a TE event rate of 13% in 38 patients treated with PAG versus 18% in 17 patients receiving AG.

We and the Data Monitoring Committee for Study 109-202 continue to closely monitor the occurrence of TE events in enrolled patients after the revision to the protocol. The revised protocol includes pre-specified analyses to evaluate the rate of TE events. While the pre-specified TE event rate analysis established in the protocol at the time of the clinical hold in 2014 have been passed, the continuation of Study 202 may be halted again if the FDA determines that imbalances in safety findings, including TE events, occur, or for any other emergent safety concerns.

In March 2015, we met with the FDA to discuss both the interim efficacy and safety data from Study 109-202, which included the potential risk profile including TE event rate. Based on the feedback from that meeting, we proceeded with a Phase 3 clinical study (Study 109-301) of PEGPH20 in patients with stage IV PDA, using a design allowing for potential marketing application based on either PFS or overall survival. The study will enroll patients whose tumors accumulate high levels of HA using a companion diagnostic test. The FDA provided feedback on the current companion diagnostic approach and confirmed that an approved companion diagnostic strategy is required for Phase 3 related tumor biopsy.

The use of PFS as the basis for marketing approval will be subject to the overall benefit and risk associated with PEGPH20 combined with nab-paclitaxel (ABRAXANE®) and gemcitabine therapy, including the:

- Magnitude of the PFS treatment effect observed;
- Toxicity profile; and
- Interim overall survival data.

In June 2015, we received scientific advice/protocol assistance from the European Medicines Agency (EMA) regarding our Phase 3 study. The EMA agreed to the patient population, and the use of both PFS and OS as co-primary endpoints stating that OS is the preferred endpoint and that ultimate approval would require an overall positive benefit:risk balance.

In January 2016, an update on the Stage 1 PFS data utilizing the companion diagnostic that is currently in development with Ventana Medical Systems (Ventana) was presented. In a total of 43 high-HA patients, the data continued to show an improvement in median PFS when patients with high HA received PAG compared to AG (9.2 months compared to 6.3 months respectively); hazard ratio of 0.48 (95% CI: 0.16, 1.48). In addition, the overall response rate in the PAG treated patients was 55% (12 out of 22 patients) compared to 33% (7 out of 21 patients), which was not statistically significant. A modest improvement in median overall survival was seen in the PAG-treated high-HA patients. PEGPH20 was discontinued in over 40% of patients in the new companion diagnostic analysis due to the clinical hold in April 2014. We remain blinded to the efficacy results and project to present mature PFS and overall response rate from Stage 2 of Study 202 in the fourth quarter of 2016. For the secondary primary endpoint of the rate of TE events, we have passed the pre-specified analyses for TE events and are continuing with the Data Monitoring Committee

to monitor the rate of TE events since implementing low-molecular weight heparin (LMWH) prophylaxis.

Additionally, an update on the rate of TE events in the PEGPH20 treatment arm in Stage 2 of Study 202 was provided. Reported results included a TE event rate with LMWH prophylaxis of 12% in 73 patients treated with PAG versus 9% in 34 patients receiving AG, and for those treated with 1mg/kg/day of LMWH, a TE event rate of 7% in 55 patients treated with PAG versus 4% in 27 patients receiving AG.

We also reported an update on the development of the companion diagnostic. Halozyme has partnered with Ventana to develop the companion diagnostic and announced the methodology and scoring algorithm have been finalized. Based on the cutpoint for the Ventana diagnostic, we now expect approximately 35 to 40 percent of stage IV PDA patients to have high-HA tumors, similar to the previously reported interim results from Stage 1 of Study 202 using the Halozyme prototype assay.

In February 2016, our partner Ventana submitted an investigational device exemption (IDE) application for our companion diagnostic test to enable patient selection in our Phase 3 Study 301 of PEGPH20 in high-HA patients.

Study Halo 109-301:

In the first quarter of 2016, we initiated Study 109-301, a Phase 3 multicenter randomized clinical trial evaluating PEGPH20 as a first-line therapy for patients with stage IV PDA. The study will explore PEGPH20 with gemcitabine and ABRAXANE in stage IV PDA patients at approximately 200 sites in 20 countries located in North America, Europe, South America and Asia Pacific. First dosing of a patient is expected to occur in March 2016.

SWOG Study S1313:

In October 2013, SWOG, a cancer research cooperative group of more than 4,000 researchers in over 500 institutions around the world, initiated a 144 patient Phase 1b/2 randomized clinical trial in some of their study centers, examining PEGPH20 in combination with modified FOLFIRINOX chemotherapy (mFOLFIRINOX) compared to mFOLFIRINOX treatment alone in patients with stage IV PDA (funded by the National Cancer Institute). This study was also placed on clinical hold temporarily at the time of the hold on Study 109-202. In September 2014, the FDA removed the clinical hold on patient enrollment and dosing of PEGPH20 in this SWOG cooperative study. The study has resumed under a revised protocol, and patient enrollment is continuing. The Phase 2 portion of the study, where up to 172 patients are planned to be enrolled, began in June 2015. As with Study 109-202, the occurrence of TE events will be closely monitored in enrolled patients, and the continuation of this study may be halted again in accordance with event rate rules established in the protocol, or for other safety reasons.

Other indications outside of pancreatic cancer:

Study HALO 107-201, PRIMAL Study: In December 2014, we initiated a Phase 1b/2 trial, to evaluate PEGPH20 in second line in combination with docetaxel (Taxotere®) in non-small cell lung cancer patients. In this study, we expect to evaluate and identify the maximum tolerated dose (MTD) and safety of PEGPH20 plus docetaxel in previously treated patients with non-small cell lung cancer. Upon identification of the MTD we plan to expand the trial into a dose expansion phase in patients prospectively tested for HA status, and then ultimately a Phase 2 portion of the study to evaluate the safety and efficacy of PEGPH20 in second line HA-high non-small cell lung cancer patients in combination with docetaxel.

Study HALO 107-101, the immuno-oncology trial: We recently initiated a Phase 1b study exploring the combination of PEGPH20 and KEYTRUDA®, an immuno-oncology agent in relapsed non-small cell lung cancer and gastric cancer. We expect to evaluate and identify the dose and safety of PEGPH20 plus KEYTRUDA prior to embarking on dose expansion in high-HA patients in this study.

Halozyme Eisai Clinical Collaboration: We expect a Phase 1b/2 study to be initiated in the second quarter of 2016, exploring the combination of PEGPH20 and eribulin in first line HER2-negative HA-high metastatic breast cancer. Halozyme and Eisai will jointly share the costs to conduct this global study.

Regulatory:

In September 2014, the FDA granted Fast Track designation for our program investigating PEGPH20 in combination with gemcitabine and nab-paclitaxel for the treatment of patients with stage IV PDA to demonstrate an improvement in overall survival. The Fast Track designation process was developed by the FDA to facilitate the development, and expedite the review of drugs to treat serious or life-threatening diseases and address unmet medical needs.

In October 2014, the FDA granted Orphan Drug designation for PEGPH20 for the treatment of pancreatic cancer. The FDA Office of Orphan Products Development's mission is to advance the evaluation and development of products (drugs, biologics, devices, or medical foods) that demonstrate promise for the diagnosis and/or treatment of rare diseases or conditions. In December 2014, the European Committee for Orphan Medicinal Products of the EMA designated PEGPH20 an orphan medicinal product for the treatment of pancreatic cancer.

In March 2015, we met with the FDA to discuss both the interim efficacy and safety data from Study 109-202 and to discuss the Phase 3 Study 109-301 as a potential registration study in stage IV PDA patients whose tumors are determined to have high levels of HA accumulation. In June 2015, we received scientific advice/protocol assistance from the EMA regarding our Phase 3 study. In addition, we continue our dialog with the FDA regarding the development of a companion diagnostic agent for detection and quantification of hyaluronan in the tumor tissue of cancer patients.

In February 2016, our partner Ventana submitted an IDE application for our companion diagnostic test to enable patient selection in our Phase 3 Study 301 of PEGPH20 in high-HA patients.

Collaborations

Roche Collaboration

In December 2006, we and Roche entered into a collaboration and license agreement under which Roche obtained a worldwide, exclusive license to develop and commercialize product combinations of rHuPH20 and up to thirteen Roche target compounds (the Roche Collaboration). Roche initially had the exclusive right to apply rHuPH20 to only three pre-defined Roche biologic targets with the option to exclusively develop and commercialize rHuPH20 with ten additional targets. As of December 31, 2015, Roche has elected a total of five targets, two of which are exclusive, and retains the option to develop and commercialize rHuPH20 with three additional targets.

In September 2013, Roche launched a subcutaneous (SC) formulation of Herceptin (trastuzumab) (Herceptin SC) in Europe for the treatment of patients with HER2-positive breast cancer. This formulation utilizes our patented ENHANZE Technology and is administered in two to five minutes, rather than 30 to 90 minutes with the standard intravenous form. Roche received European marketing approval for Herceptin SC in August 2013. The European Commission's approval was based on data from Roche's Phase 3 HannaH study which showed that the subcutaneous formulation of Herceptin was associated with comparable efficacy (pathological complete response, pCR) to Herceptin administered intravenously in women with HER2-positive early breast cancer and resulted in non-inferior trastuzumab plasma levels. Overall, the safety profile in both arms of the HannaH study was consistent with that expected from standard treatment with Herceptin and chemotherapy in this setting. No new safety signals were identified. Breast cancer is the most common cancer among women worldwide. Each year, about 1.7 million new cases of breast cancer are diagnosed worldwide, and over 500,000 women will die of the disease annually. In HER2-positive breast cancer, increased quantities of the human epidermal growth factor receptor 2 (HER2) are present on the surface of the tumor cells. This is known as "HER2 positivity" and affects approximately 15% to 20% of women with breast cancer. HER2-positive cancer is reported to be a particularly aggressive form of breast cancer.

In June 2014, Roche launched MabThera SC in Europe for the treatment of patients with common forms of non-Hodgkin lymphoma (NHL). This formulation utilizes our patented ENHANZE Technology and is administered in approximately five minutes compared to the approximately 2.5 hour infusion time for intravenous MabThera. The European Commission approved MabThera SC in March 2014. The European Commission's approval was based primarily on data from Roche's Phase 3 pivotal clinical studies, which was published in The Lancet Oncology. NHL is a type of cancer that affects lymphocytes (white blood cells). NHL represents approximately 85% of all lymphomas diagnosed and was responsible for approximately 200,000 annual deaths worldwide in 2012. Lymphomas are a cancer of the lymphatic system (composed of lymph vessels, lymph nodes and organs) which helps to keep the bodily fluid levels balanced and to defend the body against invasion by disease. Lymphoma develops when white blood cells (usually B-lymphocytes) in the lymph fluid become cancerous and begin to multiply and collect in the lymph nodes or lymphatic tissues such as the spleen. Some of these cells are released into the bloodstream and spread around the body, interfering with the body's production of healthy blood cells. Roche announced that it filed MabThera SC in Europe for previously untreated chronic lymphocytic leukemia in the fourth quarter of 2014.

Additional information about the Phase 3 Herceptin SC and Phase 3 MabThera SC clinical trials can be found at *www.clinicaltrials.gov* and *www.roche-trials.com*. Information available on these websites is not incorporated into this report.

Baxalta Collaboration

In September 2007, we and Baxalta entered into a collaboration and license agreement under which Baxalta obtained a worldwide, exclusive license to develop and commercialize product combinations of rHuPH20 with GAMMAGARD LIQUID (HYQVIA) (the Baxalta Collaboration). GAMMAGARD LIQUID is a current Baxalta product that is indicated for the treatment of primary immunodeficiency disorders associated with defects in the immune system.

In October 2014, Baxalta announced the launch and first shipments of Baxalta's HYQVIA product for treatment of adult patients with primary immunodeficiency in the U.S. HYQVIA was approved by the FDA in September 2014 and is the first subcutaneous immune globulin (IG) treatment approved for adult primary immunodeficiency patients with a dosing regimen requiring only one infusion up to once per month (every three to four weeks) and one injection site per infusion in most patients, to deliver a full therapeutic dose of IG. The majority of primary immunodeficiency patients today receive intravenous infusions in a doctor's office or infusion center, and current subcutaneous IG treatments require weekly or bi-weekly treatment with multiple

infusion sites per treatment. The FDA's approval of HYQVIA was a significant milestone for us as it represented the first U.S. approved Biologic License Application (BLA) which utilizes our rHuPH20 platform.

In May 2013, the European Commission granted Baxalta marketing authorization in all EU Member States for the use of HYQVIA (solution for subcutaneous use) as replacement therapy for adult patients with primary and secondary immunodeficiencies. Baxalta launched HYQVIA in the first EU country in July 2013 and has continued to launch in additional countries.

Pfizer Collaboration

In December 2012, we and Pfizer entered into a collaboration and license agreement, under which Pfizer has the worldwide license to develop and commercialize products combining our rHuPH20 enzyme with Pfizer proprietary biologics directed to up to six targets in primary care and specialty care indications. Targets may be selected on an exclusive or non-exclusive basis. In September 2013, Pfizer elected the fourth therapeutic target on an exclusive basis. One of the targets is proprotein convertase subtilisin/kexin type 9 (PCSK9) which is the gene that provides instructions for making a protein that helps regulate the amount of cholesterol in the bloodstream. Pfizer initiated dosing of a subcutaneous formulation of rHuPH20 and bococizumab, an investigational PCSK9 inhibitor, in a Phase 1 trial in February 2016. Pfizer is also developing rivipansel directed to another target under the collaboration to treat vaso-occlusive crisis in individuals with sickle cell disease and initiated dosing of a subcutaneous formulation of rHuPH20 and rivipansel in a Phase 1 clinical trial in October 2015.

Janssen Collaboration

In December 2014, we and Janssen entered into a collaboration and license agreement, under which Janssen has the worldwide license to develop and commercialize products combining our rHuPH20 enzyme with Janssen proprietary biologics directed to up to five targets. Targets may be selected on an exclusive basis. Janssen has elected CD38 as the first target on an exclusive basis. In November 2015, Janssen initiated dosing in a Phase 1b clinical trial evaluating subcutaneous delivery of daratumumab, using ENHANZE Technology, in multiple myeloma.

AbbVie Collaboration

In June 2015, we and AbbVie entered into a collaboration and license agreement, under which AbbVie has the worldwide license to develop and commercialize products combining our rHuPH20 enzyme with AbbVie proprietary biologics directed to up to nine targets. Targets may be selected on an exclusive basis. AbbVie has elected TNF alpha as the first target on an exclusive basis. AbbVie is developing rHuPH20 with adalimumab (HUMIRA®) which may allow a reduced number of induction injections and deliver additional performance benefits.

Lilly Collaboration

In December 2015, we and Lilly entered into a collaboration and license agreement, under which Lilly has the worldwide license to develop and commercialize products combining our rHuPH20 enzyme with Lilly proprietary biologics directed to up to five targets. Targets may be selected on an exclusive basis. Lilly has elected one target on an exclusive basis and one target on a semi-exclusive basis.

For a further discussion of the material terms of our collaboration agreements, refer to Note 4, *Collaborative Agreements*, to our consolidated financial statements.

Customers

The following table indicates the percentage of total revenues in excess of 10% with any single customer:

	Year Ended December 31,		
	2015	2014	2013
Roche	42%	57%	64%
Lilly	19%	—	—
AbbVie	17%	—	—
Janssen	1%	20%	—

For additional information regarding our revenues from external customers, refer to Note 2, *Summary of Significant Accounting Policies — Concentrations of Credit Risk, Sources of Supply and Significant Customer*s, to our consolidated financial statements.

Patents and Proprietary Rights

Patents and other proprietary rights are essential to our business. Our success will depend in part on our ability to obtain patent protection for our inventions, to preserve our trade secrets and to operate without infringing the proprietary rights of third parties. Our strategy is to actively pursue patent protection in the U.S. and certain foreign jurisdictions for technology that we believe to be proprietary to us and that offers us a potential competitive advantage. Our patent portfolio includes 21 issued patents in the U.S., more than 235 issued patents in Europe and other countries in the world and more than 260 pending patent applications. In general, patents have a term of 20 years from the application filing date or earlier claimed priority date. Our issued patents will expire between 2022 and 2032. We have multiple patents and patent applications throughout the world pertaining to our recombinant human hyaluronidase and methods of use and manufacture, including an issued U.S. patent which expires in 2027 and an issued European patent which expires in 2024, which we believe cover the products and product candidates under our existing collaborations, *Hylenex* recombinant, PEGPH20 and our endocrinology product candidates. In addition, we have, under prosecution throughout the world, multiple patent applications that relate specifically to individual product candidates under development, the expiration of which can only be definitely determined upon maturation into our issued patents. We believe our patent filings represent a barrier to entry for potential competitors looking to utilize these hyaluronidases.

In addition to patents, we rely on unpatented trade secrets, proprietary know-how and continuing technological innovation. We seek protection of these trade secrets, proprietary know-how and innovation, in part, through confidentiality and proprietary information agreements. Our policy is to require our employees, directors, consultants, advisors, collaborators, outside scientific collaborators and sponsored researchers, other advisors and other individuals and entities to execute confidentiality agreements upon the start of employment, consulting or other contractual relationships with us. These agreements provide that all confidential information developed or made known to the individual or entity during the course of the relationship is to be kept confidential and not disclosed to third parties except in specific circumstances. In the case of employees and some other parties, the agreements provide that all inventions conceived by the individual will be our exclusive property. Despite the use of these agreements and our efforts to protect our intellectual property, there will always be a risk of unauthorized use or disclosure of information. Furthermore, our trade secrets may otherwise become known to, or be independently developed by, our competitors.

We also file trademark applications to protect the names of our products and product candidates. These applications may not mature to registration and may be challenged by third parties. We are pursuing trademark protection in a number of different countries around the world. There can be no assurances that our registered or unregistered trademarks or trade names will not infringe on rights of third parties or will be acceptable to regulatory agencies.

Research and Development Activities

Our research and development expenses consist primarily of costs associated with the development and manufacturing of our product candidates, compensation and other expenses for research and development personnel, supplies and materials, costs for consultants and related contract research, clinical trials, facility costs and amortization and depreciation. We charge all research and development expenses to operations as they are incurred. Our research and development activities are primarily focused on the development of our various product candidates.

Due to the uncertainty in obtaining the FDA and other regulatory approvals, our reliance on third parties and competitive pressures, we are unable to estimate with any certainty the additional costs we will incur in the continued development of our proprietary product candidates for commercialization. However, we expect our research and development expenses for PEGPH20 to increase as our program advances into additional tumors and later stages of clinical development.

Manufacturing

We do not have our own manufacturing facility for our product and product candidates, or the capability to package our products. We have engaged third parties to manufacture bulk rHuPH20, PEGPH20 and *Hylenex* recombinant.

We have existing supply agreements with contract manufacturing organizations Avid Bioservices, Inc. (Avid) and Cook Pharmica LLC (Cook) to produce supplies of bulk rHuPH20. These manufacturers each produce bulk rHuPH20 under current Good Manufacturing Practices (cGMP) for clinical and commercial uses. Cook currently produces bulk rHuPH20 for use in *Hylenex* recombinant, product candidates and collaboration product candidates. Avid currently produces bulk rHuPH20 for use in collaboration products. We rely on their ability to successfully manufacture these batches according to product specifications. In addition, we are working to scale-up, validate and qualify a new facility operated by Avid as a manufacturer of bulk rHuPH20 for use in the products and product candidates under the Roche collaboration. It is important for our business for Cook and Avid to (i) retain their status as cGMP-approved manufacturing facilities; (ii) to successfully scale up bulk rHuPH20 production; and/or (iii) manufacture the bulk rHuPH20 required by us and our collaborators for use in our proprietary and collaboration products and product candidates. In addition to supply obligations, Avid and Cook will also provide support for data and information used in the chemistry, manufacturing and controls sections for FDA and other regulatory filings.

We have a commercial manufacturing and supply agreement with Patheon Manufacturing Services, LLC (Patheon) under which Patheon will provide the final fill and finishing steps in the production process of *Hylenex* recombinant. Under our commercial services agreement with Patheon, Patheon has agreed to fill and finish *Hylenex* recombinant product for us until December 31, 2019, subject to further extensions in accordance with the terms of the agreement. In addition, we are in the early stages of scaling up our manufacturing of PEGPH20 with third party suppliers to support additional clinical trials, including a registration-enabling trial, and ultimately, if approved, potential commercial supply.

Sales, Marketing and Distribution

HYLENEX Recombinant

Our commercial activities currently focus on *Hylenex* recombinant. We have a team of sales specialists that provide hospital and surgery center customers with the information about *Hylenex* recombinant and information needed to obtain formulary approval for, and support utilization of, *Hylenex* recombinant. Our commercial activities also include marketing and related services and commercial support services such as commercial operations, managed markets and commercial analytics. We also employ third-party vendors, such as advertising agencies, market research firms and suppliers of marketing and other sales support related services to assist with our commercial activities.

We sell *Hylenex* recombinant in the U.S. to wholesale pharmaceutical distributors, who sell the product to hospitals and other end-user customers. We have engaged Integrated Commercial Solutions (ICS), a division of AmerisourceBergen Specialty Group, a subsidiary of AmerisourceBergen, to act as our exclusive distributor for commercial shipment and distribution of *Hylenex* recombinant to our customers in the United States. In addition to distribution services, ICS provides us with other key services related to logistics, warehousing, returns and inventory management, contract administration and chargebacks processing and accounts receivable management. In addition, we utilize third parties to perform various other services for us relating to regulatory monitoring, including call center management, adverse event reporting, safety database management and other product maintenance services.

Competition

The pharmaceutical industry is characterized by rapidly advancing technologies, intense competition and a strong emphasis on proprietary therapeutics. We face competition from a number of sources, some of which may target the same indications as our product or product candidates, including large pharmaceutical companies, smaller pharmaceutical companies, biotechnology companies, academic institutions, government agencies and private and public research institutions, many of which have greater financial resources, drug development experience, sales and marketing capabilities, including larger, well established sales forces, manufacturing capabilities, experience in obtaining regulatory approvals for product candidates and other resources than us. We face competition not only in the commercialization of *Hylenex* recombinant, but also for the in-licensing or acquisition of additional product candidates, and the out-licensing of our ENHANZE Technology. In addition, our collaborators face competition in the commercialization of the product candidates for which the collaborators seek marketing approval from the FDA or other regulatory authorities.

HYLENEX Recombinant

Hylenex recombinant is currently the only FDA approved recombinant human hyaluronidase on the market. The competitors for Hylenex recombinant include, but are not limited to, Valeant Pharmaceuticals International, Inc.'s FDA approved product, Vitrase®, an ovine (ram) hyaluronidase, and Amphastar Pharmaceuticals, Inc.'s product, Amphadase®, a bovine (bull) hyaluronidase. In addition, some commercial pharmacies compound hyaluronidase preparations for institutions and physicians even though compounded preparations are not FDA approved products.

Government Regulations

The FDA and comparable regulatory agencies in foreign countries regulate the manufacture and sale of the pharmaceutical products that we have developed or currently are developing. The FDA has established guidelines and safety standards that are applicable to the laboratory and preclinical evaluation and clinical investigation of therapeutic products and stringent regulations that govern the manufacture and sale of these products. The process of obtaining regulatory approval for a new therapeutic product usually requires a significant amount of time and substantial resources. The steps typically required before a product can be introduced for human use include:

- animal pharmacology studies to obtain preliminary information on the safety and efficacy of a drug; or
- laboratory and preclinical evaluation *in vitro* and *in vivo* including extensive toxicology studies.

The results of these laboratory and preclinical studies may be submitted to the FDA as part of an IND (Investigational New Drug) application. The sponsor of an IND application may commence human testing of the compound 30 days after submission of the IND, unless notified to the contrary by the FDA.

The clinical testing program for a new drug typically involves three phases:

- Phase 1 investigations are generally conducted in healthy subjects (in certain instances, Phase 1 studies that determine the maximum tolerated dose and initial safety of the product candidate are performed in patients with the disease);
- Phase 2 studies are conducted in limited numbers of subjects with the disease or condition to be treated and are aimed at determining the most effective dose and schedule of administration, evaluating both safety and whether the product demonstrates therapeutic effectiveness against the disease; and
- Phase 3 studies involve large, well-controlled investigations in diseased subjects and are aimed at verifying the safety and effectiveness of the drug.

Data from all clinical studies, as well as all laboratory and preclinical studies and evidence of product quality, are typically submitted to the FDA in a new drug application (NDA). The results of the preclinical and clinical testing of a biologic product candidate are submitted to the FDA in the form of a BLA, for evaluation to determine whether the product candidate may be approved for commercial sale. In responding to a BLA or NDA, the FDA may grant marketing approval, request additional information, or deny the application. Although the FDA's requirements for clinical trials are well established and we believe that we have planned and conducted our clinical trials in accordance with the FDA's applicable regulations and guidelines, these requirements, including requirements relating to testing the safety of drug candidates, may be subject to change as a result of recent announcements regarding safety problems with approved drugs. Additionally, we could be required to conduct additional trials beyond what we had planned due to the FDA's safety and/or efficacy concerns or due to differing interpretations of the meaning of our clinical data. (See Part I, Item 1A, *Risk Factors.*)

The FDA's Center for Drug Evaluation and Research must approve an NDA and the FDA's Center for Biologics Evaluation and Research must approve a BLA for a drug before it may be marketed in the United States. If we begin to market our proposed products for commercial sale in the U.S., any manufacturing operations that may be established in or outside the U.S. will also be subject to rigorous regulation, including compliance with cGMP. We also may be subject to regulation under the Occupational Safety and Health Act, the Environmental Protection Act, the Toxic Substance Control Act, the Export Control Act and other present and future laws of general application. In addition, the handling, care and use of laboratory animals are subject to the Guidelines for the Humane Use and Care of Laboratory Animals published by the National Institutes of Health.

Regulatory obligations continue post-approval, and include the reporting of adverse events when a drug is utilized in the broader patient population. Promotion and marketing of drugs is also strictly regulated, with penalties imposed for violations of FDA regulations, the Lanham Act and other federal and state laws, including the federal anti-kickback statute.

We currently intend to continue to seek, directly or through our collaborators, approval to market our products and product candidates in foreign countries, which may have regulatory processes that differ materially from those of the FDA. We anticipate that we will rely upon independent consultants to seek and gain approvals to market our proposed products in foreign countries or may rely on other pharmaceutical or biotechnology companies to license our proposed products. We cannot assure you that approvals to market any of our proposed products can be obtained in any country. Approval to market a product in any one foreign country does not necessarily indicate that approval can be obtained in other countries.

From time to time, legislation is drafted and introduced in Congress that could significantly change the statutory provisions governing the approval, manufacturing and marketing of drug products. In addition, FDA regulations and guidance are often revised or reinterpreted by the agency or reviewing courts in ways that may significantly affect our business and development of our product candidates and any products that we may commercialize. It is impossible to predict whether additional legislative changes will be enacted, or FDA regulations, guidance or interpretations changed, or what the impact of any such changes may be.

Segment Information

We operate our business as one segment, which includes all activities related to the research, development and commercialization of human enzymes. This segment also includes revenues and expenses related to (i) research and development activities conducted under our collaboration agreements with third parties and (ii) product sales of *Hylenex* recombinant. The chief operating decision-maker reviews the operating results on an aggregate basis and manages the operations as a single operating segment. We had no foreign based operations and minimal long-lived assets located in foreign countries as of and for the years ended December 31, 2015, 2014 and 2013. Refer to the Notes for additional financial information regarding our operating segment.

Executive Officers of the Registrant

Information concerning our executive officers, including their names, ages and certain biographical information can be found in Part III, Item 10, *Directors, Executive Officers and Corporate Governance*. This information is incorporated by reference into Part I of this report.

Employees

As of February 22, 2016, we had 216 full-time employees. None of our employees are unionized and we believe our employee relations to be good.

Item 1A. ***Risk Factors***

Risks Related To Our Business

We have generated only limited revenue from product sales to date; we have a history of net losses and negative cash flow, and we may never achieve or maintain profitability.

Relative to expenses incurred in our operations, we have generated only limited revenues from product sales, royalties, licensing fees, milestone payments, bulk rHuPH20 supply payments and research reimbursements to date, and we may never generate sufficient revenues from future product sales, licensing fees and milestone payments to offset expenses. Even if we ultimately do achieve significant revenues from product sales, royalties, licensing fees, research reimbursements, bulk rHuPH20 supply payments and/or milestone payments, we expect to incur significant operating losses over the next few years. We have never been profitable, and we may never become profitable. Through December 31, 2015, we have incurred aggregate net losses of approximately $482.7 million.

If our product candidates do not receive and maintain regulatory approvals, or if approvals are not obtained in a timely manner, such failure or delay would substantially impair our ability to generate revenues.

Approval from the FDA or equivalent health authorities is necessary to manufacture and market pharmaceutical products in the U.S. and the other countries in which we anticipate doing business have similar requirements. The process for obtaining FDA and other regulatory approvals is extensive, time-consuming, risky and costly, and there is no guarantee that the FDA or other regulatory bodies will approve any applications that may be filed with respect to any of our product candidates, or that the timing of any such approval will be appropriate for the desired product launch schedule for a product candidate. We and our collaborators attempt to provide guidance as to the timing for the filing and acceptance of such regulatory approvals, but such filings and approvals may not occur when we or our collaborators expect, or at all. The FDA or other foreign regulatory agency may refuse or delay approval of our product candidates for failure to collect sufficient clinical or animal safety data and require us or our collaborators to conduct additional clinical or animal safety studies which may cause lengthy delays and increased costs to our programs. For example, the approval of Baxalta's HYQVIA BLA was delayed until we and Baxalta provided additional preclinical data sufficient to address concerns regarding non-neutralizing antibodies to rHuPH20 that were detected in the registration trial. Although these antibodies have not been associated with any known adverse clinical effects, and the HYQVIA BLA was approved by the FDA in September 2014, we cannot assure you that they will not arise and have an adverse impact on future development of products which include rHuPH20, future sales of *Hylenex* recombinant, our ability to enter into collaborations, or be raised by the FDA or other health authorities in connection with testing or approval of products including rHuPH20.

We and our collaborators may not be successful in obtaining approvals for any additional potential products in a timely manner, or at all. Refer to the risk factor titled "*Our proprietary and collaboration product candidates or companion diagnostic assays may not receive regulatory approvals or their development may be delayed for a variety of reasons, including delayed or unsuccessful clinical trials, regulatory requirements or safety concerns*" for additional information relating to the approval of product candidates.

Additionally, even with respect to products which have been approved for commercialization, in order to continue to manufacture and market pharmaceutical products, we or our collaborators must maintain our regulatory approvals. If we or any of our collaborators are unsuccessful in maintaining our regulatory approvals, our ability to generate revenues would be adversely affected.

We will likely need to raise additional capital in the future and there can be no assurance that we will be able to obtain such funds.

We will likely need to raise additional capital in the future to continue the development of our product candidates or for other current corporate purposes. Our current cash reserves and expected revenues during the next few years will not be sufficient for us to continue the development of our proprietary product candidates, to fund general operations and conduct our business at the level desired. In addition, if we engage in acquisitions of companies, products or technologies in order to execute our business

strategy, we may need to raise additional capital. We may raise additional capital in the future through one or more financing vehicles that may be available to us including (i) the public offering of securities; (ii) new collaborative agreements; (iii) expansions or revisions to existing collaborative relationships; (iv) private financings; and/or (v) other equity or debt financings.

In view of our stage of development, business prospects, the nature of our capital structure and general market conditions, if we are required to raise additional capital in the future, the additional financing may not be available on favorable terms, or at all. If additional capital is not available on favorable terms when needed, we will be required to raise capital on adverse terms or significantly reduce operating expenses through the restructuring of our operations or deferral of one or more product development programs. If we raise additional capital, a substantial number of additional shares may be issued, and these shares will dilute the ownership interest of our current investors.

Use of our product candidates or those of our collaborators could be associated with side effects or adverse events.

As with most pharmaceutical products, use of our product candidates or those of our collaborators could be associated with side effects or adverse events which can vary in severity (from minor reactions to death) and frequency (infrequent or prevalent). Side effects or adverse events associated with the use of our product candidates or those of our collaborators may be observed at any time, including in clinical trials or when a product is commercialized, and any such side effects or adverse events may negatively affect our or our collaborators' ability to obtain or maintain regulatory approval or market our product candidates. Side effects such as toxicity or other safety issues associated with the use of our product candidates or those of our collaborators could require us or our collaborators to perform additional studies or halt development or commercialization of these product candidates or expose us to product liability lawsuits which will harm our business. We or our collaborators may be required by regulatory agencies to conduct additional animal or human studies regarding the safety and efficacy of our pharmaceutical product candidates which we have not planned or anticipated. Furthermore, there can be no assurance that we or our collaborators will resolve any issues related to any product related adverse events to the satisfaction of the FDA or any regulatory agency in a timely manner or ever, which could harm our business, prospects and financial condition. For example, in April 2014, a clinical hold was placed on patient enrollment and dosing of PEGPH20 in Study 202 as a result of a possible difference in the TE event rate that had been observed at that time in the trial between the group of patients treated with PEGPH20 versus the group of patients treated without PEGPH20. The clinical hold was lifted by FDA in June 2014, and we have completed enrollment and resumed dosing of PEGPH20 in Study 202 under a revised clinical protocol. We and the data monitoring committee for Study 202 continue to closely monitor the occurrence of TE events in enrolled patients after the protocol amendments. While the pre-specified TE event rate analysis established in the protocol at the time of the clinical hold in 2014 have been passed, the continuation of Study 202 may be halted again if the FDA determines that imbalances in safety findings, including TE events, occur.

If our contract manufacturers are unable to manufacture and supply to us bulk rHuPH20 or other raw materials in the quantity and quality required by us or our collaborators for use in our products and product candidates, our product development and commercialization efforts could be delayed or stopped and our collaborations could be damaged.

We have existing supply agreements with contract manufacturing organizations Avid Bioservices, Inc. (Avid) and Cook Pharmica LLC (Cook) to produce bulk rHuPH20. These manufacturers each produce bulk rHuPH20 under current cGMP for clinical uses. Cook currently produces bulk rHuPH20 for use in *Hylenex* recombinant, product candidates and collaboration product candidates. Avid currently produces bulk rHuPH20 for use in collaboration products. In addition to supply obligations, Avid and Cook will also provide support for the chemistry, manufacturing and controls sections for FDA and other regulatory filings. We rely on their ability to successfully manufacture these batches according to product specifications. If either Avid or Cook: (i) is unable to retain its status as an FDA approved manufacturing facility; (ii) is unable to otherwise successfully scale up bulk rHuPH20 production to meet corporate or regulatory authority quality standards; or (iii) fails to manufacture and supply bulk rHuPH20 in the quantity and quality required by us or our collaborators for use in our proprietary and collaboration products and product candidates for any other reason, our business will be adversely affected. In addition, a significant change in such parties' or other third party manufacturers' business or financial condition could adversely affect their abilities to fulfill their contractual obligations to us. We have not established, and may not be able to establish, favorable arrangements with additional bulk rHuPH20 manufacturers and suppliers of the ingredients necessary to manufacture bulk rHuPH20 should the existing manufacturers and suppliers become unavailable or in the event that our existing manufacturers and suppliers are unable to adequately perform their responsibilities. We have attempted to mitigate the impact of a potential supply interruption through the establishment of excess bulk rHuPH20 inventory where possible, but there can be no assurances that this safety stock will be maintained or that it will be sufficient to address any delays, interruptions or other problems experienced by Avid and/or Cook. Any delays, interruptions or other problems regarding the ability of Avid and/or Cook to supply bulk rHuPH20 or the ability of other third party manufacturers, to supply other raw materials or ingredients necessary to produce our products on a timely basis could: (i) cause the delay of clinical trials or otherwise delay or prevent the regulatory approval of proprietary or collaboration product candidates; (ii) delay or prevent the effective commercialization of proprietary or collaboration products; and/or (iii) cause us to breach contractual obligations to deliver bulk rHuPH20 to our collaborators. Such delays would likely

damage our relationship with our collaborators, and they would have a material adverse effect on royalties and thus our business and financial condition.

If we or any party to a key collaboration agreement fails to perform material obligations under such agreement, or if a key collaboration agreement, is terminated for any reason, our business could significantly suffer.

We have entered into multiple collaboration agreements under which we may receive significant future payments in the form of milestone payments, target designation fees, maintenance fees and royalties. We are dependent on our collaborators to develop and commercialize product candidates subject to our collaborations in order for us to realize any financial benefits from these collaborations. Our collaborators may not devote the attention and resources to such efforts that we would ourselves, change their promotional efforts or simultaneously develop and commercialize products in competition to those products we have licensed to them. Any of these actions could not be visible to us immediately and could negatively impact the benefits and revenue we receive from such collaboration. In addition, in the event that a party fails to perform under a key collaboration agreement, or if a key collaboration agreement is terminated, the reduction in anticipated revenues could delay or suspend our product development activities for some of our product candidates, as well as our commercialization efforts for some or all of our products. Specifically, the termination of a key collaboration agreement by one of our collaborators could materially impact our ability to enter into additional collaboration agreements with new collaborators on favorable terms, if at all. In certain circumstances, the termination of a key collaboration agreement would require us to revise our corporate strategy going forward and reevaluate the applications and value of our technology.

Most of our current proprietary and collaboration products and product candidates rely on the rHuPH20 enzyme, and any adverse development regarding rHuPH20 could substantially impact multiple areas of our business, including current and potential collaborations, as well as proprietary programs.

rHuPH20 is a key technological component of ENHANZE Technology and our most advanced proprietary and collaboration products and product candidates, including the current and future products and product candidates under our Roche, Pfizer, Janssen, Baxalta, AbbVie and Lilly collaborations, our PEGPH20 program, and *Hylenex* recombinant. If there is an adverse development for rHuPH20 (e.g., an adverse regulatory determination relating to rHuPH20, if we are unable to obtain sufficient quantities of rHuPH20, if we are unable to obtain or maintain material proprietary rights to rHuPH20 or if we discover negative characteristics of rHuPH20), multiple areas of our business, including current and potential collaborations, as well as proprietary programs would be substantially impacted. For example, elevated anti-rHuPH20 antibody titers were detected in the registration trial for Baxalta's HYQVIA product as well as in a former collaborator's product in a Phase 2 clinical trial with rHuPH20, but have not been associated, in either case, with any adverse events. We monitor for antibodies to rHuPH20 in our collaboration and proprietary programs, and although we do not believe at this time that the incidence of non-neutralizing anti-rHuPH20 antibodies in either the HYQVIA program or the former collaborator's program will have a significant impact on our other proprietary and other collaboration product candidates, there can be no assurance that there will not be other such occurrences in the foregoing programs or our other programs or that concerns regarding these antibodies will not also be raised by the FDA or other health authorities in the future, which could result in delays or discontinuations of our development or commercialization activities or deter entry into additional collaborations with third parties.

We routinely evaluate, and may modify, our business strategy and our strategic focus to only a few fields or applications of our technology which may increase or decrease the risk for potential negative impact of adverse developments.

We routinely evaluate our business strategy, and may modify this strategy in the future in light of our assessment of unmet medical needs, growth potential, resource requirements, regulatory issues, competition, risks and other factors. As a result of these strategic evaluations, we may focus our resources and efforts on one or a few programs or fields and may suspend or reduce our efforts on other programs and fields. For example, in the third quarter of 2014, we decided to focus our resources on advancing PEGPH20 and expanding utilization of our ENHANZE platform. While we believe these are applications with the greatest potential value, we have reduced the diversification of our programs and increased our dependence on the success of the areas we are pursuing. By focusing on one or a few areas, we increase the potential impact on us if one of those programs or product candidates does not successfully complete clinical trials, achieve commercial acceptance or meet expectations regarding sales and revenue. Our decision to focus on one or a few programs may also reduce the value of programs that are no longer within our principal strategic focus, which could impair our ability to pursue collaborations or other strategic alternatives for those programs we are not pursuing.

Our proprietary and collaboration product candidates or companion diagnostic assays may not receive regulatory approvals or their development may be delayed for a variety of reasons, including delayed or unsuccessful clinical trials, regulatory requirements or safety concerns.

Clinical testing of pharmaceutical products is a long, expensive and uncertain process, and the failure or delay of a clinical trial can occur at any stage, including the patient enrollment stage. Even if initial results of preclinical and nonclinical studies or

clinical trial results are promising, we or our collaborators may obtain different results in subsequent trials or studies that fail to show the desired levels of safety and efficacy, or we may not, or our collaborators may not, obtain applicable regulatory approval for a variety of other reasons. Preclinical, nonclinical, and clinical trials for any of our proprietary or collaboration product candidates or development of any collaboration companion diagnostic assays could be unsuccessful, which would delay or preclude regulatory approval and commercialization of the product candidates or companion diagnostic assays. In the U.S. and other jurisdictions, regulatory approval can be delayed, limited or not granted for many reasons, including, among others:

- clinical results may not meet prescribed endpoints for the studies or otherwise provide sufficient data to support the efficacy of our product candidates;
- clinical and nonclinical test results may reveal side effects, adverse events or unexpected safety issues associated with the use of our product candidates; for example, in April 2014, a clinical hold was placed on patient enrollment and dosing of PEGPH20 in Study 202 as a result of a possible difference in the TE event rate that had been observed at that time in the trial between the group of patients treated with PEGPH20 versus the group of patients treated without PEGPH20. The clinical hold was lifted by FDA in June 2014, and we have completed enrollment and resumed dosing of PEGPH20 in Study 202 under a revised clinical protocol;
- Completion of clinical trials may be delayed for a variety of reasons including the amount of time it may take to identify and enroll patients with high levels of HA in our target population;
- regulatory review may not find a product candidate safe or effective enough to merit either continued testing or final approval;
- regulatory review may not find that the data from preclinical testing and clinical trials justifies approval;
- regulatory authorities may require that we change our studies or conduct additional studies which may significantly delay or make continued pursuit of approval commercially unattractive;
- a regulatory agency may reject our trial data or disagree with our interpretations of either clinical trial data or applicable regulations;
- a regulatory agency may approve only a narrow use of our product or may require additional safety monitoring and reporting through Risk Evaluation and Mitigation Strategies (REMS) or conditions to assure safe use program;
- the cost of clinical trials required for product approval may be greater than what we originally anticipate, and we may decide to not pursue regulatory approval for such a product;
- a regulatory agency may not approve our manufacturing processes or facilities, or the processes or facilities of our collaborators, our contract manufacturers or our raw material suppliers;
- a regulatory agency may identify problems or other deficiencies in our existing manufacturing processes or facilities, or the existing processes or facilities of our collaborators, our contract manufacturers or our raw material suppliers;
- a regulatory agency may change its formal or informal approval requirements and policies, act contrary to previous guidance, adopt new regulations or raise new issues or concerns late in the approval process; or
- a product candidate may be approved only for indications that are narrow or under conditions that place the product at a competitive disadvantage, which may limit the sales and marketing activities for such product candidate or otherwise adversely impact the commercial potential of a product.

If a proprietary or collaboration product candidate or companion diagnostic assay is not approved in a timely fashion or obtained on commercially viable terms, or if development of any product candidate or a companion diagnostic assay is terminated due to difficulties or delays encountered in the regulatory approval process, it could have a material adverse impact on our business, and we would become more dependent on the development of other proprietary or collaboration product candidates and/or our ability to successfully acquire other products and technologies. There can be no assurances that any proprietary or collaboration product candidate or companion diagnostic assay will receive regulatory approval in a timely manner, or at all. There can be no assurance that we will be able to gain clarity as to the FDA's requirements or that the requirements may be satisfied in a commercially feasible way, in which case our ability to enter into collaborations with third parties or explore other strategic alternatives to exploit this opportunity will be limited or may not be possible.

We anticipate that certain proprietary and collaboration products will be marketed, and perhaps manufactured, in foreign countries. The process of obtaining regulatory approvals in foreign countries is subject to delay and failure for the reasons set forth above, as well as for reasons that vary from jurisdiction to jurisdiction. The approval process varies among countries and jurisdictions and can involve additional testing. The time required to obtain approval may differ from that required to obtain FDA approval. Foreign regulatory agencies may not provide approvals on a timely basis, if at all. Approval by the FDA does not ensure approval by regulatory authorities in other countries or jurisdictions, and approval by one foreign regulatory authority does not ensure approval by regulatory authorities in other foreign countries or jurisdictions or by the FDA.

Our third party collaborators are responsible for providing certain proprietary materials that are essential components of our collaboration products and product candidates, and any failure to supply these materials could delay the development and commercialization efforts for these collaboration products and product candidates and/or damage our collaborations.

Our development and commercialization collaborators are responsible for providing certain proprietary materials that are essential components of our collaboration products and product candidates. For example, Roche is responsible for producing the Herceptin and MabThera required for its subcutaneous products and Baxalta is responsible for producing the GAMMAGARD LIQUID for its product HYQVIA. If a collaborator, or any applicable third party service provider of a collaborator, encounters difficulties in the manufacture, storage, delivery, fill, finish or packaging of the collaboration product or product candidate or component of such product or product candidate, such difficulties could (i) cause the delay of clinical trials or otherwise delay or prevent the regulatory approval of collaboration product candidates; and/or (ii) delay or prevent the effective commercialization of collaboration products. Such delays could have a material adverse effect on our business and financial condition.

We rely on third parties to prepare, fill, finish and package our products and product candidates, and if such third parties should fail to perform, our commercialization and development efforts for our products and product candidates could be delayed or stopped.

We rely on third parties to store and ship bulk rHuPH20 on our behalf and to also prepare, fill, finish and package our products and product candidates prior to their distribution. If we are unable to locate third parties to perform these functions on terms that are acceptable to us, or if the third parties we identify fail to perform their obligations, the progress of clinical trials could be delayed or even suspended and the commercialization of approved product candidates could be delayed or prevented. In addition, we are in the early stages of scaling up our manufacturing of PEGPH20 with third party suppliers to support additional clinical trials, including a Phase 3 trial, and ultimately, if approved, potential commercial supply. If our contract manufacturers are unable to successfully manufacture and supply PEGPH20, the progress of our clinical trials could be delayed or halted for a period of time.

If we are unable to sufficiently develop our sales, marketing and distribution capabilities or enter into successful agreements with third parties to perform these functions, we will not be able to fully commercialize our products.

We may not be successful in marketing and promoting our approved product, *Hylenex* recombinant, or any other products we develop or acquire in the future. Our sales, marketing and distribution capabilities are very limited. In order to commercialize any products successfully, we must internally develop substantial sales, marketing and distribution capabilities or establish collaborations or other arrangements with third parties to perform these services. We do not have extensive experience in these areas, and we may not be able to establish adequate in-house sales, marketing and distribution capabilities or engage and effectively manage relationships with third parties to perform any or all of such services. To the extent that we enter into co-promotion or other licensing arrangements, our product revenues are likely to be lower than if we directly marketed and sold our products, and any revenues we receive will depend upon the efforts of third parties, whose efforts may not meet our expectations or be successful. These third parties would be largely responsible for the speed and scope of sales and marketing efforts, and may not dedicate the resources necessary to maximize product opportunities. Our ability to cause these third parties to increase the speed and scope of their efforts may also be limited. In addition, sales and marketing efforts could be negatively impacted by the delay or failure to obtain additional supportive clinical trial data for our products. In some cases, third party collaborators are responsible for conducting these additional clinical trials, and our ability to increase the efforts and resources allocated to these trials may be limited.

If we or our collaborators fail to comply with regulatory requirements applicable to promotion, sale and manufacturing of approved products, regulatory agencies may take action against us or them, which could significantly harm our business.

Any approved products, along with the manufacturing processes, post-approval clinical data, labeling, advertising and promotional activities for these products, are subject to continual requirements and review by the FDA, state and foreign regulatory bodies. Regulatory authorities subject a marketed product, its manufacturer and the manufacturing facilities to continual review and periodic inspections. We, our collaborators and our respective contractors, suppliers and vendors, will be subject to ongoing regulatory requirements, including complying with regulations and laws regarding advertising, promotion and sales of drug products, required submissions of safety and other post-market information and reports, registration requirements, cGMP regulations (including requirements relating to quality control and quality assurance, as well as the corresponding maintenance of records and documentation), and the requirements regarding the distribution of samples to physicians and recordkeeping requirements. Regulatory agencies may change existing requirements or adopt new requirements or policies. We, our collaborators and our respective contractors, suppliers and vendors, may be slow to adapt or may not be able to adapt to these changes or new requirements.

In particular, regulatory requirements applicable to pharmaceutical products make the substitution of suppliers and manufacturers costly and time consuming. We have minimal internal manufacturing capabilities and are, and expect to be in the future, entirely dependent on contract manufacturers and suppliers for the manufacture of our products and for their active and other ingredients. The disqualification of these manufacturers and suppliers through their failure to comply with regulatory

requirements could negatively impact our business because the delays and costs in obtaining and qualifying alternate suppliers (if such alternative suppliers are available, which we cannot assure) could delay clinical trials or otherwise inhibit our ability to bring approved products to market, which would have a material adverse effect on our business and financial condition. Likewise, if we, our collaborators and our respective contractors, suppliers and vendors involved in sales and promotion of our products do not comply with applicable laws and regulations, for example off-label or false or misleading promotion, this could materially harm our business and financial condition.

Failure to comply with regulatory requirements may result in any of the following:

- restrictions on our products or manufacturing processes;
- warning letters;
- withdrawal of the products from the market;
- voluntary or mandatory recall;
- fines;
- suspension or withdrawal of regulatory approvals;
- suspension or termination of any of our ongoing clinical trials;
- refusal to permit the import or export of our products;
- refusal to approve pending applications or supplements to approved applications that we submit;
- product seizure;
- injunctions; or
- imposition of civil or criminal penalties.

We currently have significant debt and failure by us to fulfill our obligations under the applicable loan agreements may cause the repayment obligations to accelerate.

In December 2015, our subsidiaries, Halozyme, Inc. (Halozyme) and Halozyme Royalty LLC (Halozyme Royalty) entered into a credit agreement (the Credit Agreement) with BioPharma Credit Investments IV Sub, LP and Athyrium Opportunities II Acquisition LP (the Royalty-backed Lenders) pursuant to which we borrowed $150 million through Halozyme Royalty (the Royalty-backed Loan). The Royalty-backed Loan will be repaid primarily from a specified percentage of the royalty payments we receive under our collaboration agreements with Roche and Baxalta (the Royalty Payments).

The obligations of Halozyme Royalty under the Credit Agreement to repay the Royalty-backed Loan may be accelerated upon the occurrence of certain events of default under the Credit Agreement, including but not limited to:

- if any payment of principal is not made within three days of when such payment is due and payable or otherwise made in accordance with the terms of the Credit Agreement;
- if any representations or warranties made in the Credit Agreement or any other transaction document proves to be incorrect or misleading in any material respect when made;
- if there occurs a default in the performance of affirmative and negative covenants set forth in the Credit Agreement or any other transaction document;
- the failure by either Baxalta or Roche to pay material amounts owed under our collaboration agreements because of an actual breach or default by us under the collaboration agreements;
- the voluntary or involuntary commencement of bankruptcy proceedings by either Halozyme or Halozyme Royalty and other insolvency related defaults;
- any materially adverse effect on the binding nature of any of the transaction documents or the collaboration agreements with Baxalta and Roche; or
- Halozyme ceases to own, of record and beneficially, 100% of the equity interests in Halozyme Royalty.

The Credit Agreement also contains covenants applicable to Halozyme and Halozyme Royalty, including certain visitation, information and audits rights granted to the collateral agent and the lenders and restrictions on the conduct of business, including continued compliance with the Baxalta and Roche collaboration agreements and specified affirmative actions regarding the escrow account established to facilitate payment of Royalty Payments to the Royalty-backed Lenders or other specified parties. The Credit Agreement also contains covenants solely applicable to Halozyme Royalty, including restrictions on incurring indebtedness, creating or granting liens, making acquisitions and making specified restricted payments. These covenants could make it more difficult for us to execute our business strategy.

In connection with the Royalty-backed Loan, Halozyme Royalty granted a first priority lien and security interest (subject only to permitted liens) in all of its assets and all real, intangible and personal property, including all of its right, title and interest in and to the Royalty Payments.

In December 2013, we entered into an Amended and Restated Loan and Security Agreement (the Loan Agreement) with Oxford Finance LLC (Oxford) and Silicon Valley Bank (SVB) (collectively, the Lenders), amending and restating in its entirety

our original loan agreement with the Lenders, dated December 2012. The Loan Agreement provided for an additional $20 million principal amount of new term loan, bringing the total term loan balance to $50 million. The proceeds are to be used for working capital and general business requirements. In January 2015, we entered into the Second Amendment to the Amended and Restated Loan and Security Agreement and First Amendment to Disbursement Letter (the Amendment) with the Lenders, amending and restating the loan payment schedules of the Amended and Restated Loan and Security Agreement. The amended and restated term loan repayment schedule provides for interest only payments through January 2016, followed by consecutive equal monthly payments of principal and interest in arrears starting in February 2016 and continuing through the previously established maturity date of January 2018. The amended and restated term loan facility is secured by substantially all of the assets of the Company and its subsidiary, Halozyme, Inc., except that the collateral does not include any equity interests in Halozyme, Inc., any intellectual property (including all licensing, collaboration and similar agreements relating thereto), and certain other excluded assets. The Loan Agreement contains customary representations, warranties and covenants by us, which covenants limit our ability to convey, sell, lease, transfer, assign or otherwise dispose of certain of our assets; engage in any business other than the businesses currently engaged in by us or reasonably related thereto; liquidate or dissolve; make certain management changes; undergo certain change of control events; create, incur, assume, or be liable with respect to certain indebtedness; grant certain liens; pay dividends and make certain other restricted payments; make certain investments; make payments on any subordinated debt; and enter into transactions with any of our affiliates outside of the ordinary course of business or permit our subsidiaries to do the same. In addition, subject to certain exceptions, we are required to maintain with SVB our primary deposit accounts, securities accounts and commodities, and to do the same for our domestic subsidiary. Complying with these covenants may make it more difficult for us to successfully execute our business strategy.

The Loan Agreement also contains customary indemnification obligations and customary events of default, including, among other things, our failure to fulfill certain of our obligations under the Loan Agreement and the occurrence of a material adverse change which is defined as a material adverse change in our business, operations or condition (financial or otherwise), a material impairment of the prospect of repayment of any portion of the loan, or a material impairment in the perfection or priority of lender's lien in the collateral or in the value of such collateral.

Our ability to make payments on our debt will depend on our future operating performance and ability to generate cash and may also depend on our ability to obtain additional debt or equity financing. We will need to use cash to pay principal and interest on our debt, thereby reducing the funds available to fund our research and development programs, strategic initiatives and working capital requirements. If we are unable to generate sufficient cash to service our debt obligation, an event of default may occur. In the event of default by us under the Credit Agreement or the Loan Agreement, the lenders would be entitled to exercise their remedies thereunder, including the right to accelerate the debt, upon which we may be required to repay all amounts then outstanding under the Credit Agreement or the Loan Agreement which could harm our financial condition.

If proprietary or collaboration product candidates are approved for marketing but do not gain market acceptance, our business may suffer and we may not be able to fund future operations.

Assuming that our proprietary or collaboration product candidates obtain the necessary regulatory approvals for commercial sale, a number of factors may affect the market acceptance of these existing product candidates or any other products which are developed or acquired in the future, including, among others:

- the price of products relative to other therapies for the same or similar treatments;
- the perception by patients, physicians and other members of the health care community of the effectiveness and safety of these products for their prescribed treatments relative to other therapies for the same or similar treatments;
- our ability to fund our sales and marketing efforts and the ability and willingness of our collaborators to fund sales and marketing efforts;
- the degree to which the use of these products is restricted by the approved product label;
- the effectiveness of our sales and marketing efforts and the effectiveness of the sales and marketing efforts of our collaborators;
- the introduction of generic competitors; and
- the extent to which reimbursement for our products and related treatments will be available from third party payors including government insurance programs (Medicare and Medicaid) and private insurers.

If these products do not gain market acceptance, we may not be able to fund future operations, including the development or acquisition of new product candidates and/or our sales and marketing efforts for our approved products, which would cause our business to suffer.

In addition, our proprietary and collaboration product candidates will be restricted to the labels approved by FDA and applicable regulatory bodies, and these restrictions may limit the marketing and promotion of the ultimate products. If the approved labels are restrictive, the sales and marketing efforts for these products may be negatively affected.

Developing and marketing pharmaceutical products for human use involves significant product liability risks for which we currently have limited insurance coverage.

The testing, marketing and sale of pharmaceutical products involves the risk of product liability claims by consumers and other third parties. Although we maintain product liability insurance coverage, product liability claims can be high in the pharmaceutical industry, and our insurance may not sufficiently cover our actual liabilities. If product liability claims were to be made against us, it is possible that the liabilities may exceed the limits of our insurance policy, or our insurance carriers may deny, or attempt to deny, coverage in certain instances. If a lawsuit against us is successful, then the lack or insufficiency of insurance coverage could materially and adversely affect our business and financial condition. Furthermore, various distributors of pharmaceutical products require minimum product liability insurance coverage before purchase or acceptance of products for distribution. Failure to satisfy these insurance requirements could impede our ability to achieve broad distribution of our proposed products, and higher insurance requirements could impose additional costs on us. In addition, since many of our collaboration product candidates include the pharmaceutical products of a third party, we run the risk that problems with the third party pharmaceutical product will give rise to liability claims against us.

Our inability to attract, hire and retain key management and scientific personnel could negatively affect our business.

Our success depends on the performance of key management and scientific employees with relevant experience. For example, in order to pursue our current business strategy, we will need to recruit and retain personnel experienced in oncology drug development which is a highly competitive market for talent. We depend substantially on our ability to hire, train, motivate and retain high quality personnel, especially our scientists and management team. Particularly in view of the small number of employees on our staff to cover our numerous programs and key functions, if we are unable to retain existing personnel or identify or hire additional personnel, we may not be able to research, develop, commercialize or market our products and product candidates as expected or on a timely basis and we may not be able to adequately support current and future alliances with strategic collaborators.

Furthermore, if we were to lose key management personnel, we would likely lose some portion of our institutional knowledge and technical know-how, potentially causing a substantial delay in one or more of our development programs until adequate replacement personnel could be hired and trained. We currently have a severance policy applicable to all employees and a change in control policy applicable to senior executives.

We do not have key man life insurance policies on the lives of any of our employees.

Our operations might be interrupted by the occurrence of a natural disaster or other catastrophic event.

Our operations, including laboratories, offices and other research facilities, are located in four buildings in San Diego, California. In addition, we have a satellite office in South San Francisco, California. We depend on our facilities and on our collaborators, contractors and vendors for the continued operation of our business. Natural disasters or other catastrophic events, interruptions in the supply of natural resources, political and governmental changes, wildfires and other fires, floods, explosions, actions of animal rights activists, earthquakes and civil unrest could disrupt our operations or those of our collaborators, contractors and vendors. Even though we believe we carry commercially reasonable business interruption and liability insurance, and our contractors may carry liability insurance that protect us in certain events, we may suffer losses as a result of business interruptions that exceed the coverage available under our and our contractors' insurance policies or for which we or our contractors do not have coverage. Any natural disaster or catastrophic event could have a significant negative impact on our operations and financial results. Moreover, any such event could delay our research and development programs.

If we or our collaborators do not achieve projected development, clinical, regulatory or sales goals in the timeframes we publicly announce or otherwise expect, the commercialization of our products and the development of our product candidates may be delayed and, as a result, our stock price may decline, and we may face lawsuits relating to such declines.

From time to time, we or our collaborators may publicly articulate the estimated timing for the accomplishment of certain scientific, clinical, regulatory and other product development goals. The accomplishment of any goal is typically based on numerous assumptions, and the achievement of a particular goal may be delayed for any number of reasons both within and outside of our control. If scientific, regulatory, strategic or other factors cause us to not meet a goal, regardless of whether that goal has been publicly articulated or not, our stock price may decline rapidly. For example, the announcement in April 2014 of the temporary halting of our Phase 2 clinical trial for PEGPH20 caused a rapid decline in our stock price. Stock price declines may also trigger direct or derivative shareholder lawsuits. As with any litigation proceeding, the eventual outcome of any legal action is difficult to predict. If any such lawsuits occur, we will incur expenses in connection with the defense of these lawsuits, and we may have to pay substantial damages or settlement costs in connection with any resolution thereof. Although we have insurance coverage

against which we may claim recovery against some of these expenses and costs, the amount of coverage may not be adequate to cover the full amount or certain expenses and costs may be outside the scope of the policies we maintain. In the event of an adverse outcome or outcomes, our business could be materially harmed from depletion of cash resources, negative impact on our reputation, or restrictions or changes to our governance or other processes that may result from any final disposition of the lawsuit. Moreover, responding to and defending pending litigation significantly diverts management's attention from our operations.

In addition, the consistent failure to meet publicly announced milestones may erode the credibility of our management team with respect to future milestone estimates.

Future acquisitions could disrupt our business and harm our financial condition.

In order to augment our product pipeline or otherwise strengthen our business, we may decide to acquire additional businesses, products and technologies. As we have limited experience in evaluating and completing acquisitions, our ability as an organization to make such acquisitions is unproven. Acquisitions could require significant capital infusions and could involve many risks, including, but not limited to, the following:

- we may have to issue convertible debt or equity securities to complete an acquisition, which would dilute our stockholders and could adversely affect the market price of our common stock;
- an acquisition may negatively impact our results of operations because it may require us to amortize or write down amounts related to goodwill and other intangible assets, or incur or assume substantial debt or liabilities, or it may cause adverse tax consequences, substantial depreciation or deferred compensation charges;
- we may encounter difficulties in assimilating and integrating the business, products, technologies, personnel or operations of companies that we acquire;
- certain acquisitions may impact our relationship with existing or potential collaborators who are competitive with the acquired business, products or technologies;
- acquisitions may require significant capital infusions and the acquired businesses, products or technologies may not generate sufficient value to justify acquisition costs;
- we may take on liabilities from the acquired company such as debt, legal liabilities or business risk which could be significant;
- an acquisition may disrupt our ongoing business, divert resources, increase our expenses and distract our management;
- acquisitions may involve the entry into a geographic or business market in which we have little or no prior experience; and
- key personnel of an acquired company may decide not to work for us.

If any of these risks occurred, it could adversely affect our business, financial condition and operating results. There is no assurance that we will be able to identify or consummate any future acquisitions on acceptable terms, or at all. If we do pursue any acquisitions, it is possible that we may not realize the anticipated benefits from such acquisitions or that the market will not view such acquisitions positively.

Security breaches may disrupt our operations and harm our operating results.

The wrongful use, theft, deliberate sabotage or any other type of security breach with respect to any of our information technology storage and access systems could result in the disruption of our ability to use such systems or disclosure or dissemination of our proprietary and confidential information that is electronically stored, including research or clinical data, resulting in a material adverse impact on our business, operating results and financial condition. Our security and data recovery measures may not be adequate to protect against computer viruses, break-ins, and similar disruptions from unauthorized tampering with our electronic storage systems. Furthermore, any physical break-in or trespass of our facilities could result in the misappropriation, theft, sabotage or any other type of security breach with respect to our proprietary and confidential information, including research or clinical data or damage to our research and development equipment and assets. Such adverse effects could be material and irrevocable to our business, operating results and financial condition.

Risks Related To Ownership of Our Common Stock

Our stock price is subject to significant volatility.

We participate in a highly dynamic industry which often results in significant volatility in the market price of common stock irrespective of company performance. As a result, the high and low sales prices of our common stock during the twelve months ended December 31, 2015 were $25.25 and $9.47, respectively. We expect our stock price to continue to be subject to significant volatility and, in addition to the other risks and uncertainties described elsewhere in this Annual Report on Form 10-K and all other risks and uncertainties that are either not known to us at this time or which we deem to be immaterial, any of the following factors may lead to a significant drop in our stock price:

- the presence of competitive products to those being developed by us;
- failure (actual or perceived) of our collaborators to devote attention or resources to the development or commercialization of product candidates licensed to such collaborator;
- a dispute regarding our failure, or the failure of one of our third party collaborators, to comply with the terms of a collaboration agreement;
- the termination, for any reason, of any of our collaboration agreements;
- the sale of common stock by any significant stockholder, including, but not limited to, direct or indirect sales by members of management or our Board of Directors;
- the resignation, or other departure, of members of management or our Board of Directors;
- general negative conditions in the healthcare industry;
- general negative conditions in the financial markets;
- the cost associated with obtaining regulatory approval for any of our proprietary or collaboration product candidates;
- the failure, for any reason, to secure or defend our intellectual property position;
- for those products that are not yet approved for commercial sale, the failure or delay of applicable regulatory bodies to approve such products;
- identification of safety or tolerability issues;
- failure of clinical trials to meet efficacy endpoints;
- suspensions or delays in the conduct of clinical trials or securing of regulatory approvals;
- adverse regulatory action with respect to our and our collaborators' products and product candidates such as clinical holds, imposition of onerous requirements for approval or product recalls;
- our failure, or the failure of our third party collaborators, to successfully commercialize products approved by applicable regulatory bodies such as the FDA;
- our failure, or the failure of our third party collaborators, to generate product revenues anticipated by investors;
- disruptions in our clinical or commercial supply chains, including disruptions caused by problems with a bulk rHuPH20 contract manufacturer or a fill and finish manufacturer for any product or product candidate;
- the sale of additional debt and/or equity securities by us;
- our failure to obtain financing on acceptable terms or at all; or
- a restructuring of our operations.

Future transactions where we raise capital may negatively affect our stock price.

We are currently a "Well-Known Seasoned Issuer" and may file automatic shelf registration statements at any time with the SEC. Sales of substantial amounts of shares of our common stock or other securities under our shelf registration statements could lower the market price of our common stock and impair our ability to raise capital through the sale of equity securities. In the future, we may issue additional options, warrants or other derivative securities convertible into our common stock.

Our rights agreement and anti-takeover provisions in our charter documents and Delaware law may make an acquisition of us more difficult.

We are party to a Rights Agreement designed to deter abusive takeover tactics and to encourage prospective acquirers to negotiate with our board of directors rather than attempt to acquire us in a manner or on terms that our board deems unacceptable, which could delay or discourage takeover attempts that stockholders may consider favorable.

In addition, anti-takeover provisions in our charter documents and Delaware law may make an acquisition of us more difficult. First, our board of directors is classified into three classes of directors. Under Delaware law, directors of a corporation with a classified board may be removed only for cause unless the corporation's certificate of incorporation provides otherwise. Our amended and restated certificate of incorporation, as amended, does not provide otherwise. In addition, our bylaws limit who may call special meetings of stockholders, permitting only stockholders holding at least 50% of our outstanding shares to call a special meeting of stockholders. Our amended and restated certificate of incorporation, as amended, does not include a provision for cumulative voting for directors. Under cumulative voting, a minority stockholder holding a sufficient percentage of a class of

shares may be able to ensure the election of one or more directors. Finally, our bylaws establish procedures, including advance notice procedures, with regard to the nomination of candidates for election as directors and stockholder proposals.

These provisions may discourage potential takeover attempts, discourage bids for our common stock at a premium over market price or adversely affect the market price of, and the voting and other rights of the holders of, our common stock. These provisions could also discourage proxy contests and make it more difficult for stockholders to elect directors other than the candidates nominated by our board of directors.

In addition, because we are incorporated in Delaware, we are governed by the provisions of Section 203 of the Delaware General Corporation Law, which may prohibit large stockholders from consummating a merger with, or acquisition of, us.

These provisions may deter an acquisition of us that might otherwise be attractive to stockholders.

Risks Related to Our Industry

Our products must receive regulatory approval before they can be sold, and compliance with the extensive government regulations is expensive and time consuming and may result in the delay or cancellation of product sales, introductions or modifications.

Extensive industry regulation has had, and will continue to have, a significant impact on our business. All pharmaceutical companies, including ours, are subject to extensive, complex, costly and evolving regulation by the health regulatory agencies including the FDA (and with respect to controlled drug substances, the U.S. Drug Enforcement Administration (DEA)) and equivalent foreign regulatory agencies and state and local/regional government agencies. The Federal Food, Drug and Cosmetic Act, the Controlled Substances Act and other domestic and foreign statutes and regulations govern or influence the testing, manufacturing, packaging, labeling, storing, recordkeeping, safety, approval, advertising, promotion, sale and distribution of our products. We are dependent on receiving FDA and other governmental approvals, including regulatory approvals in jurisdictions outside the United States, prior to manufacturing, marketing and shipping our products. Consequently, there is always a risk that the FDA or other applicable governmental authorities, including those outside the United States, will not approve our products or may impose onerous, costly and time-consuming requirements such as additional clinical or animal testing. Regulatory authorities may require that we change our studies or conduct additional studies, which may significantly delay or make continued pursuit of approval commercially unattractive. For example, the approval of Baxalta's HYQVIA BLA was delayed by the FDA until we and Baxalta provided additional preclinical data sufficient to address concerns regarding non-neutralizing antibodies to rHuPH20 that were detected in the registration trial. Although these antibodies have not been associated with any known adverse clinical effects, and the HYQVIA BLA was approved by the FDA in September 2014, the FDA or other foreign regulatory agency may, at any time, halt our and our collaborators' development and commercialization activities due to safety concerns. In addition, even if our products are approved, regulatory agencies may also take post-approval action limiting or revoking our ability to sell our products. Any of these regulatory actions may adversely affect the economic benefit we may derive from our products and therefore harm our financial condition.

Under certain of these regulations, we and our contract suppliers and manufacturers are subject to periodic inspection of our or their respective facilities, procedures and operations and/or the testing of products by the FDA, the DEA and other authorities, which conduct periodic inspections to confirm that we and our contract suppliers and manufacturers are in compliance with all applicable regulations. The FDA also conducts pre-approval and post-approval reviews and plant inspections to determine whether our systems, or our contract suppliers' and manufacturers' processes, are in compliance with cGMP and other FDA regulations. If we, or our contract supplier, fail these inspections, we may not be able to commercialize our product in a timely manner without incurring significant additional costs, or at all.

In addition, the FDA imposes a number of complex regulatory requirements on entities that advertise and promote pharmaceuticals including, but not limited to, standards and regulations for direct-to-consumer advertising, off-label promotion, industry-sponsored scientific and educational activities, and promotional activities involving the internet.

We may be subject, directly or indirectly, to various broad federal and state healthcare laws. If we are unable to comply, or have not fully complied, with such laws, we could face civil, criminal and administrative penalties, damages, monetary fines, disgorgement, possible exclusion from participation in Medicare, Medicaid and other federal healthcare programs, contractual damages, reputational harm, diminished profits and future earnings and curtailment or restructuring of our operations, any of which could adversely affect our ability to operate.

Our business operations and activities may be directly, or indirectly, subject to various broad federal and state healthcare laws, including without limitation, anti-kickback laws, the Foreign Corrupt Practices Act, false claims laws, civil monetary penalty laws, data privacy and security laws, tracing and tracking laws, as well as transparency laws regarding payments or other items of value provided to healthcare providers. These laws may restrict or prohibit a wide range of business activities, including, but not limited to, research, manufacturing, distribution, pricing, discounting, marketing and promotion and other business

arrangements. These laws may impact, among other things, our current activities with principal investigators and research subjects, as well as sales, marketing and education programs. Many states have similar healthcare fraud and abuse laws, some of which may be broader in scope and may not be limited to items or services for which payment is made by a government health care program.

Efforts to ensure that our business arrangements will comply with applicable healthcare laws may involve substantial costs. While we have adopted a healthcare corporate compliance program, it is possible that governmental and enforcement authorities will conclude that our business practices may not comply with current or future statutes, regulations or case law interpreting applicable fraud and abuse or other healthcare laws. If our operations or activities are found to be in violation of any of the laws described above or any other governmental regulations that apply to us, we may be subject to, without limitation, civil, criminal and administrative penalties, damages, monetary fines, disgorgement, possible exclusion from participation in Medicare, Medicaid and other federal healthcare programs, contractual damages, reputational harm, diminished profits and future earnings and curtailment or restructuring of our operations, any of which could adversely affect our ability to operate.

In addition, any sales of products outside the U.S. will also likely subject us to foreign equivalents of the healthcare laws mentioned above, among other foreign laws.

We may be required to initiate or defend against legal proceedings related to intellectual property rights, which may result in substantial expense, delay and/or cessation of the development and commercialization of our products.

We primarily rely on patents to protect our intellectual property rights. The strength of this protection, however, is uncertain. For example, it is not certain that:

- we will be able to obtain patent protection for our products and technologies;
- the scope of any of our issued patents will be sufficient to provide commercially significant exclusivity for our products and technologies;
- others will not independently develop similar or alternative technologies or duplicate our technologies and obtain patent protection before we do; and
- any of our issued patents, or patent pending applications that result in issued patents, will be held valid, enforceable and infringed in the event the patents are asserted against others.

We currently own or license several patents and also have pending patent applications applicable to rHuPH20 and other proprietary materials. There can be no assurance that our existing patents, or any patents issued to us as a result of our pending patent applications, will provide a basis for commercially viable products, will provide us with any competitive advantages, or will not face third party challenges or be the subject of further proceedings limiting their scope or enforceability. Any weaknesses or limitations in our patent portfolio could have a material adverse effect on our business and financial condition. In addition, if any of our pending patent applications do not result in issued patents, or result in issued patents with narrow or limited claims, this could result in us having no or limited protection against generic or biosimilar competition against our product candidates which would have a material adverse effect on our business and financial condition.

We may become involved in interference proceedings in the U.S. Patent and Trademark Office, or other proceedings in other jurisdictions, to determine the priority, validity or enforceability of our patents. In addition, costly litigation could be necessary to protect our patent position.

We also rely on trademarks to protect the names of our products (e.g. *Hylenex* recombinant). We may not be able to obtain trademark protection for any proposed product names we select. In addition, product names for pharmaceutical products must be approved by health regulatory authorities such as the FDA in addition to meeting the legal standards required for trademark protection and product names we propose may not be timely approved by regulatory agencies which may delay product launch. In addition, our trademarks may be challenged by others. If we enforce our trademarks against third parties, such enforcement proceedings may be expensive.

We also rely on trade secrets, unpatented proprietary know-how and continuing technological innovation that we seek to protect with confidentiality agreements with employees, consultants and others with whom we discuss our business. Disputes may arise concerning the ownership of intellectual property or the applicability or enforceability of these agreements, and we might not be able to resolve these disputes in our favor.

In addition to protecting our own intellectual property rights, third parties may assert patent, trademark or copyright infringement or other intellectual property claims against us. If we become involved in any intellectual property litigation, we may be required to pay substantial damages, including but not limited to treble damages, attorneys' fees and costs, for past infringement if it is ultimately determined that our products infringe a third party's intellectual property rights. Even if infringement claims against us are without merit, defending a lawsuit takes significant time, may be expensive and may divert management's attention from other business concerns. Further, we may be stopped from developing, manufacturing or selling our products until we obtain

a license from the owner of the relevant technology or other intellectual property rights. If such a license is available at all, it may require us to pay substantial royalties or other fees.

Patent protection for protein-based therapeutic products and other biotechnology inventions is subject to a great deal of uncertainty, and if patent laws or the interpretation of patent laws change, our competitors may be able to develop and commercialize products based on our discoveries.

Patent protection for protein-based therapeutic products is highly uncertain and involves complex legal and factual questions. In recent years, there have been significant changes in patent law, including the legal standards that govern the scope of protein and biotechnology patents. Standards for patentability of full-length and partial genes, and their corresponding proteins, are changing. Recent court decisions have made it more difficult to obtain patents, by making it more difficult to satisfy the patentable subject matter requirement and the requirement of non-obviousness, have decreased the availability of injunctions against infringers, and have increased the likelihood of challenging the validity of a patent through a declaratory judgment action. Taken together, these decisions could make it more difficult and costly for us to obtain, license and enforce our patents. In addition, the Leahy-Smith America Invents Act (HR 1249) was signed into law in September 2011, which among other changes to the U.S. patent laws, changes patent priority from "first to invent" to "first to file," implements a post-grant opposition system for patents and provides for a prior user defense to infringement. These judicial and legislative changes have introduced significant uncertainty in the patent law landscape and may potentially negatively impact our ability to procure, maintain and enforce patents to provide exclusivity for our products.

There also have been, and continue to be, policy discussions concerning the scope of patent protection awarded to biotechnology inventions. Social and political opposition to biotechnology patents may lead to narrower patent protection within the biotechnology industry. Social and political opposition to patents on genes and proteins and recent court decisions concerning patentability of isolated genes may lead to narrower patent protection, or narrower claim interpretation, for isolated genes, their corresponding proteins and inventions related to their use, formulation and manufacture. Patent protection relating to biotechnology products is also subject to a great deal of uncertainty outside the U.S., and patent laws are evolving and undergoing revision in many countries. Changes in, or different interpretations of, patent laws worldwide may result in our inability to obtain or enforce patents, and may allow others to use our discoveries to develop and commercialize competitive products, which would impair our business.

If third party reimbursement and customer contracts are not available, our products may not be accepted in the market.

Our ability to earn sufficient returns on our products will depend in part on the extent to which reimbursement for our products and related treatments will be available from government health administration authorities, private health insurers, managed care organizations and other healthcare providers.

Third-party payors are increasingly attempting to limit both the coverage and the level of reimbursement of new drug products to contain costs. Consequently, significant uncertainty exists as to the reimbursement status of newly approved healthcare products. Third party payors may not establish adequate levels of reimbursement for the products that we commercialize, which could limit their market acceptance and result in a material adverse effect on our revenues and financial condition.

Customer contracts, such as with group purchasing organizations and hospital formularies, will often not offer contract or formulary status without either the lowest price or substantial proven clinical differentiation. If our products are compared to animal-derived hyaluronidases by these entities, it is possible that neither of these conditions will be met, which could limit market acceptance and result in a material adverse effect on our revenues and financial condition.

The rising cost of healthcare and related pharmaceutical product pricing has led to cost containment pressures that could cause us to sell our products at lower prices, resulting in less revenue to us.

Any of the proprietary or collaboration products that have been, or in the future are, approved by the FDA may be purchased or reimbursed by state and federal government authorities, private health insurers and other organizations, such as health maintenance organizations and managed care organizations. Such third party payors increasingly challenge pharmaceutical product pricing. The trend toward managed healthcare in the U.S., the growth of such organizations, and various legislative proposals and enactments to reform healthcare and government insurance programs, including the Medicare Prescription Drug Modernization Act of 2003, could significantly influence the manner in which pharmaceutical products are prescribed and purchased, resulting in lower prices and/or a reduction in demand. Such cost containment measures and healthcare reforms could adversely affect our ability to sell our products.

In March 2010, the U.S. adopted the Patient Protection and Affordable Care Act, as amended by the Health Care and Education Reconciliation Act (the Healthcare Reform Act). This law substantially changes the way healthcare is financed by both governmental and private insurers, and significantly impacts the pharmaceutical industry. The Healthcare Reform Act contains a number of provisions that are expected to impact our business and operations, in some cases in ways we cannot currently predict. Changes that may affect our business include those governing enrollment in federal healthcare programs, reimbursement changes, fraud

and abuse and enforcement. These changes will impact existing government healthcare programs and will result in the development of new programs, including Medicare payment for performance initiatives and improvements to the physician quality reporting system and feedback program.

Additional provisions of the Healthcare Reform Act may negatively affect our revenues in the future. For example, the Healthcare Reform Act imposes a non-deductible excise tax on pharmaceutical manufacturers or importers that sell branded prescription drugs to U.S. government programs that we believe will impact our revenues from our products. In addition, as part of the Healthcare Reform Act's provisions closing a funding gap that currently exists in the Medicare Part D prescription drug program, we will also be required to provide a 50% discount on branded prescription drugs dispensed to beneficiaries under this prescription drug program. We expect that the Healthcare Reform Act and other healthcare reform measures that may be adopted in the future could have a material adverse effect on our industry generally and on our ability to maintain or increase our product sales or successfully commercialize our product candidates or could limit or eliminate our future spending on development projects.

Furthermore, individual states have become increasingly aggressive in passing legislation and implementing regulations designed to control pharmaceutical product pricing, including price or patient reimbursement constraints, discounts, restrictions on certain product access, importation from other countries and bulk purchasing. Legally mandated price controls on payment amounts by third party payors or other restrictions could negatively and materially impact our revenues and financial condition. We anticipate that we will encounter similar regulatory and legislative issues in most other countries outside the U.S.

We face intense competition and rapid technological change that could result in the development of products by others that are superior to our proprietary and collaboration products under development.

Our proprietary and collaboration products have numerous competitors in the U.S. and abroad including, among others, major pharmaceutical and specialized biotechnology firms, universities and other research institutions that have developed competing products. The competitors for *Hylenex* recombinant include, but are not limited to, Valeant Pharmaceuticals International, Inc.'s FDA-approved product, Vitrase®, an ovine (ram) hyaluronidase, and Amphastar Pharmaceuticals, Inc.'s product, Amphadase®, a bovine (bull) hyaluronidase. For our PEGPH20 product candidate, such competitors may include major pharmaceutical and specialized biotechnology firms. These competitors may develop technologies and products that are more effective, safer, or less costly than our current or future proprietary and collaboration product candidates or that could render our technologies and product candidates obsolete or noncompetitive. Many of these competitors have substantially more resources and product development, manufacturing and marketing experience and capabilities than we do. In addition, many of our competitors have significantly greater experience than we do in undertaking preclinical testing and clinical trials of pharmaceutical product candidates and obtaining FDA and other regulatory approvals of products and therapies for use in healthcare.

Item 1B. ***Unresolved Staff Comments***

None.

Item 2. ***Properties***

Our administrative offices and research facilities are currently located in San Diego, California. We lease an aggregate of approximately 76,000 square feet of office and research space for a monthly rent expense of approximately $145,000, net of costs and property taxes associated with the operation and maintenance of the subleased facilities. In addition, we have a satellite office in South San Francisco, California, where we lease approximately 10,000 square feet of office space for a monthly rent expense of approximately $26,000. We believe the current space is adequate for our immediate needs.

Item 3. ***Legal Proceedings***

From time to time, we may be involved in disputes, including litigation, relating to claims arising out of operations in the normal course of our business. Any of these claims could subject us to costly legal expenses and, while we generally believe that we have adequate insurance to cover many different types of liabilities, our insurance carriers may deny coverage or our policy limits may be inadequate to fully satisfy any damage awards or settlements. If this were to happen, the payment of any such awards could have a material adverse effect on our consolidated results of operations and financial position. Additionally, any such claims, whether or not successful, could damage our reputation and business. We currently are not 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 our consolidated results of operations or financial position.

Item 4. ***Mine Safety Disclosures***

Not applicable.

PART II

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

Market Information

Our common stock is listed on the NASDAQ Global Select Market under the symbol "HALO." The following table sets forth the high and low sales prices per share of our common stock during each quarter of the two most recent fiscal years:

	2015		2014	
	High	Low	High	Low
First Quarter	$16.55	$9.47	$18.18	$11.28
Second Quarter	$22.85	$13.91	$12.97	$6.88
Third Quarter	$25.25	$12.80	$10.70	$8.58
Fourth Quarter	$18.65	$12.80	$10.00	$7.51

On February 22, 2016, the closing sales price of our common stock on the NASDAQ Global Select Market was $8.19 per share. As of February 22, 2016, we had approximately 21,000 stockholders of record and beneficial owners of our common stock.

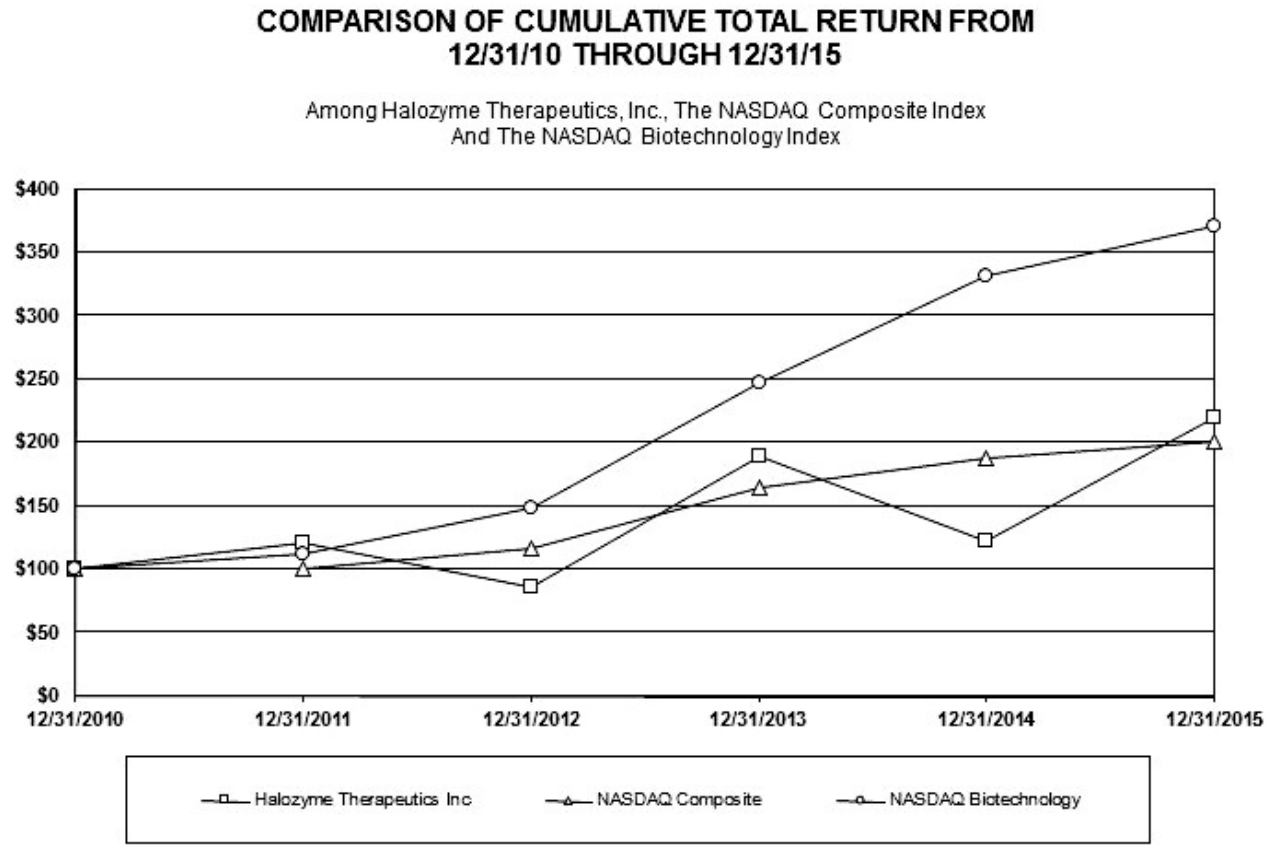
Dividends

We have never declared or paid any dividends on our common stock. We currently intend to retain available cash for funding operations; therefore, we do not expect to pay any dividends on our common stock in the foreseeable future. In addition, the provisions of our Loan Agreement limit, among other things, our ability to pay dividends and make certain other payments. Any future determination to pay dividends on our common stock will be at the discretion of our board of directors and will depend upon, among other factors, our results of operations, financial condition, capital requirements, contract restrictions, business prospects and other factors our board of directors may deem relevant.

Stock Performance Graph and Cumulative Total Return

Notwithstanding any statement to the contrary in any of our previous or future filings with the SEC, 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, or the Exchange Act, and it shall not be deemed to be incorporated by reference into any of our filings under the Securities Act of 1933, as amended, or the Exchange Act, except to the extent we specifically incorporate it by reference into such filing.

The graph below compares Halozyme Therapeutics, Inc.'s cumulative five-year total shareholder return on common stock with the cumulative total returns of the NASDAQ Composite Index and the NASDAQ Biotechnology Index. The graph tracks the performance of a $100 investment in our common stock and in each of the indexes (with the reinvestment of all dividends) from December 31, 2010 to December 31, 2015. The historical stock price performance included in this graph is not necessarily indicative of future stock price performance.



	12/31/2010	12/31/2011	12/31/2012	12/31/2013	12/31/2014	12/31/2015
Halozyme Therapeutics, Inc.	$100	$120	$85	$189	$122	$219
NASDAQ Composite	$100	$99	$116	$163	$187	$200
NASDAQ Biotechnology	$100	$112	$148	$246	$331	$370

Item 6. ***Selected Financial Data***

The selected consolidated financial data set forth below as of December 31, 2015 and 2014, and for the fiscal years ended December 31, 2015, 2014 and 2013, are derived from our audited consolidated financial statements included elsewhere in this report. This information should be read in conjunction with those consolidated financial statements, the notes thereto, and with "*Management's Discussion and Analysis of Financial Condition and Results of Operations*." The selected consolidated financial data set forth below as of December 31, 2013, 2012 and 2011, and for the fiscal years ended December 31, 2012 and 2011, are derived from our audited consolidated financial statements that are contained in reports previously filed with the SEC, not included herein.

Summary Financial Information

	Year Ended December 31,				
Statement of Operations Data:	**2015[1]**	**2014[2]**	**2013[3]**	**2012[4]**	**2011[5]**
	(in thousands, except for per share amounts)				
Total revenues	$ 135,057	$ 75,334	$ 54,799	$ 42,325	$ 56,086
Net loss	$ (32,231)	$ (68,375)	$ (83,479)	$ (53,552)	$ (19,770)
Net loss per share, basic and diluted	$ (0.25)	$ (0.56)	$ (0.74)	$ (0.48)	$ (0.19)
Shares used in computing net loss per share, basic and diluted	126,704	122,690	112,805	111,077	102,566

	As of December 31,				
Balance Sheet Data:	**2015**	**2014**	**2013**	**2012**	**2011**
			(in thousands)		
Cash and cash equivalents and available-for-sale marketable securities	$ 108,339	$ 135,623	$ 71,503	$ 99,501	$ 52,376
Working capital	$ 109,315	$ 136,990	$ 70,293	$ 111,682	$ 46,236
Total assets	$ 181,789	$ 165,977	$ 101,793	$ 134,728	$ 65,759
Deferred revenue	$ 53,223	$ 54,634	$ 53,143	$ 43,846	$ 40,884
Long-term debt, net	$ 27,971	$ 49,860	$ 49,772	$ 29,662	$ —
Total liabilities	$ 138,790	$ 124,625	$ 121,783	$ 85,875	$ 54,858
Stockholders' equity (deficit)	$ 42,999	$ 41,352	$ (19,991)	$ 48,854	$ 10,900

(1) Revenues in 2015 included $23.0 million and $25.0 million in license fees from collaboration agreements with AbbVie and Lilly, respectively.

(2) Revenues in 2014 included a $15.0 million license fee from the Janssen Collaboration.

(3) Revenues in 2013 reflected increases in supply of bulk rHuPH20 to Roche and product sales of *Hylenex* recombinant, which was relaunched in December 2011.

(4) Revenues in 2012 included $9.5 million in license fees from the Pfizer Collaboration.

(5) Revenues in 2011 included $18.0 million in license fees from collaboration agreements with ViroPharma Incorporated and Intrexon Corporation and $18.1 million related to recognition of unamortized deferred prepaid product-based payments and unamortized deferred upfront payment in connection with the termination of the collaboration with Baxalta for the marketing rights of *Hylenex* recombinant in July 2011.

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

In addition to historical information, the following discussion contains forward-looking statements that are subject to risks and uncertainties. Actual results may differ substantially from those referred to herein due to a number of factors, including but not limited to risks described in the Part I, Item 1A, Risks Factors, and elsewhere in this Annual Report. References to "Notes" are Notes included in our Notes to Consolidated Financial Statements.

Overview

Halozyme Therapeutics, Inc. is a biotechnology company focused on developing and commercializing novel oncology therapies. We are seeking to translate our unique knowledge of the tumor microenvironment to create therapies that can improve cancer survival. Our research primarily focuses on human enzymes that alter the extracellular matrix and tumor microenvironment. The extracellular matrix is a complex matrix of proteins and carbohydrates surrounding the cell that provides structural support in tissues and orchestrates many important biological activities, including cell migration, signaling and survival. Over many years, we have developed unique technology and scientific expertise enabling us to pursue this target-rich environment for the development of therapies.

Our proprietary enzymes are used to facilitate the delivery of injected drugs and fluids, potentially enhancing the efficacy and the convenience of other drugs or to alter tissue structures for potential clinical benefit. We exploit our technology and expertise using a two pillar strategy that we believe enables us to manage risk and cost by: (1) developing our own proprietary products in therapeutic areas with significant unmet medical needs, with a focus on oncology, and (2) licensing our technology to biopharmaceutical companies to collaboratively develop products that combine our technology with the collaborators' proprietary compounds.

The majority of our approved product and product candidates are based on rHuPH20, our patented recombinant human hyaluronidase enzyme. rHuPH20 is the active ingredient in our first commercially approved product, *Hylenex*® recombinant, and it works by temporarily breaking down hyaluronan (or HA), a naturally occurring substance that is a major component of the extracellular matrix in tissues throughout the body such as skin and cartilage. We believe this temporary degradation creates an opportunistic window for the improved subcutaneous delivery of injectable biologics, such as monoclonal antibodies and other large therapeutic molecules, as well as small molecules and fluids. We refer to the application of rHuPH20 to facilitate the delivery of other drugs or fluids as our ENHANZE™ Technology. We license the ENHANZE Technology to form collaborations with biopharmaceutical companies that develop or market drugs requiring or benefiting from injection via the subcutaneous route of administration.

We currently have ENHANZE collaborations with F. Hoffmann-La Roche, Ltd. and Hoffmann-La Roche, Inc. (Roche), Baxalta US Inc. and Baxalta GmbH (Baxalta), Pfizer Inc. (Pfizer), Janssen Biotech, Inc. (Janssen), AbbVie, Inc. (AbbVie), and Eli Lilly and Company (Lilly). We receive royalties from two of these collaborations, including royalties from sales of one product approved in the United States and outside the United States from the Baxalta collaboration and from sales of two products approved for marketing outside the United States from the Roche collaboration. Future potential revenues from the sales and/or royalties of our approved products, product candidates, and ENHANZE collaborations will depend on the ability of Halozyme and our collaborators to develop, manufacture, secure and maintain regulatory approvals for approved products and product candidates and commercialize product candidates.

Our proprietary development pipeline consists of a clinical stage product candidate in oncology and research-stage oncology projects. Our lead oncology program is PEGPH20 (PEGylated recombinant human hyaluronidase), a molecular entity we are developing for the systemic treatment of tumors that accumulate HA. When HA accumulates in a tumor, it can cause higher pressure in the tumor, reducing blood flow into the tumor and with that, reduced access of cancer therapies to the tumor. PEGPH20 works by temporarily degrading HA surrounding cancer cells resulting in reduced pressure and increased blood flow to the tumor thereby enabling increased amounts of anticancer treatments administered concomitantly gaining access to the tumor. We are currently in Phase 2 and Phase 3 clinical testing for PEGPH20 in stage IV PDA (Studies 109-202 and 109-301), in Phase 1b clinical testing in non-small cell lung cancer (Study 107-201) and in Phase 1b clinical testing in non-small cell lung cancer and gastric cancer (Study 107-101).

Our 2015 and recent key accomplishments and events are as follows:

- In the first quarter of 2016, we initiated the Phase 3 study of PEGPH20 (Halozyme Study 301) in previously untreated stage IV PDA patients. Dosing of the first patient is planned to occur by the end of March 2016.
- In February 2016, we completed enrollment of 133 patients in Halozyme Study 202 and project to present mature PFS results of Stage 2 of the study in the fourth quarter of 2016.
- In February 2016, our partner Ventana filed an IDE with the FDA for the companion diagnostic test we co-developed to prospectively identify patients with high levels of HA.

- In February 2016, Pfizer dosed the first patient in the Phase 1 clinical trial evaluating subcutaneous delivery of bococizumab, an investigational PCSK9 inhibitor developed by Pfizer, with ENHANZE Technology.
- In January 2016, through our subsidiary, Halozyme Royalty LLC (Halozyme Royalty), we received a $150.0 million loan secured by future royalties received from our collaborations with Roche and Baxalta.
- In January 2016, AbbVie dosed the first patient in the Phase 1 clinical trial evaluating subcutaneous delivery of adalimumab (HUMIRA®) with ENHANZE Technology.
- In December 2015, we entered into a collaboration and license agreement with Lilly, under which Lilly has the worldwide license to develop and commercialize products combining our ENHANZE Technology with Lilly proprietary biologics directed to up to five targets. Targets may be selected on an exclusive basis. We received $25.0 million for the license with two specified targets.
- In November 2015, we finalized our assay methodology and pathology-based scoring algorithm with Ventana for our affinity-histochemistry companion diagnostic.
- In November 2015, we announced the dosing of the first patient in a Phase 1b clinical trial of PEGPH20 in combination with Merck's immuno-oncology drug KEYTRUDA (pembrolizumab) for patients with advanced non-small cell lung and gastric cancers.
- In November 2015, Janssen dosed the first patient in a Phase 1b clinical trial evaluating subcutaneous delivery of daratumumab (DARZALEX®) with ENHANZE Technology in multiple myeloma.
- In October 2015, Pfizer dosed the first patient in the Phase 1 clinical trial evaluating subcutaneous delivery of rivipansel with our ENHANZE Technology for the treatment of individuals with vaso-occlusive crisis of sickle cell disease.
- In July 2015, we entered into a clinical collaboration agreement with Eisai Co. Ltd. (Eisai) to evaluate Eisai's agent eribulin mesylate Halaven® (eribulin) in combination with PEGPH20 in first line HER2-negative HA-high metastatic breast cancer patients.
- In June 2015, we entered into a collaboration and license agreement with AbbVie, under which AbbVie has the worldwide license to develop and commercialize products combining our ENHANZE Technology with AbbVie proprietary biologics directed to up to nine targets. Targets may be selected on an exclusive basis. We received $23.0 million for the license with one specified target, HUMIRA.
- In May 2015, we entered into a global collaboration agreement with Ventana, a member of the Roche Group, to collaborate on the development of, and for Ventana to ultimately commercialize, a companion diagnostic assay for use with PEGPH20. The Ventana assay will be used to identify high levels of HA. Under the agreement, Ventana will develop an in vitro diagnostic (IVD), under design control, using our proprietary HA binding protein, with the intent of submitting it for regulatory approval in the United States, Europe and other countries.
- In January 2015, we disclosed initial efficacy and safety data from an interim assessment of Stage 1 of Study 109-202, a Phase 2 multicenter, randomized clinical trial evaluating PEGPH20 as a first-line therapy for patients with stage IV PDA. We also presented the final results from Study 109-201, a multi-center, international open label dose escalation Phase 1b clinical study of PEGPH20 in combination with gemcitabine for the treatment of patients with stage IV PDA at the 2015 Gastrointestinal Cancers Symposium (also known as ASCO-GI meeting).

Results of Operations

Comparison of Years Ended December 31, 2015, 2014 and 2013

Product Sales, Net — Product sales increased in 2015 compared to 2014 by $8.3 million, or 22%, primarily due to the sale of bulk rHuPH20 to Baxalta of $6.4 million in 2015, compared to no sales in 2014, and a $2.9 million increase in product sales of *Hylenex* recombinant, which increased to $16.1 million in 2015 from $13.2 million in 2014. Product sales increased in 2014 compared to 2013 by $13.4 million, or 55%, primarily due to a $9.8 million increase in product sales of bulk rHuPH20 to Roche and a $4.1 million increase in product sales of *Hylenex* recombinant. Prior to the receipt of the European marketing approval of Roche's Herceptin SC product in August 2013 and MabThera SC product in March 2014, and Baxalta's HYQVIA product in May 2013, revenue from bulk rHuPH20 supply for these collaboration products was recorded as revenues under collaborative agreements instead of product sales revenue.

Revenues Under Collaborative Agreements — Revenues under collaborative agreements for the years ended December 31, 2015, 2014 and 2013 were as follows (in thousands):

	2015	Change	2014	Change	2013
Upfront payments, license maintenance fees and amortization of deferred upfront, license fees and product-based payments:					
Lilly	$25,000	n/a	$ —	n/a	$ —
AbbVie	23,000	n/a	—	n/a	—
Roche	3,269	8%	3,028	31%	2,308
Pfizer	2,000	100%	1,000	(33%)	1,500
Baxalta	765	0%	765	27%	604
Janssen	—	(100)%	15,000	n/a	—
Other	—	n/a	—	(100%)	2,000
	54,034	173%	19,793	209%	6,412
Reimbursements for research and development services:					
Roche[(1)]	2,556	(63%)	6,923	(64%)	19,086
Janssen	834	n/a	—	n/a	—
Baxalta[(1)]	292	(76%)	1,209	(70%)	4,059
Other	284	76%	161	(79%)	770
	3,966	(52%)	8,293	(65%)	23,915
Total revenues under collaborative agreements	$58,000	107%	$28,086	(7%)	$30,327

(1) Subsequent to the European approvals of Roche's Herceptin SC product in August 2013 and MabThera SC product in March 2014 and Baxalta's HYQVIA product in May 2013, revenue from supply of bulk rHuPH20 for those products to the collaborators was recorded as product sales.

In 2015, we recognized $25.0 million in license fee revenue in connection with the Lilly Collaboration and $23.0 million in license fee revenue in connection with the AbbVie Collaboration. In 2014, we recognized $15.0 million in license fee revenue in connection with the Janssen Collaboration. Revenue from reimbursements for research and development services and bulk rHuPh20 supply decreased in 2015 compared to 2014 mainly due to a reduction in services provided to Roche compared to the same period in 2014. Revenue from reimbursements for research and development services and bulk rHuPh20 supply decreased in 2014 compared to 2013 mainly due to revenue from supply of bulk rHuPH20 for Roche collaboration products being recognized as product sales revenue in 2014, as opposed to revenue from reimbursements for research and development services in the same period in 2013. The decrease was also due to a decrease in reimbursements for manufacturing services to support the launches by Roche and Baxalta. Research and development services rendered by us on behalf of our collaborators are at the request of the collaborators; therefore, the amount of future revenues related to reimbursable research and development services is uncertain. We expect the non-reimbursement revenues under our collaborative agreements to continue to fluctuate in future periods based on our collaborators' abilities to meet various clinical and regulatory milestones set forth in such agreements and our abilities to obtain new collaborative agreements.

Royalties – Royalty revenue was $31.0 million in 2015 compared to $9.4 million in 2014 and $33,000 in 2013. The increase relates primarily to increased sales of Herceptin SC by Roche since the launch of Herceptin SC in September 2013. We recognize royalties on sales of the collaboration products by the collaborators in the quarter following the quarter in which the corresponding sales occurred. In general, we expect royalty revenue to increase in future periods reflecting expected increases in sales of collaboration products, although there may be periods with flat or declining royalty revenue as sales of products under collaborations vary.

Cost of Product Sales — Cost of product sales increased in 2015 compared to 2014 by $6.5 million, or 29%, primarily due to the increased product sales of bulk rHuPH20 for HYQVIA. Cost of product sales increased in 2014 compared to 2013 by $16.5 million, or 264%, primarily due to the increased product sales of bulk rHuPH20 for Herceptin SC.

Prior to European marketing approvals of Roche's collaboration products, Herceptin SC in August 2013 and MabThera SC in March 2014, and Baxalta's collaboration HYQVIA product in May 2013, all costs related to the manufacturing of bulk rHuPH20 for these collaboration products were charged to research and development expenses in the periods such costs were incurred. Therefore, cost of product sales of bulk rHuPH20 for these collaboration products in 2013 was materially reduced due to the exclusion of those manufacturing costs that were charged to research and development expenses in the periods prior to receiving marketing approvals.

Cost of product sales of bulk rHuPH20 for collaboration products in 2014 excluded $1.0 million in manufacturing costs, of which $0.9 million and $0.1 million were charged to research and development expenses for 2013 and 2012, respectively. Cost of product sales of bulk rHuPH20 for collaboration products in 2013 excluded $10.0 million in manufacturing costs, of which $9.0 million and $1.0 million were charged to research and development expenses in 2013 and 2012, respectively. The estimated selling price of the zero-cost inventory of bulk rHuPH20 for Herceptin SC on hand as of December 31, 2013, was approximately $1.3 million. We sold all of this inventory in 2014. In 2015, the cost of product sales of bulk rHuPH20 was approximately 81% of bulk rHuPH20 product sales revenue.

Research and Development — Research and development expenses consist of external costs, salaries and benefits and allocation of facilities and other overhead expenses related to research manufacturing, clinical trials, preclinical and regulatory activities. Research and development expenses incurred for the years ended December 31, 2015, 2014 and 2013 were as follows (in thousands):

	2015	Change	2014	Change	2013
Programs					
Product Candidates:					
PEGPH20	$ 75,616	117 %	$ 34,857	86 %	$ 18,742
Ultrafast insulin program	1,634	(93)%	22,424	(9)%	24,723
Hylenex recombinant	1,468	(72)%	5,318	(50)%	10,734
ENHANZE collaborations[(1)]	3,181	(53)%	6,799	(78)%	31,104
rHuPH20 platform[(2)]	7,333	26 %	5,807	(1)%	5,895
HTI-501	5	(100)%	1,447	(47)%	2,712
Other	3,999	31 %	3,044	12 %	2,730
Total research and development expenses	$ 93,236	17 %	$ 79,696	(18)%	$ 96,640

(1) Subsequent to the European approvals of Roche's Herceptin SC product in August 2013 and MabThera SC product in March 2014 and Baxalta's HYQVIA product in May 2013, the manufacturing costs of bulk rHuPH20 for these collaboration products were capitalized as inventory.

(2) Includes research, development and manufacturing expenses related to our proprietary rHuPH20 enzyme. These expenses were not designated to a specific program at the time the expenses were incurred.

Research and development expenses relating to our PEGPH20 program in 2015 increased by 117%, compared to 2014 primarily due to increased clinical trial activities. Research and development expenses relating to our ultrafast insulin program in 2015 decreased by 93% compared to 2014 primarily due to decreased clinical trial and manufacturing activities. Research and development expenses relating to *Hylenex* recombinant program decreased in 2015 by 72% compared to 2014 mainly due to the completion of the technology transfer and validation campaign with a second manufacturer for *Hylenex* recombinant in 2014. Research and development expenses relating to our ENHANZE collaborations in 2015 decreased by 53%, primarily due to a decrease in manufacturing expenses related to our collaboration with Roche. We expect total research and development expenses to increase in future periods reflecting expected increases in our PEGPH20 development activities.

Research and development expenses relating to our PEGPH20 program in 2014 increased by 86%, compared to 2013 primarily due to the increased clinical trial activities mostly relating to Study 109-202. Research and development expenses relating to *Hylenex* recombinant program decreased in 2014 by 50% compared to 2013 mainly due to the completion of the technology transfer and validation campaign with a second manufacturer for *Hylenex* recombinant in 2014. Research and development expenses relating to our ENHANZE collaborations in 2014 decreased by 78%, primarily due to a $12.0 million decrease resulting from capitalizing manufacturing costs for approved collaboration products in the current period, an $8.1 million decrease in other outsourced regulatory and manufacturing activities to support our collaboration with Roche and a $2.5 million decrease in preclinical activities to support Baxalta. Subsequent to the European approvals of Roche's Herceptin SC product in August 2013 and MabThera SC product in March 2014 and Baxalta's HYQVIA product in May 2013, the manufacturing costs of bulk rHuPH20 for these collaboration products were capitalized as inventory.

Selling, General and Administrative — Selling, general and administrative (SG&A) expenses increased in 2015 compared to 2014 by $4.1 million, or 11%, primarily due to the increase in compensation costs, including a $3.7 million increase in stock-based compensation.

SG&A expenses increased in 2014 compared to 2013 by $3.6 million, or 11%, primarily due to the increase in compensation costs, including a $2.3 million increase in stock-based compensation.

Interest Expense — Interest expense included interest expense and amortization of the debt discount related to the long-term debt. Interest expense decreased by $0.4 million in 2015 as compared to 2014. Interest expense increased by $2.3 million in 2014 as compared to 2013 due to the $20.0 million increase in the principal balance of the long-term debt in December 2013.

Liquidity and Capital Resources

Our principal sources of liquidity are our existing cash, cash equivalents and available-for-sale marketable securities. As of December 31, 2015, we had cash, cash equivalents and marketable securities of approximately $108.3 million. We will continue to have significant cash requirements to support product development activities. The amount and timing of cash requirements will depend on the progress and success of our clinical development programs, regulatory and market acceptance, and the resources we devote to research and other commercialization activities.

We believe that our current cash, cash equivalents and marketable securities will be sufficient to fund our operations for at least the next twelve months. We currently anticipate an increase of cash and cash equivalents of approximately $35 million to $55 million for the year ending December 31, 2016, which includes cash received in January 2016 of $25 million paid by Lilly and $150 million from the royalty-backed debt agreement, and will depend on the progress of various preclinical and clinical programs, the timing of our manufacturing scale up and the achievement of various milestones and royalties under our existing collaborative agreements. We expect to fund our operations going forward with existing cash resources, anticipated revenues from our existing collaborations and cash that we may raise through future transactions, such as the $150 million royalty-backed loan we received in January 2016. Refer to Note 15, *Subsequent Event*, for further information on our royalty-backed debt agreement. We may finance future cash needs through any one of the following financing vehicles: (i) the public offering of securities; (ii) new collaborative agreements; (iii) expansions or revisions to existing collaborative relationships; (iv) private financings; and/or (v) other equity or debt financings.

We are a "well known seasoned issuer", which allows us to file an automatically effective shelf registration statement on Form S-3 which would allow us, from time to time, to offer and sell equity, debt securities and warrants to purchase any of such securities, either individually or in units. We may, in the future, offer and sell equity, debt securities and warrants to purchase any of such securities, either individually or in units to raise capital to fund the continued development of our product candidates, the commercialization of our products or for other general corporate purposes.

Our existing cash, cash equivalents and marketable securities may not be adequate to fund our operations until we become profitable, if ever. We cannot be certain that additional financing will be available when needed or, if available, financing will be obtained on favorable terms. If we are unable to raise sufficient funds, we may need to delay, scale back or eliminate some or all of our research and development programs, delay the launch of our product candidates, if approved, and/or restructure our operations. If we raise additional funds by issuing equity securities, substantial dilution to existing stockholders could result. If we raise additional funds by incurring debt financing, the terms of the debt may involve significant cash payment obligations, the issuance of warrants that may ultimately dilute existing stockholders when exercised and covenants that may restrict our ability to operate our business.

Cash Flows

Operating Activities

Net cash used in operations was $37.1 million in 2015 compared to $47.5 million in 2014. The $10.4 million decrease in utilization of cash in operations was mainly due to an increase of license fees and royalties from our collaborators; offset in part by increased spending on our R&D programs.

Net cash used in operations was $47.5 million in 2014 compared to $49.3 million in 2013. The $1.8 million decrease in utilization of cash in operations was mainly due to the receipt of a $15.0 million license fee payment from the Janssen Collaboration; offset in part by the timing of the collection of accounts receivable and the payment of accounts payable.

Investing Activities

Net cash provided by investing activities was $5.9 million in 2015 compared to net cash used of $33.0 million in 2014 and $47.9 million in 2013. The change in 2015 compared to 2014 was primarily due to the $17.4 million decrease in purchases of marketable securities and $22.4 million increase in proceeds from the maturities of marketable securities. The decrease in 2014 compared to 2013 was primarily due to a $53.9 million increase in proceeds from maturities of marketable securities; offset in part by a $39.9 million increase in purchases of marketable securities in 2014.

Financing Activities

Net cash provided by financing activities was $13.1 million in 2015 compared to $114.5 million in 2014 and $25.1 million in 2013. Net cash provided by financing activities in 2015 consisted of $13.1 million in net proceeds from issuance of common stock under equity incentive plans. Net cash provided by financing activities in 2014 consisted of $107.7 million in net proceeds from the sale of our common stock in February 2014 and $6.8 million in net proceeds from option exercises. Net cash provided by financing activities in 2013 consisted of net proceeds of $20.0 million from the amended long-term debt and $5.1 million in net proceeds from option exercises.

Long-Term Debt

In December 2013, we entered into an Amended and Restated Loan and Security Agreement (the Loan Agreement) with Oxford Finance LLC (Oxford) and Silicon Valley Bank (SVB) (collectively, the Lenders), amending and restating in its entirety our original loan agreement with the Lenders, dated December 2012. The Loan Agreement provided for an additional $20 million principal amount of new term loan, bringing the total term loan balance to $50 million. The proceeds are to be used for working capital and general business requirements. The amended term loan facility matures on January 1, 2018. The outstanding term loan was $49.8 million as of December 31, 2015, net of unamortized debt discount of $0.2 million.

In January 2015, we and the Lenders entered into a second amendment to the Loan Agreement (the Amendment) amending and restating the loan repayment schedule of the Loan Agreement. The amended and restated loan repayment schedule provides for interest only payments in arrears through January 2016, followed by consecutive equal monthly payments of principal and interest in arrears starting in February 2016 and continuing through the previously established maturity date. Consistent with the original loan, the Loan Agreement provides for a 7.55% interest rate on the term loan and a final interest payment equal to 8.5% of the original principal amount, or $4.25 million, which is due when the term loan becomes due or upon the prepayment of the facility. We have the option to prepay the outstanding balance of the term loan in full, subject to a prepayment fee of 1% to 3% depending upon when the prepayment occurs.

In December 2015, we entered into a consent, release and third amendment to the Loan Agreement with the Lenders, in which the Lenders consented to (i) the formation of Halozyme Royalty as a wholly-owned subsidiary of Halozyme, (ii) the release of liens and the sale of certain rights to receive royalty payments to Halozyme Royalty, and (iii) entering into a Credit Agreement with BioPharma Credit Investments IV Sub, LP., (BioPharma), as collateral agent and lender, and the other lenders party, whereby Halozyme Royalty will incur indebtedness from and grant liens on the royalty payments to BioPharma. This amendment allowed us to enter into a royalty-backed debt agreement. Refer to Note 15, *Subsequent Event*, for further information on our royalty-backed debt agreement.

The amended and restated term loan facility is secured by substantially all of the assets of the Company and its subsidiary, Halozyme, Inc., except that the collateral does not include any equity interests in Halozyme, Inc. and any intellectual property (including all licensing, collaboration and similar agreements relating thereto), and certain other excluded assets. The Loan Agreement contains customary representations, warranties and covenants by us, which covenants limit our ability to convey, sell, lease, transfer, assign or otherwise dispose of certain of our assets; engage in any business other than the businesses currently engaged in by us or reasonably related thereto; liquidate or dissolve; make certain management changes; undergo certain change of control events; create, incur, assume, or be liable with respect to certain indebtedness; grant certain liens; pay dividends and make certain other restricted payments; make certain investments; make payments on any subordinated debt; and enter into transactions with any of our affiliates outside of the ordinary course of business or permit our subsidiaries to do the same. In addition, subject to certain exceptions, we are required to maintain with SVB our primary deposit accounts, securities accounts and commodities, and to do the same for our domestic subsidiary.

The Loan Agreement also contains customary indemnification obligations and customary events of default, including, among other things, our failure to fulfill certain of our obligations under the Loan Agreement and the occurrence of a material adverse change which is defined as a material adverse change in our business, operations or condition (financial or otherwise), a material impairment of the prospect of repayment of any portion of the loan, or a material impairment in the perfection or priority of lender's lien in the collateral or in the value of such collateral. In the event of default by us under the Loan Agreement, the Lenders would be entitled to exercise their remedies thereunder, including the right to accelerate the debt, upon which we may be required to repay all amounts then outstanding under the Loan Agreement, which could harm our financial condition.

Off-Balance Sheet Arrangements

As of December 31, 2015, 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 other contractually narrow or limited purposes. In addition, we did not engage in trading activities involving non-exchange traded contracts. As such, we are not materially exposed to any financing, liquidity, market or credit risk that could arise if we had engaged in such relationship.

Contractual Obligations

As of December 31, 2015, future minimum payments due under our contractual obligations are as follows (in thousands):

Contractual Obligations[1,5]	Payments Due by Period				
	Total	Less than 1 Year	1-3 Years	4-5 Years	More than 5 Years
Long-term debt, including interest[2]	$ 58,592	$ 25,077	$ 33,515	$ —	$ —
Operating leases[3]	6,527	2,539	3,526	462	—
Third-party manufacturing obligations[4]	39,897	37,466	2,431	—	—
Purchase obligations	960	344	616	—	—
Total	$105,976	$ 65,426	$ 40,088	$ 462	$ —

(1) Does not include milestone or contractual payment obligations contingent upon the achievement of certain milestones or events if the amount and timing of such obligations are unknown or uncertain. Our in-license agreement is cancelable with written notice within 90 days. We may be required to pay up to approximately $9.3 million in milestone payments, plus sales royalties, in the event that all scientific research under these agreements is successful. One of the milestone payments of $1.3 million is due upon the first dosing of a patient in our Phase 3 study of PEGPH20, which is expected to occur at the end of the first quarter of 2016.

(2) Long-term debt obligations include future monthly interest payments based on a fixed rate of 7.55% and a final payment of $4.25 million for our long-term debt due in January 2018.

(3) Includes minimum lease payments related to leases of our office and research facilities and certain autos under non-cancelable operating leases.

(4) We have contracted with third-party manufacturers for the supply of bulk rHuPH20 and fill/finish of *Hylenex* recombinant. Under these agreements, we are required to purchase certain quantities each year during the terms of the agreements. The amounts presented represent our estimates of the minimum required payments under these agreements.

(5) Excludes contractual obligations already recorded on our consolidated balance sheet as current liabilities.

Contractual obligations for purchases of goods or services include agreements that are enforceable and legally binding on us and that specify all significant terms, including fixed or minimum quantities to be purchased; fixed, minimum or variable price provisions; and the approximate timing of the transaction. For obligations with cancellation provisions, the amounts included in the preceding table were limited to the non-cancelable portion of the agreement terms or the minimum cancellation fee.

For the restricted stock units and performance stock units granted, the number of shares issued on the date the restricted stock units vest is net of the minimum statutory withholding requirements that we pay in cash to the appropriate taxing authorities on behalf of our employees. The obligation to pay the relevant taxing authority is not included in the preceding table, as the amount is contingent upon continued employment. In addition, the amount of the obligation is unknown, as it is based in part on the market price of our common stock when the awards vest.

The expected timing of payments of the obligations above is estimated based on current information. Timing of payments and actual amounts paid may be different, depending on the time of receipt of goods or services, or changes to agreed-upon amounts for some obligations.

Our future capital uses and requirements depend on numerous forward-looking factors. These factors may include, but are not limited to, the following:

- the rate of progress and cost of research and development activities;
- the number and scope of our research activities;
- the costs of filing, prosecuting, defending and enforcing any patent claims and other intellectual property rights;
- our ability to establish and maintain product discovery and development collaborations, including scale-up manufacturing costs for our collaborators' product candidates;
- the amount of royalties from our collaborators;
- the amount of product sales for *Hylenex* recombinant;
- the costs of obtaining and validating additional manufacturers of *Hylenex* recombinant;
- the effect of competing technological and market developments;

- the terms and timing of any collaborative, licensing and other arrangements that we may establish; and
- the extent to which we acquire or in-license new products, technologies or businesses.

Critical Accounting Policies and Estimates

The discussion and analysis of our financial condition and results of operations are based on our consolidated financial statements, which have been prepared in accordance with U.S. generally accepted accounting principles, or U.S. GAAP. The preparation of our consolidated financial statements requires us to make estimates and judgments that affect the reported amounts of assets, liabilities, revenues and expenses and related disclosure of contingent assets and liabilities. We review our estimates on an ongoing basis. We base our estimates on historical experience and on various other assumptions that we believe to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities. Actual results may differ from these estimates under different assumptions or conditions. We believe the following accounting policies to be critical to the judgments and estimates used in the preparation of our consolidated financial statements.

Revenue Recognition

We generate revenues from product sales and collaborative agreements. Payments received under collaborative agreements may include nonrefundable fees at the inception of the agreements, license fees, milestone payments for specific achievements designated in the collaborative agreements, reimbursements of research and development services and supply of bulk rHuPH20 and/or royalties on sales of products resulting from collaborative arrangements.

We recognize revenue in accordance with the authoritative guidance on revenue recognition. Revenue is recognized when all of the following criteria are met: (1) persuasive evidence of an arrangement exists; (2) delivery has occurred or services have been rendered; (3) the seller's price to the buyer is fixed or determinable; and (4) collectibility is reasonably assured.

Refer to Note 2, *Summary of Significant Accounting Policies - Adoption and Pending Adoption of Recent Accounting Pronouncements*, of our consolidated financial statements for further discussion of our revenue recognition policies for product sales and revenues under our collaborative agreements and Note 4, *Collaborative Agreements,* of our consolidated financial statements for a further discussion of our collaborative agreements.

Share-Based Payments

We use the fair value method to account for share-based payments in accordance with the authoritative guidance for share-based compensation. The fair value of each option award is estimated on the date of grant using a Black-Scholes-Merton option pricing model (Black-Scholes model) that uses assumptions regarding a number of complex and subjective variables. Changes in these assumptions may lead to variability with respect to the amount of expense we recognize in connection with share-based payments. Refer to Note 2, *Summary of Significant Accounting Policies - Adoption and Pending Adoption of Recent Accounting Pronouncements*, of our consolidated financial statements for a further discussion of share-based payments.

Research and Development Expenses

Research and development expenses include salaries and benefits, facilities and other overhead expenses, external clinical trial expenses, research related manufacturing services, contract services and other outside expenses. Research and development expenses are charged to operations as incurred when these expenditures relate to our research and development efforts and have no alternative future uses. After receiving marketing approval from the FDA or comparable regulatory agencies in foreign countries for a product, costs related to purchases or manufacturing of bulk rHuPH20 for such product are capitalized as inventory. The manufacturing costs of bulk rHuPH20 for the collaboration products, Herceptin SC, MabThera SC and HYQVIA, which were incurred after the receipt of marketing approvals are capitalized as inventory. Refer to Note 2, *Summary of Significant Accounting Policies - Adoption and Pending Adoption of Recent Accounting Pronouncements*, of our consolidated financial statements for a further discussion of research and development expenses.

Due to the uncertainty in obtaining the FDA and other regulatory approvals, our reliance on third parties and competitive pressures, we are unable to estimate with any certainty the additional costs we will incur in the continued development of our proprietary product candidates for commercialization. However, we expect our research and development expenses to increase this year as we continue with our clinical trial programs and continue to develop and manufacture our product candidates.

Clinical development timelines, likelihood of success and total costs vary widely. We anticipate that we will make ongoing determinations as to which research and development projects to pursue and how much funding to direct to each project on an ongoing basis in response to existing resource levels, the scientific and clinical progress of each product candidate, and other market and regulatory developments. We plan on focusing our resources on those proprietary and collaboration product candidates that represent the most valuable economic and strategic opportunities.

Product candidate completion dates and costs vary significantly for each product candidate and are difficult to estimate. The lengthy process of seeking regulatory approvals and the subsequent compliance with applicable regulations require the expenditure of substantial resources. Any failure by us to obtain, or any delay in obtaining, regulatory approvals could cause our research and development expenditures to increase and, in turn, have a material adverse effect on our results of operations. We cannot be certain when, or if, our product candidates will receive regulatory approval or whether any net cash inflow from our other product candidates, or development projects, will commence.

Recent Accounting Pronouncements

Refer to Note 2, *Summary of Significant Accounting Policies - Adoption and Pending Adoption of Recent Accounting Pronouncements*, of our consolidated financial statements for a discussion of recent accounting pronouncements and their effect, if any, on us.

Item 7A. ***Quantitative and Qualitative Disclosures About Market Risk***

As of December 31, 2015, our cash equivalents and marketable securities consisted of investments in money market funds and corporate debt obligations. These investments were made in accordance with our investment policy which specifies the categories, allocations, and ratings of securities we may consider for investment. The primary objective of our investment activities is to preserve principal while at the same time maximizing the income we receive without significantly increasing risk. Some of the financial instruments that we invest in could be subject to market risk. This means that a change in prevailing interest rates may cause the value of the instruments to fluctuate. For example, if we purchase a security that was issued with a fixed interest rate and the prevailing interest rate later rises, the value of that security will probably decline. As of December 31, 2015 based on our current investment portfolio, we do not believe that our results of operations would be materially impacted by an immediate change of 10% in interest rates.

We do not hold or issue derivatives, derivative commodity instruments or other financial instruments for speculative trading purposes. Further, we do not believe our cash, cash equivalents and marketable securities have significant risk of default or illiquidity. We made this determination based on discussions with our investment advisors and a review of our holdings. While we believe our cash, cash equivalents and marketable securities do not contain excessive risk, we cannot provide absolute assurance that in the future our investments will not be subject to adverse changes in market value. All of our cash equivalents and marketable securities are recorded at fair market value.

Item 8. ***Financial Statements and Supplementary Data***

Our financial statements are annexed to this report beginning on page F-1.

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

None.

Item 9A. ***Control and Procedures***

Evaluation of Disclosure Controls and Procedures

We maintain disclosure controls and procedures that are designed to ensure that information required to be disclosed in our Exchange Act reports is recorded, processed, summarized and reported within the timelines specified in the Securities and Exchange Commission's rules and forms, and that such information is accumulated and communicated to our management, including our Chief Executive Officer and Chief Financial Officer, as appropriate, to allow timely decision regarding required disclosure. In designing and evaluating the disclosure controls and procedures, management recognized that any controls and procedures, no matter how well designed and operated, can only provide reasonable assurance of achieving the desired control objectives, and in reaching a reasonable level of assurance, management necessarily was required to apply its judgment in evaluating the cost-benefit relationship of possible controls and procedures.

Under the supervision and with the participation of our management, including our principal executive officer and principal financial officer, we conducted an evaluation of our disclosure controls and procedures, as such term is defined under Rule 13a-15 (e) promulgated under the Securities Exchange Act of 1934, as amended. Based on this evaluation, our principal executive officer and our principal financial officer concluded that our disclosure controls and procedures were effective as of the end of the period covered by this Annual Report on Form 10-K.

Changes in Internal Control Over Financial Reporting

There have been no significant changes in our internal control over financial reporting that occurred during the quarter ended December 31, 2015 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Management's Report on Internal Control Over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting. Internal control over financial reporting is defined in Rule 13a-15(f) and Rule 15d-15(f) promulgated under the Securities Exchange Act of 1934 as a process designed by, or under the supervision of, our principal executive and principal financial officers and effected by our board of directors, management and other personnel, 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 and includes those policies and procedures that:

- Pertain to the maintenance of records that in reasonable detail accurately and fairly reflect the transactions and dispositions 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 authorizations 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 our financial statements.

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

Our management assessed the effectiveness of our internal control over financial reporting as of December 31, 2015. In making this assessment, our management used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) in Internal Control-Integrated Framework (2013 framework) (the COSO criteria). Based on our assessment, management concluded that, as of December 31, 2015, our internal control over financial reporting is effective based on the COSO criteria.

The independent registered public accounting firm that audited the consolidated financial statements that are included in this Annual Report on Form 10-K has issued an audit report on the effectiveness of our internal control over financial reporting as of December 31, 2015. The report appears below.

Report of Independent Registered Public Accounting Firm

The Board of Directors and Stockholders
Halozyme Therapeutics, Inc.

We have audited Halozyme Therapeutics, Inc.'s internal control over financial reporting as of December 31, 2015, 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). Halozyme 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, Halozyme Therapeutics, Inc. maintained, in all material respects, effective internal control over financial reporting as of December 31, 2015, based on the COSO criteria**.**

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the consolidated balance sheets of Halozyme Therapeutics, Inc. as of December 31, 2015 and 2014, and the related consolidated statements of operations, comprehensive loss, cash flows, and stockholders' equity (deficit) for each of the three years in the period ended December 31, 2015 of Halozyme Therapeutics, Inc. and our report dated February 29, 2016 expressed an unqualified opinion thereon.

/s/ Ernst & Young LLP

San Diego, California
February 29, 2016

Item 9B. ***Other Information***

None.

PART III

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

The information required by this item regarding directors is incorporated by reference to our definitive Proxy Statement (the Proxy Statement) to be filed with the Securities and Exchange Commission in connection with our 2016 Annual Meeting of Stockholders under the heading "Election of Directors." The information required by this item regarding compliance with Section 16 (a) of the Securities Exchange Act of 1934, as amended, is incorporated by reference to the information under the caption "Compliance with Section 16(a) of the Exchange Act" to be contained in the Proxy Statement. The information required by this item regarding our code of ethics is incorporated by reference to the information under the caption "Code of Conduct and Ethics" to be contained in the Proxy Statement. The information required by this item regarding our audit committee is incorporated by reference to the information under the caption "Board Meetings and Committees—Audit Committee" to be contained in the Proxy Statement. The information required by this item regarding material changes, if any, to the process by which stockholders may recommend nominees to our board of directors is incorporated by reference to the information under the caption "Board Meetings and Committees—Nominating and Governance Committee" to be contained in the Proxy Statement.

Executive Officers

Helen I. Torley, M.B. Ch. B., M.R.C.P. (53), President, Chief Executive Officer and Director. Dr. Torley joined Halozyme in January 2014 as President and Chief Executive Officer and as a member of Halozyme's Board of Directors. Throughout her career, Dr. Torley has led several successful product launches, including Kyprolis®, Prolia®, Sensipar®, and Miacalcin®. Prior to joining Halozyme, Dr. Torley served as Executive Vice President and Chief Commercial Officer for Onyx Pharmaceuticals (Onyx) from August 2011 to December 2013 overseeing the collaboration with Bayer on Nexavar® and Stivarga® and the U.S. launch of Kyprolis. She was responsible for the development of Onyx's commercial capabilities in ex-US markets and in particular, in Europe. Prior to Onyx, Dr. Torley spent 10 years in management positions at Amgen Inc., most recently serving as Vice President and General Manager of the US Nephrology Business Unit from 2003 to 2009 and the U.S. Bone Health Business Unit from 2009 to 2011. From 1997 to 2002, she held various senior management positions at Bristol-Myers Squibb, including Regional Vice President of Cardiovascular and Metabolic Sales and Head of Cardiovascular Global Marketing. She began her career at Sandoz/ Novartis, where she ultimately served as Vice President of Medical Affairs, developing and conducting post-marketing clinical studies across all therapeutic areas, including oncology. Dr. Torley serves on the board of directors of Relypsa, Inc., a biopharmaceutical company. Before joining the industry, Dr. Torley was in medical practice as a senior registrar in rheumatology at the Royal Infirmary in Glasgow, Scotland. Dr. Torley received her Bachelor of Medicine and Bachelor of Surgery degrees (M.B. Ch.B.) from the University of Glasgow and is a Member of the Royal College of Physicians (M.R.C.P).

Laurie D. Stelzer (48), Senior Vice President, Chief Financial Officer. Ms. Stelzer joined Halozyme in 2015 as Senior Vice President, Chief Financial Officer. Prior to joining Halozyme, Ms. Stelzer served from April 2014 to January 2015 as the Senior Vice President of Finance supporting R&D, Technical Operations and M&A at Shire, Inc. Prior to that she was the Division CFO for the Regenerative Medicine Division and the Head of Investor Relations at Shire from March 2012 to April 2014. Prior to Shire, Ms. Stelzer held positions of increasing responsibility for 15 years at Amgen, Inc. including Interim Treasurer, Head of Emerging Markets Expansion, Executive Director of Global Commercial Finance and Head of Global Accounting. Early in her career, she held various finance and accounting positions in the real estate and banking industries. Ms. Stelzer received her MBA from the Anderson School at the University of California, Los Angeles, and a Bachelor of Science in Accounting from Arizona State University.

Athena Countouriotis, M.D. (44), Senior Vice President, Chief Medical Officer. Dr. Countouriotis joined Halozyme in January 2015 as Senior Vice President, Chief Medical Officer. From February 2012 to January 2015, Dr. Countouriotis served as chief medical officer at Ambit Biosciences Corporation, a pharmaceutical company, which was acquired by Daiichi Sankyo in November 2014. From August 2007 to February 2012, Dr. Countouriotis was a clinical leader within the Pfizer Inc., a pharmaceutical company, Oncology Business Unit. From October 2005 to August 2007, she was director of oncology global clinical research at Bristol-Myers Squibb Company, a pharmaceutical company, with responsibility for leading clinical development of Sprycel® in acute lymphoblastic leukemia and chronic myeloid leukemia. Earlier in her career, she held the position as Associate Medical Director at Cell Therapeutics, Inc., a biopharmaceutical company. Dr. Countouriotis received a B.S. from the University of California, Los Angeles, and an M.D. at Tufts University School of Medicine. She received her initial training in pediatrics at the University of California, Los Angeles, and additional training at the Fred Hutchinson Cancer Research Center in the Pediatric Hematology/ Oncology Program.

Harry J. Leonhardt, Esq. (59), Senior Vice President, General Counsel, Chief Compliance Officer and Corporate Secretary. Mr. Leonhardt joined Halozyme in April 2015 as Senior Vice President, General Counsel, Chief Compliance Officer and Corporate Secretary. Mr. Leonhardt brings more than 30 years of executive management, corporate legal, intellectual property, compliance, business development and mergers and acquisitions experience to Halozyme, with an extensive background in the biotechnology industry. Prior to joining Halozyme, Mr. Leonhardt was an arbitrator before the International Centre for Dispute Resolution and a consultant in the biotechnology industry from January 2013 to April 2015. He served as Senior Vice President, Legal and Compliance, and Corporate Secretary at Amylin Pharmaceuticals, Inc., a biotechnology company, from September 2011 to January 2013 and previously served in other senior management legal positions at Amylin since September 2007. Prior to Amylin, he served as Senior Vice President, General Counsel and Corporate Secretary at Senomyx, Inc., a company focused on taste receptor technology and the development of novel flavor ingredients for the food and beverage industry, from September 2003 to September 2007. From February 2001 to September 2003, Mr. Leonhardt was Executive Vice President, General Counsel and Corporate Secretary at Genoptix, Inc. and from July 1996 to November 2000, he served as Vice President and then Senior Vice President, General Counsel and Corporate Secretary at Nanogen, Inc. Prior to Nanogen, Mr. Leonhardt held positions of increasing responsibility at Allergan, Inc. including Chief Litigation Counsel and General Counsel for European Operations. Early in his career, he was an attorney at Lyon & Lyon LLP where he represented a number of prominent clients in the biotech, pharmaceutical and consumer products industries. Mr. Leonhardt received a B.S. in Pharmacy from the University of the Sciences and a Juris Doctorate from the University of Southern California School of Law.

Item 11. *Executive Compensation*

The information required by this item is incorporated by reference to the information under the caption "*Executive Compensation*" to be contained in the Proxy Statement.

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

Other than as set forth below, the information required by this item is incorporated by reference to the information under the caption "*Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters*" to be contained in the Proxy Statement.

Equity Compensation Plan Information

The following table summarizes our compensation plans under which our equity securities are authorized for issuance as of December 31, 2015:

Plan Category	Number of Shares to Be Issued upon Exercise of Outstanding Options and Restricted Stock Units (a)	Weighted Average Exercise Price of Outstanding Options and Restricted Stock Units[2] (b)	Number of Shares Remaining Available for Future Issuance under Equity Compensation Plans (Excluding Shares Reflected in Column (a)) (c)
Equity compensation plans approved by stockholders[1]	8,969,113	$13.03	7,440,487
Equity compensation plans not approved by stockholders	—	—	—
	8,969,113	$13.03	7,440,487

(1) Represents stock options, restricted stock units, and performance restricted stock units under the Amended and Restated 2011 Stock Plan, 2008 Stock Plan, 2006 Stock Plan, 2005 Outside Directors' Stock Plan, and 2004 Stock Plan.

(2) This amount does not include restricted stock units and performance restricted stock units as there is no exercise price for such units.

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

The information required by this item is incorporated by reference to the information under the caption "*Certain Relationships and Related Transactions*" to be contained in the Proxy Statement.

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

The information required by this item is incorporated by reference to the information under the caption "*Principal Accounting Fees and Services*" to be contained in the Proxy Statement.

PART IV

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

(a) Documents filed as part of this report.

1. Financial Statements

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Report of Independent Registered Public Accounting Firm	F-1
Consolidated Balance Sheets at December 31, 2015 and 2014	F-2
Consolidated Statements of Operations for Each of the Years Ended December 31, 2015, 2014 and 2013	F-3
Consolidated Statements of Comprehensive Loss for Each of the Years Ended December 31, 2015, 2014 and 2013	F-4
Consolidated Statements of Cash Flows for Each of the Years Ended December 31, 2015, 2014 and 2013	F-5
Consolidated Statements of Stockholders' Equity (Deficit) for Each of the Years Ended December 31, 2015, 2014 and 2013	F-6
Notes to the Consolidated Financial Statements	F-7

2. List of all Financial Statement schedules.

The following financial statement schedule of Halozyme Therapeutics, Inc. is filed as part of this Annual Report on Form 10-K on page F-32 and should be read in conjunction with the consolidated financial statements of Halozyme Therapeutics, Inc.

Schedule II: Valuation and Qualifying Accounts

All other schedules are omitted because they are not applicable or the required information is shown in the Financial Statements or notes thereto.

3. List of Exhibits required by Item 601 of Regulation S-K. See part (b) below.

(b) Exhibits.

The exhibits listed in the accompanying "Exhibit Index" are incorporated herein by reference.

(c) Financial Statement Schedules. See Item 15(a) 2 above.

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.

Halozyme Therapeutics, Inc.,
a Delaware corporation

Date: February 29, 2016

By: /s/ Helen I. Torley, M.B. Ch.B., M.R.C.P.
Helen I. Torley, M.B. Ch.B., M.R.C.P.
President and Chief Executive Officer

POWER OF ATTORNEY

Know all persons by these presents, that each person whose signature appears below constitutes and appoints Helen I. Torley and Laurie D. Stelzer, and each of them, as his true and lawful attorneys-in-fact and agents, with full power of substitution and resubstitution, for him and in his name, place, and stead, in any and all capacities, to sign any and all amendments to this Annual Report, and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done in connection therewith, as fully to all intents and purposes as he might or could do in person, hereby ratifying and confirming that all said attorneys-in-fact and agents, or any of them or their or his substitute or substituted, may lawfully do or cause to be done by virtue thereof.

Pursuant to the requirements of the Securities Exchange Act of 1934, this Annual 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/ Helen I. Torley, M.B. Ch.B., M.R.C.P. Helen I. Torley, M.B. Ch.B., M.R.C.P.	President and Chief Executive Officer (Principal Executive Officer), Director	February 29, 2016
/s/ Laurie D. Stelzer Laurie D. Stelzer	Senior Vice President and Chief Financial Officer (Principal Financial and Accounting Officer)	February 29, 2016
/s/ Kathryn E. Falberg Kathryn E. Falberg	Chair of the Board of Directors	February 29, 2016
/s/ Jean-Pierre Bizzari Jean-Pierre Bizzari	Director	February 29, 2016
/s/ Jeffrey W. Henderson Jeffrey W. Henderson	Director	February 29, 2016
/s/ Kenneth J. Kelley Kenneth J. Kelley	Director	February 29, 2016
/s/ Randal J. Kirk Randal J. Kirk	Director	February 29, 2016
/s/ Connie L. Matsui Connie L. Matsui	Director	February 29, 2016
/s/ Matthew L. Posard Matthew L. Posard	Director	February 29, 2016

Report of Independent Registered Public Accounting Firm

The Board of Directors and Stockholders
Halozyme Therapeutics, Inc.

We have audited the accompanying consolidated balance sheets of Halozyme Therapeutics, Inc. as of December 31, 2015 and 2014, and the related consolidated statements of operations, comprehensive loss, cash flows, and stockholders' equity (deficit) for each of the three years in the period ended December 31, 2015. Our audits also included the financial statement schedule listed in the Index at Item 15(a). These financial statements and schedule are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements and schedule 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 Halozyme Therapeutics, Inc. at December 31, 2015 and 2014, and the consolidated results of its operations and its cash flows for each of the three years in the period ended December 31, 2015, in conformity with U.S. generally accepted accounting principles. Also, in our opinion, the related financial statement schedule, when considered in relation to the basic financial statements taken as a whole, presents fairly in all material respects the information set forth therein.?

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), Halozyme Therapeutics, Inc.'s internal control over financial reporting as of December 31, 2015, 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 February 29, 2016 expressed an unqualified opinion thereon.

/s/ Ernst & Young LLP

San Diego, California
February 29, 2016

HALOZYME THERAPEUTICS, INC.

CONSOLIDATED BALANCE SHEETS
(in thousands, except per share data)

	December 31, 2015	December 31, 2014
ASSETS		
Current assets:		
Cash and cash equivalents	$ 43,292	$ 61,389
Marketable securities, available-for-sale	65,047	74,234
Accounts receivable, net	32,410	9,149
Inventories	9,489	6,406
Prepaid expenses and other assets	21,534	10,143
Total current assets	171,772	161,321
Property and equipment, net	3,943	2,951
Prepaid expenses and other assets	5,574	1,205
Restricted cash	500	500
Total assets	$ 181,789	$ 165,977
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	$ 4,499	$ 3,003
Accrued expenses	26,792	13,961
Deferred revenue, current portion	9,304	7,367
Current portion of long-term debt, net	21,862	—
Total current liabilities	62,457	24,331
Deferred revenue, net of current portion	43,919	47,267
Long-term debt, net	27,971	49,860
Other long-term liabilities	4,443	3,167
Commitments and contingencies (Note 9)		
Stockholders' equity:		
Preferred stock — $0.001 par value; 20,000 shares authorized; no shares issued and outstanding	—	—
Common stock — $0.001 par value; 200,000 shares authorized; 128,152 and 125,721 shares issued and outstanding at December 31, 2015 and 2014, respectively	128	126
Additional paid-in capital	525,628	491,694
Accumulated other comprehensive loss	(99)	(41)
Accumulated deficit	(482,658)	(450,427)
Total stockholders' equity	42,999	41,352
Total liabilities and stockholders' equity	$ 181,789	$ 165,977

See accompanying notes to consolidated financial statements.

HALOZYME THERAPEUTICS, INC.

CONSOLIDATED STATEMENTS OF OPERATIONS
(in thousands, except per share data)

	Year Ended December 31,		
	2015	**2014**	**2013**
Revenues:			
Product sales, net	$ 46,082	$ 37,823	$ 24,439
Revenues under collaborative agreements	58,000	28,086	30,327
Royalties	30,975	9,425	33
Total revenues	135,057	75,334	54,799
Operating expenses:			
Cost of product sales	29,245	22,732	6,246
Research and development	93,236	79,696	96,640
Selling, general and administrative	40,028	35,942	32,347
Total operating expenses	162,509	138,370	135,233
Operating loss	(27,452)	(63,036)	(80,434)
Other income (expense):			
Investment and other income, net	422	242	229
Interest expense	(5,201)	(5,581)	(3,274)
Net loss	$ (32,231)	$ (68,375)	$ (83,479)
Basic and diluted net loss per share	$ (0.25)	$ (0.56)	$ (0.74)
Shares used in computing basic and diluted net loss per share	126,704	122,690	112,805

See accompanying notes to consolidated financial statements.

HALOZYME THERAPEUTICS, INC.

CONSOLIDATED STATEMENTS OF COMPREHENSIVE LOSS
(in thousands)

	Year Ended December 31,		
	2015	2014	2013
Net loss	$ (32,231)	$ (68,375)	$ (83,479)
Other comprehensive (loss) income:			
Unrealized (loss) gain on marketable securities	(58)	(58)	17
Total comprehensive loss	$ (32,289)	$ (68,433)	$ (83,462)

See accompanying notes to consolidated financial statements.

HALOZYME THERAPEUTICS, INC.
CONSOLIDATED STATEMENTS OF CASH FLOWS
(in thousands)

	Year Ended December 31,		
	2015	2014	2013
Operating activities:			
Net loss	$ (32,231)	$ (68,375)	$ (83,479)
Adjustments to reconcile net loss to net cash used in operating activities:			
Share-based compensation	20,838	15,274	9,538
Depreciation and amortization	1,677	1,762	1,227
Non-cash interest expense	1,243	2,025	156
Amortization of premiums on marketable securities, net	879	1,457	1,116
Loss on disposal of equipment	8	233	—
Changes in operating assets and liabilities:			
Accounts receivable, net	(23,261)	(52)	6,606
Inventories	(3,083)	(236)	(3,499)
Prepaid expenses and other assets	(15,774)	(265)	1,959
Restricted cash	—	—	(100)
Accounts payable and accrued expenses	13,866	(816)	7,888
Deferred revenue	(1,411)	1,490	9,297
Other liabilities	166	(15)	(48)
Net cash used in operating activities	(37,083)	(47,518)	(49,339)
Investing activities:			
Purchases of marketable securities	(71,482)	(88,884)	(48,947)
Proceeds from maturities of marketable securities	79,730	57,301	3,375
Purchases of property and equipment	(2,360)	(1,368)	(2,297)
Net cash provided by (used in) investing activities	5,888	(32,951)	(47,869)
Financing activities:			
Proceeds from issuance of common stock under equity incentive plans, net	13,098	6,788	5,079
Proceeds from issuance of common stock, net	—	107,713	—
Proceeds from issuance of long-term debt, net	—	—	19,985
Net cash provided by financing activities	13,098	114,501	25,064
Net (decrease) increase in cash and cash equivalents	(18,097)	34,032	(72,144)
Cash and cash equivalents at beginning of period	61,389	27,357	99,501
Cash and cash equivalents at end of period	$ 43,292	$ 61,389	$ 27,357
Supplemental disclosure of cash flow information:			
Interest paid	$ 3,775	$ 3,460	$ 3,099
Supplemental disclosure of non-cash investing and financing activities:			
Amounts accrued for purchases of property and equipment	$ 473	$ 156	$ 100
Capitalized property and liability associated with a build-to-suit lease arrangement	$ —	$ —	$ (1,450)

See accompanying notes to consolidated financial statements.

HALOZYME THERAPEUTICS, INC.

CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY (DEFICIT)
(in thousands)

	Common Stock		Additional Paid-In Capital	Accumulated Other Comprehensive Income (Loss)	Accumulated Deficit	Total Stockholders' Equity (Deficit)
	Shares	Amount				
BALANCE AT JANUARY 1, 2013	112,709	$ 113	$ 347,315	$ —	$ (298,573)	$ 48,855
Share-based compensation expense	—	—	9,538	—	—	9,538
Issuance of common stock pursuant to exercise of stock options and vesting of restricted stock units, net	1,363	1	5,078	—	—	5,079
Issuance of restricted stock awards	462	1	(1)	—	—	—
Other comprehensive income	—	—	—	17	—	17
Net loss	—	—	—	—	(83,479)	(83,479)
BALANCE AT DECEMBER 31, 2013	114,534	115	361,930	17	(382,052)	(19,990)
Share-based compensation expense	—	—	15,274	—	—	15,274
Issuance of common stock for cash, net	8,846	9	107,704	—	—	107,713
Issuance of common stock pursuant to exercise of stock options and vesting of restricted stock units, net	1,552	1	6,787	—	—	6,788
Issuance of restricted stock awards	789	1	(1)	—	—	—
Other comprehensive loss	—	—	—	(58)	—	(58)
Net loss	—	—	—	—	(68,375)	(68,375)
BALANCE AT DECEMBER 31, 2014	125,721	126	491,694	(41)	(450,427)	41,352
Share-based compensation expense	—	—	20,838	—	—	20,838
Issuance of common stock pursuant to exercise of stock options and vesting of restricted stock units and performance restricted stock units, net	2,056	2	13,096	—	—	13,098
Issuance of restricted stock awards	375	—	—	—	—	—
Other comprehensive loss	—	—	—	(58)	—	(58)
Net loss	—	—	—	—	(32,231)	(32,231)
BALANCE AT DECEMBER 31, 2015	128,152	$ 128	$ 525,628	$ (99)	$ (482,658)	$ 42,999

See accompanying notes to consolidated financial statements.

1. Organization and Business

Halozyme Therapeutics, Inc. is a biotechnology company focused on developing and commercializing novel oncology therapies. We are seeking to translate our unique knowledge of the tumor microenvironment to create therapies that have the potential to improve cancer patient survival. Our research primarily focuses on human enzymes that alter the extracellular matrix and tumor microenvironment. The extracellular matrix is a complex matrix of proteins and carbohydrates surrounding the cell that provides structural support in tissues and orchestrates many important biological activities, including cell migration, signaling and survival. Over many years, we have developed unique technology and scientific expertise enabling us to pursue this target-rich environment for the development of therapies.

Our proprietary enzymes are used to facilitate the delivery of injected drugs and fluids, potentially enhancing the efficacy and the convenience of other drugs or can be used to alter tissue structures for potential clinical benefit. We exploit our technology and expertise using a two pillar strategy that we believe enables us to manage risk and cost by: (1) developing our own proprietary products in therapeutic areas with significant unmet medical needs, with a focus on oncology, and (2) licensing our technology to biopharmaceutical companies to collaboratively develop products that combine our technology with the collaborators' proprietary compounds.

The majority of our approved product and product candidates are based on rHuPH20, our patented recombinant human hyaluronidase enzyme. rHuPH20 is the active ingredient in our first commercially approved product, *Hylenex*® recombinant, and it works by temporarily breaking down hyaluronan (or HA), a naturally occurring complex carbohydrate that is a major component of the extracellular matrix in tissues throughout the body such as skin and cartilage. We believe this temporary degradation creates an opportunistic window for the improved subcutaneous delivery of injectable biologics, such as monoclonal antibodies and other large therapeutic molecules, as well as small molecules and fluids. We refer to the application of rHuPH20 to facilitate the delivery of other drugs or fluids as our ENHANZE™ Technology. We license the Enhance Technology to form collaborations with biopharmaceutical companies that develop or market drugs requiring or benefiting from injection via the subcutaneous route of administration.

We currently have ENHANZE collaborations with F. Hoffmann-La Roche, Ltd. and Hoffmann-La Roche, Inc. (Roche), Baxalta US Inc. and Baxalta GmbH (Baxalta), Pfizer Inc. (Pfizer), Janssen Biotech, Inc. (Janssen), AbbVie, Inc. (AbbVie), and Eli Lilly and Company (Lilly). We receive royalties from two of these collaborations, including royalties from sales of one product approved in both the United States and outside the United States from the Baxalta collaboration and from sales of two products approved for marketing outside the United States from the Roche collaboration. Future potential revenues from the sales and/or royalties of our approved products, product candidates, and ENHANZE collaborations will depend on the ability of Halozyme and our collaborators to develop, manufacture, secure and maintain regulatory approvals for approved products and product candidates and commercialize product candidates.

Our proprietary development pipeline consists primarily of clinical stage product candidates in oncology. Our lead oncology program is PEGPH20 (PEGylated recombinant human hyaluronidase), a molecular entity we are developing for the systemic treatment of tumors that accumulate HA. When HA accumulates in a tumor, it can cause higher pressure in the tumor, reducing blood flow into the tumor and with that, reduced access of cancer therapies to the tumor. PEGPH20 works by temporarily degrading HA surrounding cancer cells resulting in reduced pressure and increased blood flow to the tumor thereby enabling increased amounts of anticancer treatments administered concomitantly gaining access to the tumor. We are currently in Phase 2 and Phase 3 clinical testing for PEGPH20 in stage IV PDA (Studies 109-202 and 109-301), in Phase 1b clinical testing in non-small cell lung cancer (Study 107-201) and in Phase 1b clinical testing in non-small cell lung cancer and gastric cancer (Study 107-101).

Except where specifically noted or the context otherwise requires, references to "Halozyme," "the Company," "we," "our," and "us" in these notes to consolidated financial statements refer to Halozyme Therapeutics, Inc. and its wholly owned subsidiary, Halozyme, Inc., and Halozyme, Inc.'s wholly owned subsidiaries, Halozyme Holdings Ltd. and Halozyme Royalty LLC.

2. Summary of Significant Accounting Policies

Basis of Presentation

The consolidated financial statements include the accounts of Halozyme Therapeutics, Inc. and our wholly owned subsidiary, Halozyme, Inc., and Halozyme, Inc.'s wholly owned subsidiaries, Halozyme Holdings Ltd. and Halozyme Royalty LLC. All intercompany accounts and transactions have been eliminated.

Use of Estimates

The preparation of consolidated financial statements in conformity with U.S. generally accepted accounting principles ("U.S. GAAP") requires management to make estimates and assumptions that affect the amounts reported in our consolidated financial statements and accompanying notes. On an ongoing basis, we evaluate our estimates and judgments, which are based on historical and anticipated results and trends and on various other assumptions that management believes to be reasonable under the circumstances. By their nature, estimates are subject to an inherent degree of uncertainty and, as such, actual results may differ from management's estimates.

Cash Equivalents and Marketable Securities

Cash equivalents consist of highly liquid investments, readily convertible to cash, that mature within ninety days or less from date of purchase. Our cash equivalents consist of money market funds.

Marketable securities are investments with original maturities of more than ninety days from the date of purchase that are specifically identified to fund current operations. Marketable securities are considered available-for-sale. These investments are classified as current assets, even though the stated maturity date may be one year or more beyond the current balance sheet date which reflects management's intention to use the proceeds from the sale of these investments to fund our operations, as necessary. Such available-for-sale investments are carried at fair value with unrealized gains and losses recorded in other comprehensive gain (loss) and included as a separate component of stockholders' equity. The cost of marketable securities is adjusted for amortization of premiums or accretion of discounts to maturity, and such amortization or accretion is included in investment and other income, net in the consolidated statements of operations. We use the specific identification method for calculating realized gains and losses on marketable securities sold. Realized gains and losses and declines in value judged to be other-than-temporary on marketable securities, if any, are included in investment and other income, net in the consolidated statements of operations.

Restricted Cash

Under the terms of the leases on our facilities, we are required to maintain letters of credit as security deposits during the terms of such leases. At December 31, 2015 and 2014, restricted cash of $0.5 million was pledged as collateral for the letters of credit.

Fair Value of Financial Instruments

The authoritative guidance for fair value measurements establishes a three tier fair value hierarchy, which prioritizes the inputs used in measuring fair value. These tiers include: Level 1, defined as observable inputs such as quoted prices in active markets; Level 2, defined as inputs other than quoted prices in active markets that are either directly or indirectly observable; and Level 3, defined as unobservable inputs in which little or no market data exists, therefore requiring an entity to develop its own assumptions.

Our financial instruments include cash equivalents, available-for-sale marketable securities, accounts receivable, prepaid expenses and other assets, accounts payable, accrued expenses and long-term debt. Fair value estimates of these instruments are made at a specific point in time, based on relevant market information. These estimates may be subjective in nature and involve uncertainties and matters of significant judgment and therefore cannot be determined with precision. The carrying amount of cash equivalents, accounts receivable, prepaid expenses and other assets, accounts payable and accrued expenses are generally considered to be representative of their respective fair values because of the short-term nature of those instruments. Further, based on the borrowing rates currently available for loans with similar terms, we believe the fair value of long-term debt approximates its carrying value.

Available-for-sale marketable securities consist of corporate debt securities, commercial paper and certificates of deposit and were measured at fair value using Level 2 inputs. Level 2 financial instruments are valued using market prices on less active markets and proprietary pricing valuation models with observable inputs, including interest rates, yield curves, maturity dates, issue dates, settlement dates, reported trades, broker-dealer quotes, issue spreads, benchmark securities or other market related data. We obtain the fair value of Level 2 investments from our investment manager, who obtains these fair values from a third-party pricing service. We validate the fair values of Level 2 financial instruments provided by our investment manager by comparing these fair values to a third-party pricing source.

The following table summarizes, by major security type, our cash equivalents and marketable securities that are measured at fair value on a recurring basis and are categorized using the fair value hierarchy (in thousands):

	December 31, 2015			December 31, 2014		
	Level 1	Level 2	Total estimated fair value	Level 1	Level 2	Total estimated fair value
Cash equivalents:						
Money market funds	$ 38,595	$ —	$ 38,595	$ 42,685	$ —	$ 42,685
Available-for-sale marketable securities:						
Corporate debt securities	—	65,047	65,047	—	74,234	74,234
	$ 38,595	$ 65,047	$ 103,642	$ 42,685	$ 74,234	$ 116,919

There were no transfers between Level 1 and Level 2 of the fair value hierarchy for the years ended December 31, 2015 and 2014. We have no instruments that are classified within Level 3 as of December 31, 2015 and 2014.

Concentrations of Credit Risk, Sources of Supply and Significant Customers

We are subject to credit risk from our portfolio of cash equivalents and marketable securities. These investments were made in accordance with our investment policy which specifies the categories, allocations, and ratings of securities we may consider for investment. The primary objective of our investment activities is to preserve principal while at the same time maximizing the income we receive without significantly increasing risk. We maintain our cash and cash equivalent balances with one major commercial bank and marketable securities with another financial institution. Deposits held with the financial institutions exceed the amount of insurance provided on such deposits. We are exposed to credit risk in the event of a default by the financial institutions holding our cash, cash equivalents and marketable securities to the extent recorded on the balance sheet.

We are also subject to credit risk from our accounts receivable related to our product sales and revenues under our license and collaborative agreements. We have license and collaborative agreements with pharmaceutical companies under which we receive payments for license fees, milestone payments for specific achievements designated in the collaborative agreements, reimbursements of research and development services and supply of bulk formulation of rHuPH20. In addition, we sell *Hylenex*® recombinant in the United States to a limited number of established wholesale distributors in the pharmaceutical industry. Credit is extended based on an evaluation of the customer's financial condition, and collateral is not required. Management monitors our exposure to accounts receivable by periodically evaluating the collectibility of the accounts receivable based on a variety of factors including the length of time the receivables are past due, the financial health of the customer and historical experience. Based upon the review of these factors, we recorded no allowance for doubtful accounts at December 31, 2015 and 2014. Approximately 89% of the accounts receivable balance at December 31, 2015 represents amounts due from Roche and Lilly. Approximately 76% of the accounts receivable balance at December 31, 2014 represents amounts due from Roche and Pfizer.

The following table indicates the percentage of total revenues in excess of 10% with any single customer:

	Year Ended December 31,		
	2015	2014	2013
Roche	42%	57%	64%
Lilly	19%	—	—
AbbVie	17%	—	—
Janssen	1%	20%	—

We attribute revenues under collaborative agreements to the individual countries where the collaborator is headquartered. We attribute revenues from product sales to the individual countries to which the product is shipped. Worldwide revenues from external customers are summarized by geographic location in the following table (in thousands):

	Year Ended December 31,		
	2015	2014	2013
United States	$ 77,149	$ 31,397	$ 19,019
Switzerland	57,136	42,791	35,157
All other foreign	772	1,146	623
Total revenues	$ 135,057	$ 75,334	$ 54,799

For the years ended December 31, 2015, 2014 and 2013, we had no foreign based operations. As of December 31, 2015 and 2014, we had $0.3 million and $0.4 million, respectively, of research equipment in Germany.

We rely on two third-party manufacturers for the supply of bulk rHuPH20 for use in the manufacture of *Hylenex* recombinant and our other collaboration products and product candidates. Payments due to these suppliers represented 20% and 0% of the accounts payable balance at December 31, 2015 and 2014, respectively. We also rely on a third-party manufacturer for the fill and finish of *Hylenex* recombinant product under a contract. Payments due to this supplier represented 4% and 6% of the accounts payable balance at December 31, 2015 and 2014, respectively.

Accounts Receivable, Net

Accounts receivable is recorded at the invoiced amount and is non-interest bearing. Accounts receivable is recorded net of allowances for doubtful accounts, cash discounts for prompt payment, distribution fees and chargebacks. We recorded no allowance for doubtful accounts at December 31, 2015 and 2014 as the collectibility of accounts receivable was reasonably assured.

Inventories

Inventories are stated at lower of cost or market. Cost is determined on a first-in, first-out basis. Inventories are reviewed periodically for potential excess, dated or obsolete status. Management evaluates the carrying value of inventories on a regular basis, taking into account such factors as historical and anticipated future sales compared to quantities on hand, the price we expect to obtain for products in their respective markets compared with historical cost and the remaining shelf life of goods on hand.

Prior to receiving marketing approval from the U.S. Food and Drug Administration ("FDA") or comparable regulatory agencies in foreign countries, costs related to purchases of bulk rHuPH20 and raw materials and the manufacturing of the product candidates are recorded as research and development expense. All direct manufacturing costs incurred after receiving marketing approval are capitalized as inventory. Inventories used in clinical trials are expensed at the time the inventories are packaged for the clinical trials.

As of December 31, 2015 and 2014, inventories consisted of $1.4 million and $3.0 million of *Hylenex* recombinant inventory, respectively, and $8.1 million and $3.4 million of bulk rHuPH20, respectively, for use in the manufacture of Balxalta's and Roche's collaboration products.

Property and Equipment, Net

Property and equipment are recorded at cost, less accumulated depreciation and amortization. Equipment is depreciated using the straight-line method over their estimated useful lives of three years and leasehold improvements are amortized using the straight-line method over the estimated useful life of the asset or the lease term, whichever is shorter. Leased buildings under build-to-suit lease arrangements are capitalized and included in property and equipment when we are involved in the construction of the structural improvements or take construction risk prior to the commencement of the lease. Upon completion of the construction under the build-to-suit leases, we assess whether those arrangements qualify for sales recognition under the sale-leaseback accounting guidance. If we continue to be the deemed owner, the facilities would be accounted for as financing leases.

Impairment of Long-Lived Assets

We account for long-lived assets in accordance with authoritative guidance for impairment or disposal of long-lived assets. Long-lived assets are reviewed for events or changes in circumstances, which indicate that their carrying value may not be recoverable. For the year ended December 31, 2015, there was no impairment of the value of long-lived assets. For the year ended December 31, 2014, we recorded an impairment of $0.2 million relating to manufacturing equipment.

Deferred Rent

Rent expense is recorded on a straight-line basis over the initial term of the lease. The difference between rent expense accrued and amounts paid under lease agreements is recorded as deferred rent in the accompanying consolidated balance sheets.

Comprehensive Income (Loss)

Comprehensive income (loss) is defined as the change in equity during the period from transactions and other events and circumstances from non-owner sources.

Revenue Recognition

We generate revenues from product sales and payments received under collaborative agreements. Collaborative agreement payments may include nonrefundable fees at the inception of the agreements, license fees, milestone and event-based payments for specific achievements designated in the collaborative agreements, reimbursements of research and development services and supply of bulk rHuPH20, and/or royalties on sales of products resulting from collaborative arrangements.

We recognize revenues in accordance with the authoritative guidance for revenue recognition. We recognize revenue when all of the following criteria are met: (1) persuasive evidence of an arrangement exists; (2) delivery has occurred or services have been rendered; (3) the seller's price to the buyer is fixed or determinable; and (4) collectibility is reasonably assured.

Product Sales, Net

***Hylenex* Recombinant**

We sell *Hylenex* recombinant in the U.S. to wholesale pharmaceutical distributors, who sell the product to hospitals and other end-user customers. Sales to wholesalers provide for selling prices that are fixed on the date of sale, although we offer discounts to certain group purchasing organizations ("GPOs"), hospitals and government programs. The wholesalers take title to the product, bear the risk of loss of ownership and have economic substance to the inventory. Further, we have no significant obligations for future performance to generate pull-through sales.

We have developed sufficient historical experience and data to reasonably estimate future returns and chargebacks of *Hylenex* recombinant. As a result, we recognize *Hylenex* recombinant product sales and related cost of product sales at the time title transfers to the wholesalers.

Upon recognition of revenue from product sales of *Hylenex* recombinant, we record certain sales reserves and allowances as a reduction to gross revenue. These reserves and allowances include:

Product Returns. We allow the wholesalers to return product that is damaged or received in error. In addition, we accept unused product to be returned beginning six months prior to and ending twelve months following product expiration. Our estimates for expected returns of expired products are based primarily on an ongoing analysis of historical return patterns.

- *Distribution Fees*. The distribution fees, based on contractually determined rates, arise from contractual agreements we have with certain wholesalers for distribution services they provide with respect to *Hylenex* recombinant. These fees are generally a fixed percentage of the price of the product purchased by the wholesalers.
- *Prompt Payment Discounts*. We offer cash discounts to certain wholesalers as an incentive to meet certain payment terms. We estimate prompt payment discounts based on contractual terms, historical utilization rates, as available, and our expectations regarding future utilization rates.
- *Other Discounts and Fees*. We provide discounts to end-user members of certain GPOs under collective purchasing contracts between us and the GPOs. We also provide discounts to certain hospitals, who are members of the GPOs, with which we do not have contracts. The end-user members purchase products from the wholesalers at a contracted discounted price, and the wholesalers then charge back to us the difference between the current retail price and the price the end-users paid for the product. We also incur GPO administrative service fees for these transactions. In addition, we provide predetermined discounts under certain government programs. Our estimate for these chargebacks and fees takes into consideration contractual terms, historical utilization rates, as available, and our expectations regarding future utilization rates.

Allowances for product returns and chargebacks are based on amounts owed or to be claimed on the related sales. We believe that our estimated product returns for *Hylenex* recombinant requires a high degree of judgment and is subject to change based on our experience and certain quantitative and qualitative factors. In order to develop a methodology to reliably estimate future returns and provide a basis for recognizing revenue on sales to wholesale distributors, we analyzed many factors, including, without limitation: (1) actual *Hylenex* recombinant product return history, taking into account product expiration dating at the time of shipment, (2) re-order activities of the wholesalers as well as their customers and (3) levels of inventory in the wholesale channel. We have monitored actual return history on an individual product lot basis since product launch. We consider the dating of product at the time of shipment into the distribution channel and changes in the estimated levels of inventory within the distribution channel to estimate our exposure to returned product. We also consider historical chargebacks activity and current contract prices to estimate our exposure to returned product. Based on such data, we believe we have the information needed to reasonably estimate product returns and chargebacks.

We recognize product sales allowances as a reduction of product sales in the same period the related revenue is recognized. Because of the shelf life of *Hylenex* recombinant and our lengthy return period, there may be a significant period of time between when the product is shipped and when we issue credits on returned product. If actual results differ from our estimates, we will be required to make adjustments to these allowances in the future, which could have an effect on product sales revenue and earnings in the period of adjustments.

Bulk rHuPH20

Subsequent to receiving marketing approval from the FDA or comparable regulatory agencies in foreign countries, sales of bulk rHuPH20 for use in collaboration commercial products are recognized as product sales when the materials have met all the specifications required for the customer's acceptance and title and risk of loss have transferred to the customer. Following the receipt of European marketing approvals of Roche's Herceptin SC product in August 2013 and MabThera® SC product in March 2014 and Baxalta's HYQVIA product in May 2013, revenue from the sales of bulk rHuPH20 for these collaboration products has been recognized as product sales. For the years ended December 31, 2015 and 2014, we recognized $22.8 million and $23.5 million in product sales of bulk rHuPH20 for Roche's collaboration products, respectively. For the years ended December 31, 2015 and 2014, we recognized $6.4 million and zero in product sales of bulk rHuPH20 for Baxalta's collaboration product, respectively.

Revenues under Collaborative Agreements

We have license and collaboration agreements under which the collaborators obtained worldwide rights for the use of our proprietary rHuPH20 enzyme in the development and commercialization of the collaborators' biologic compounds identified as targets. The collaborative agreements may also contain other elements. Pursuant to the terms of these agreements, collaborators could be required to make various payments to us for each target, including nonrefundable upfront license fees, exclusivity fees, payments based on achievement of specified milestones designated in the collaborative agreements, annual maintenance fees, reimbursements of research and development services, payments for supply of bulk rHuPH20 for the collaborator and/or royalties on sales of products resulting from collaborative agreements.

In order to account for the multiple-element arrangements, we identify the deliverables included within the agreement and evaluate which deliverables represent units of accounting. We then determine the appropriate method of revenue recognition for each unit based on the nature and timing of the delivery process. Analyzing the arrangement to identify deliverables requires the use of judgment, and each deliverable may be an obligation to deliver services, a right or license to use an asset, or another performance obligation. The deliverables under our collaborative agreements include (i) the license to our rHuPH20 technology, (ii) at the collaborator's request, research and development services which are reimbursed at contractually determined rates, and (iii) at the collaborator's request, supply of bulk rHuPH20 which is reimbursed at our cost plus a margin. A delivered item is considered a separate unit of accounting when the delivered item has value to the collaborator on a standalone basis based on the consideration of the relevant facts and circumstances for each arrangement. We base this determination on the collaborators' ability to use the delivered items on their own without us supplying undelivered items, which we determine taking into consideration factors such as the research capabilities of the collaborator, the availability of research expertise in this field in the general marketplace, and the ability to procure the supply of bulk rHuPH20 from the market place.

Arrangement consideration is allocated at the inception of the agreement to all identified units of accounting based on their relative selling price. The relative selling price for each deliverable is determined using vendor specific objective evidence ("VSOE") of selling price or third-party evidence of selling price if VSOE does not exist. If neither VSOE nor third-party evidence of selling price exists, we use our best estimate of the selling price for the deliverable. The amount of allocable arrangement consideration is limited to amounts that are not contingent upon the delivery of additional items or meeting other specified performance conditions. The consideration received is allocated among the separate units of accounting, and the applicable revenue recognition criteria are applied to each of the separate units. Changes in the allocation of the sales price between delivered and undelivered elements can impact revenue recognition but do not change the total revenue recognized under any agreement.

Nonrefundable upfront license fees are recognized upon delivery of the license if facts and circumstances dictate that the license has standalone value from the undelivered items, which generally include research and development services and the manufacture of bulk rHuPH20, the relative selling price allocation of the license is equal to or exceeds the upfront license fee, persuasive evidence of an arrangement exists, our price to the collaborator is fixed or determinable and collectibility is reasonably assured. Upfront license fees are deferred if facts and circumstances dictate that the license does not have standalone value. The determination of the length of the period over which to defer revenue is subject to judgment and estimation and can have an impact on the amount of revenue recognized in a given period.

When collaborators have rights to elect additional targets, the rights are assessed as to whether they represent deliverables at the inception of the arrangement. In assessing these contingent deliverables, we consider whether the right is a substantive option. We consider a right to be a substantive option if the election of the additional targets is not essential to the functionality of the other elements in the arrangement and if we are truly at risk of the right being exercised. If the right is determined to be a substantive option, we further consider whether the right is priced at a significant and incremental discount that should be accounted for as an element of the arrangement. If a right is determined to be a substantive option and is not priced at a significant and incremental discount, it is not treated as a deliverable in the arrangement and receives no allocation at the inception of the arrangement of the original arrangement consideration. The right is then accounted for when and if it is exercised.

Certain of our collaborative agreements provide for milestone payments upon achievement of development and regulatory events and/or specified sales volumes of commercialized products by the collaborator. We account for milestone payments in accordance with the provisions of ASU No. 2010-17, *Revenue Recognition - Milestone Method* ("Milestone Method of Accounting"). We recognize consideration that is contingent upon the achievement of a milestone in its entirety as revenue in the period in which the milestone is achieved only if the milestone is substantive in its entirety. A milestone is considered substantive when it meets all of the following criteria:

1. The consideration is commensurate with either the entity's performance to achieve the milestone or the enhancement of the value of the delivered item(s) as a result of a specific outcome resulting from the entity's performance to achieve the milestone;
2. The consideration relates solely to past performance; and
3. The consideration is reasonable relative to all of the deliverables and payment terms within the arrangement.

A milestone is defined as an event (i) that can only be achieved based in whole or in part on either the entity's performance or on the occurrence of a specific outcome resulting from the entity's performance, (ii) for which there is substantive uncertainty at the date the arrangement is entered into that the event will be achieved and (iii) that would result in additional payments being due to the vendor.

Reimbursements of research and development services are recognized as revenue during the period in which the services are performed as long as there is persuasive evidence of an arrangement, the fee is fixed or determinable and collection of the related receivable is reasonably assured. Revenue from the manufacture of bulk rHuPH20 is recognized when the materials have met all specifications required for the collaborator's acceptance and title and risk of loss have transferred to the collaborator. We do not directly control when any collaborator will request research and development services or supply of bulk rHuPH20; therefore, we cannot predict when we will recognize revenues in connection with research and development services and supply of bulk rHuPH20.

Since we receive royalty reports 60 days after quarter end, royalty revenue from sales of collaboration products by our collaborators will be recognized in the quarter following the quarter in which the corresponding sales occurred.

The collaborative agreements typically provide the collaborators the right to terminate such agreement in whole or on a product-by-product or target-by-target basis at any time upon 30 to 90 days prior written notice to us. There are no performance, cancellation, termination or refund provisions in any of our collaborative agreements that contain material financial consequences to us.

Refer to Note 4, *"Collaborative Agreements,"* for further discussion on our collaborative arrangements.

Cost of Product Sales

Cost of product sales consists primarily of raw materials, third-party manufacturing costs, fill and finish costs, freight costs, internal costs and manufacturing overhead associated with the production of *Hylenex* recombinant and bulk rHuPH20 for use in approved collaboration products. Cost of product sales also consists of the write-down of excess, dated and obsolete inventories and the write-off of any inventories that do not meet certain product specifications, if any.

Prior to European marketing approvals of Roche's collaboration products Herceptin SC in August 2013 and MabThera SC in March 2014 and Baxalta's collaboration product HYQVIA in May 2013, all costs related to the manufacturing of bulk rHuPH20 for these collaboration products were charged to research and development expenses in the periods such costs were incurred.

Therefore, cost of product sales of these bulk rHuPH20 for the year ended December 31, 2013 was materially reduced due to the exclusion of the manufacturing costs that were charged to research and development expenses in the periods prior to receiving marketing approvals. For the year ended December 31, 2014, cost of product sales of bulk rHuPH20 excluded $1.0 million in manufacturing costs, of which $0.9 million and $0.1 million were charged to research and development expenses in the years ended December 31, 2013 and 2012, respectively. There was no bulk rHuPH20 excluded from cost of product sales for the year ended December 31, 2015.

Research and Development Expenses

Research and development expenses include salaries and benefits, facilities and other overhead expenses, external clinical trial expenses, research related manufacturing services, contract services and other outside expenses. Research and development expenses are charged to operations as incurred when these expenditures relate to our research and development efforts and have no alternative future uses. After receiving approval from the FDA or comparable regulatory agencies in foreign countries for a product, costs related to purchases and manufacturing of bulk rHuPH20 for such product are capitalized as inventory. The manufacturing costs of bulk rHuPH20 for the collaboration products, Herceptin SC, MabThera SC and HYQVIA, incurred after the receipt of marketing approvals are capitalized as inventory.

We are obligated to make upfront payments upon execution of certain research and development agreements. Advance payments, including nonrefundable amounts, for goods or services that will be used or rendered for future research and development activities are deferred. Such amounts are recognized as expense as the related goods are delivered or the related services are performed or such time when we do not expect the goods to be delivered or services to be performed.

Milestone payments that we make in connection with in-licensed technology for a particular research and development project that have no alternative future uses (in other research and development projects or otherwise) and therefore no separate economic value are expensed as research and development costs at the time the costs are incurred. We have no in-licensed technologies that have alternative future uses in research and development projects or otherwise.

Clinical Trial Expenses

Payments in connection with our clinical trials are often made under contracts with multiple contract research organizations that conduct and manage clinical trials on our behalf. The financial terms of these agreements are subject to negotiation and vary from contract to contract and may result in uneven payment flows. Generally, these agreements set forth the scope of work to be performed at a fixed fee, unit price or on a time and materials basis. Payments under these contracts depend on factors such as the successful enrollment or treatment of patients or the completion of other clinical trial milestones.

Expenses related to clinical trials are accrued based on our estimates and/or representations from service providers regarding work performed, including actual level of patient enrollment, completion of patient studies and progress of the clinical trials. Other incidental costs related to patient enrollment or treatment are accrued when reasonably certain. If the contracted amounts are modified (for instance, as a result of changes in the clinical trial protocol or scope of work to be performed), we modify our accruals accordingly on a prospective basis. Revisions in the scope of a contract are charged to expense in the period in which the facts that give rise to the revision become reasonably certain. Historically, we have had no changes in clinical trial expense accruals that had a material impact on our consolidated results of operations or financial position.

Share-Based Compensation

We record compensation expense associated with stock options, restricted stock awards ("RSAs"), restricted stock units ("RSUs"), and RSUs with performance conditions ("PRSUs") in accordance with the authoritative guidance for stock-based compensation. The cost of employee services received in exchange for an award of an equity instrument is measured at the grant date, based on the estimated fair value of the award, and is recognized as expense on a straight-line basis, net of estimated forfeitures, over the requisite service period of the award. Share-based compensation expense recognized during the period is based on the value of the portion of share-based payment awards that is ultimately expected to vest during the period. Share-based compensation expense for an award with a performance condition is recognized when the achievement of such performance condition is determined to be probable. If the outcome of such performance condition is not determined to be probable or is not met, no compensation expense is recognized and any previously recognized compensation expense is reversed. Share-based compensation expense recognition is based on awards ultimately expected to vest and is reduced for estimated forfeitures. The authoritative guidance requires forfeitures to be estimated at the time of grant and revised, if necessary, in subsequent periods if actual forfeitures differ from those estimates. Pre-vesting forfeitures were estimated to be approximately 10% for employees for the years ended December 31, 2015, 2014 and 2013 based on our historical experience for the years then ended.

Income Taxes

We provide for income taxes using the liability method. Under this method, deferred income tax assets and liabilities are determined based on the differences between the financial statement carrying amounts of existing assets and liabilities at each year end and their respective tax bases and are measured using enacted tax rates in effect for the year in which the differences are expected to affect taxable income. Deferred tax assets and other tax benefits are recorded when it is more likely than not that the position will be sustained upon audit. Valuation allowances have been established to reduce our net deferred tax assets to zero, as we believe that it is more likely than not that such assets will not be realized.

Net Loss Per Share

Basic net loss per common share is computed by dividing net loss for the period by the weighted average number of common shares outstanding during the period, without consideration for common stock equivalents. Outstanding stock options, unvested RSAs, unvested RSUs and unvested PRSUs are considered common stock equivalents and are only included in the calculation of diluted earnings per common share when net income is reported and their effect is dilutive. Because of our net loss, outstanding stock options, unvested RSAs, unvested RSUs and unvested PRSUs totaling approximately 9,780,593, 8,405,903 and 8,070,141 were excluded from the calculation of diluted net loss per common share for the years ended December 31, 2015, 2014 and 2013, respectively, because their effect was anti-dilutive. PRSUs for which the performance conditions were satisfied or probable of being satisfied were included in potentially dilutive securities at December 31, 2015 and 2014.

Segment Information

We operate our business in one segment, which includes all activities related to the research, development and commercialization of our proprietary enzymes. This segment also includes revenues and expenses related to (i) research and development and bulk rHuPH20 manufacturing activities conducted under our collaborative agreements with third parties and (ii) product sales of *Hylenex* recombinant. The chief operating decision-maker reviews the operating results on an aggregate basis and manages the operations as a single operating segment.

Adoption and Pending Adoption of Recent Accounting Pronouncements

In January 2016, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update No. 2016-01, *Financial Instruments - Overall (Subtopic 825-10) Recognition and Measurement of Financial Assets and Financial Liabilities* ("ASU 2016-01"). ASU 2016-01 supersedes the guidance to classify equity securities with readily determinable fair values into different categories (that is, trading or available-for-sale) and requires equity securities (including other ownership interests, such as partnerships, unincorporated joint ventures, and limited liability companies) to be measured at fair value with changes in the fair value recognized through net income. An entity's equity investments that are accounted for under the equity method of accounting or result in consolidation of an investee are not included within the scope of ASU 2016-01. ASU 2016-01 requires public business entities that are required to disclose fair value of financial instruments measured at amortized cost on the balance sheet to measure that fair value using the exit price notion consistent with Topic 820, Fair Value Measurement. ASU 2016-01 is effective for our interim and annual reporting beginning on January 1, 2018. Entities should apply the amendments by means of a cumulative-effect adjustment to the balance sheet as of the beginning of the fiscal year of adoption. The amendments related to equity securities without readily determinable fair values (including disclosure requirements) should be applied prospectively to equity investments that exist as of the date of adoption of ASU 2016-01. We currently do not hold equity securities and we are evaluating the effect that the updated standard will have on our consolidated financial statements and related disclosures.

In November 2015, the FASB issued Accounting Standards Update 2015-17, *Balance Sheet Classification of Deferred Taxes* ("ASU 2015-17"). ASU 2015-17 requires companies to classify all deferred tax assets and liabilities as non-current on the balance sheet instead of separating deferred taxes into current and non-current amounts. For public business entities, the guidance is effective for financial statements issued for annual periods beginning after December 15, 2016, and interim periods within those annual periods. Early adoption is permitted for all companies in any interim or annual period. The guidance may be adopted on either a prospective or retrospective basis. We have not yet selected a transition method and we are currently evaluating the effect that the updated standard will have on our consolidated financial statements and related disclosures.

In July 2015, the FASB issued Accounting Standards Update No. 2015-11, *Inventory (Topic 330): Simplifying the Measurement of Inventory* ("ASU 2015-11"). ASU 2015-11 requires that for entities that measure inventory using the first-in, first-out method, inventory should be measured at the lower of cost and net realizable value. Topic 330, Inventory, currently requires an entity to measure inventory at the lower of cost or market. Market could be replacement cost, net realizable value, or net realizable value less an approximately normal profit margin. Net realizable value is the estimated selling prices in the ordinary course of business, less reasonably predictable costs of completion, disposal, and transportation. ASU 2015-11 is effective for fiscal years beginning after December 15, 2016, and interim periods within those fiscal years. The amendments should be applied prospectively with earlier application permitted as of the beginning of an interim or annual reporting period. The adoption of ASU 2015-11 is not expected to have a material impact on our consolidated financial position or results of operations.

In April 2015, the FASB issued Accounting Standards Update No. 2015-03, *Interest - Imputation of Interest (Subtopic 835-30): Simplifying the Presentation of Debt Issuance Costs* ("ASU 2015-03"). ASU 2015-03 requires that debt issuance costs related to a recognized debt liability be presented in the balance sheet as a direct deduction from that debt liability, consistent with the presentation of a debt discount. The recognition and measurement guidance for debt issuance costs is not affected by ASU 2015-03. ASU 2015-03 is effective for fiscal years beginning after December 15, 2015, and interim periods within those fiscal years. Early application is permitted. The adoption of ASU 2015-03 is not expected to have a material impact on our consolidated financial position or results of operations.

In August 2014, the FASB issued Accounting Standards Update No. 2014-15, *Presentation of Financial Statements — Going Concern* ("ASU 2014-15"). The provisions of ASU 2014-15 provide that in connection with preparing financial statements for each annual and interim reporting period, an entity's management should evaluate whether there are conditions or events, considered in the aggregate, that raise substantial doubt about the entity's ability to continue as a going concern within one year after the date that the financial statements are issued (or within one year after the date that the financial statements are available to be issued when applicable). ASU 2014-15 is effective for the annual reporting period ending after December 15, 2016, and for annual and interim periods thereafter. Early adoption is permitted. The adoption of ASU 2014-15 is not expected to have a material impact on our consolidated financial position or results of operations.

In May 2014, the FASB issued Accounting Standards Update No. 2014-09, *Revenue from Contracts with Customers* ("ASU 2014-09"). ASU 2014-09 will eliminate transaction-specific and industry-specific revenue recognition guidance under current U.S. GAAP and replace it with a principle-based approach for determining revenue recognition. ASU 2014-09 will require that companies recognize revenue based on the value of transferred goods or services as they occur in the contract. ASU 2014-09 also will require additional disclosure about the nature, amount, timing and uncertainty of revenue and cash flows arising from customer contracts, including significant judgments and changes in judgments and assets recognized from costs incurred to obtain or fulfill a contract. ASU 2014-09 is effective for our interim and annual reporting beginning on January 1, 2018. Entities can transition to the standard either retrospectively or as a cumulative-effect adjustment as of the date of adoption. We have not yet selected a transition method and we are currently evaluating the effect that the updated standard will have on our consolidated financial statements and related disclosures.

3. Marketable Securities

Available-for-sale marketable securities consisted of the following (in thousands):

	December 31, 2015			
Description	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Estimated Fair Value
Corporate debt securities	$ 65,146	$ —	$ (99)	$ 65,047

	December 31, 2014			
Description	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Estimated Fair Value
Corporate debt securities	$ 74,275	$ 2	$ (43)	$ 74,234

As of December 31, 2015, $59.0 million of our available-for-sale marketable securities were scheduled to mature within the next twelve months. There were $79.7 million of available-for-sale securities that matured during the year ended December 31, 2015. There were no realized gains or losses for the years ended December 31, 2015, 2014 and 2013. As of December 31, 2015, all available-for-sale marketable securities were in a gross unrealized loss position, all of which had been in such position for less than twelve months. Based on our review of these marketable securities, we believe we had no other-than-temporary impairments on these securities as of December 31, 2015 because we do not intend to sell these securities and it is not more-likely-than-not that we will be required to sell these securities before the recovery of their amortized cost basis.

4. Collaborative Agreements

Roche Collaboration

In December 2006, we and Roche entered into a collaboration and license agreement, under which Roche obtained a worldwide, exclusive license to develop and commercialize product combinations of rHuPH20 and up to thirteen Roche target compounds (the "Roche Collaboration"). As of December 31, 2015, Roche has elected a total of five targets, two of which are exclusive, and retains the option to develop and commercialize rHuPH20 with three additional targets. In August 2013, Roche received European marketing approval for its collaboration product, Herceptin SC, for the treatment of patients with HER2-positive breast cancer and launched Herceptin SC in the European Union ("EU") in September 2013.

In March 2014, Roche received European marketing approval for its collaboration product, MabThera SC, for the treatment of patients with common forms of non-Hodgkin lymphoma ("NHL"). In June 2014, Roche launched MabThera SC in the EU which triggered a $5.0 million sales-based payment to us for the achievement of the first commercial sale pursuant to the terms of the Roche Collaboration.

Roche assumes all development, manufacturing, clinical, regulatory, sales and marketing costs under the Roche Collaboration, while we are responsible for the supply of bulk rHuPH20. We are entitled to receive reimbursements for providing research and development services and supplying bulk rHuPH20 to Roche at its request.

Under the terms of the Roche Collaboration, Roche pays us a royalty on each product commercialized under the agreement consisting of a mid-single digit percent of the net sales of such product. Unless terminated earlier in accordance with its terms, the Roche Collaboration continues in effect until the expiration of Roche's obligation to pay royalties. Roche has the obligation to pay royalties to us with respect to each product commercialized in each country, during the period equal to the longer of: (a) the duration of any valid claim of our patents covering rHuPH20 or other specified patents developed under the Roche Collaboration which valid claim covers the product in such country or (b) ten years following the date of the first commercial sale of such product in such country.

As of December 31, 2015, we have received $79.0 million from Roche, excluding royalties and reimbursements for providing research and development services and supplying bulk rHuPH20. The amounts received consisted of a $20.0 million upfront license fee payment for the application of rHuPH20 to the initial three Roche exclusive targets, $23.0 million in connection with Roche's election of two additional exclusive targets and annual license maintenance fees for the right to designate the remaining targets as exclusive targets, $13.0 million in clinical development milestone payments, $8.0 million in regulatory milestone payments and $15.0 million in sales-based payments. Due to our continuing involvement obligations (for example, support activities associated with rHuPH20), revenues from the upfront payment, exclusive designation fees, annual license maintenance fees and sales-based payments were deferred and are being amortized over the remaining term of the Roche Collaboration.

For the years ended December 31, 2015, 2014 and 2013, we recognized approximately $4.5 million, $8.1 million, and $4.6 million, respectively, of Roche deferred revenues as revenues under collaborative agreements. In addition, for the years ended December 31, 2015, 2014 and 2013, we recognized approximately zero, $2.0 million and $1.3 million, respectively, of deferred bulk rHuPH20 sales revenue as product sales revenue. Total Roche deferred revenues was approximately $43.5 million and $42.7 million as of December 31, 2015 and 2014, respectively. There were no revenues recognized related to milestone payments under this collaboration for the years ended December 31, 2015, 2014 and 2013.

Baxalta Collaboration

In September 2007, we and Baxalta entered into a collaboration and license agreement, under which Baxalta obtained a worldwide, exclusive license to develop and commercialize HYQVIA, a combination of Baxalta's current product GAMMAGARD LIQUID™ and our patented rHuPH20 enzyme (the "Baxalta Collaboration"). In May 2013, the European Commission granted Baxalta marketing authorization in all EU Member States for the use of HYQVIA (solution for subcutaneous use), a combination of GAMMAGARD LIQUID and rHuPH20 in dual vial units, as replacement therapy for adult patients with primary and secondary immunodeficiencies. Baxalta launched HYQVIA in the EU in July 2013. In September 2014, the FDA approved HYQVIA for treatment of adult patients with primary immunodeficiency. In October 2014, Baxalta announced the launch and first shipments of HYQVIA in the U.S.

The Baxalta Collaboration is applicable to both kit and formulation combinations. Baxalta assumes all development, manufacturing, clinical, regulatory, sales and marketing costs under the Baxalta Collaboration, while we are responsible for the supply of bulk rHuPH20. We perform research and development activities and supply bulk rHuPH20 at the request of Baxalta, and are reimbursed by Baxalta under the terms of the Baxalta Collaboration. In addition, Baxalta has certain product development and commercialization obligations in major markets identified in the Baxalta Collaboration.

Unless terminated earlier in accordance with its terms, the Baxalta Collaboration continues in effect until the expiration of Baxalta's obligation to pay royalties to us. Baxalta has the obligation to pay royalties, with respect to each product commercialized in each country, during the period equal to the longer of: (a) the duration of any valid claim of our patents covering rHuPH20 or other specified patents developed under the Baxalta Collaboration which valid claim covers the product in such country or (b) ten years following the date of the first commercial sale of such product in such country.

As of December 31, 2015, we have received $17.0 million under the Baxalta Collaboration, excluding royalties and reimbursements for providing research and development services and supplying bulk rHuPH20. The amounts received consisted of a $10.0 million upfront license fee payment, a $3.0 million regulatory milestone payment and a $4.0 million sales-based payment. Baxalta pays us a royalty on HYQVIA consisting of a mid-single digit percent of the net sales of such product. Due to our continuing involvement obligations (for example, support activities associated with rHuPH20 enzyme), the upfront license fee and sales-based payments were deferred and are being recognized over the term of the Baxalta Collaboration.

For the years ended December 31, 2015, 2014 and 2013, we recognized approximately $0.8 million, $0.8 million, and $0.6 million, respectively, of Baxalta deferred revenues as revenues under collaborative agreements. In addition, for the year ended December 31, 2015, we recognized approximately $1.7 million of deferred bulk rHuPH20 sales revenue as product sales revenue, with no such revenues recognized in the years ended December 31, 2014 and 2013. Total Baxalta deferred revenues was approximately $9.0 million and $10.9 million as of December 31, 2015 and 2014, respectively. There were no revenues recognized related to milestone payments under this collaboration for the years ended December 31, 2015, 2014 and 2013.

Other Collaborations

In December 2015, we and Eli Lilly and Company ("Lilly") entered into a collaboration and license agreement, under which Lilly has the worldwide license to develop and commercialize products combining our patented rHuPH20 enzyme with Lilly proprietary biologics directed at up to five targets (the "Lilly Collaboration"). Targets, once selected, will be on an exclusive, global basis. As of December 31, 2015, we have recognized $25.0 million as revenue for the license fee of one specified exclusive target and one specified semi-exclusive target. Lilly has the right to elect up to three additional targets for additional fees. The upfront license payment may be followed by event-based payments subject to Lilly's achievement of specified development, regulatory and sales-based milestones. In addition, Lilly will pay tiered royalties if products under the collaboration are commercialized. Unless terminated earlier in accordance with its terms, the Lilly Collaboration continues in effect until the later of: (i) expiration of the last to expire of the valid claims of our patents covering rHuPH20 or other specified patents developed under the collaboration which valid claim covers a product developed under the collaboration, and (ii) expiration of the last to expire royalty term for a product developed under the collaboration. The royalty term of a product developed under the Lilly Collaboration, with respect to each country, consists of the period equal to the longer of: (a) the duration of any valid claim of our patents covering rHuPH20 or other specified patents developed under the collaboration which valid claim covers the product in such country or (b) ten years following the date of the first commercial sale of such product in such country. Lilly may terminate the agreement prior to expiration for any reason in its entirety or on a target-by-target basis upon 90 days prior written notice to us. Upon any such termination, the license granted to Lilly (in total or with respect to the terminated target, as applicable) will terminate provided, however, that in the event of expiration of the agreement, the licenses granted will become perpetual, non-exclusive and fully paid.

In June 2015, we and AbbVie, Inc. ("AbbVie") entered into a collaboration and license agreement, under which AbbVie has the worldwide license to develop and commercialize products combining our patented rHuPH20 enzyme with AbbVie proprietary biologics directed at up to nine targets (the "AbbVie Collaboration"). Targets, once selected, will be on an exclusive, global basis. As of December 31, 2015, we have received a $23.0 million payment for the license fee of one specified exclusive target, TNF alpha. AbbVie has announced plans to develop rHuPH20 with adalimumab (HUMIRA®) which may allow reduced number of induction injections and deliver additional performance benefits. AbbVie has the right to elect up to eight additional targets for additional fees. The upfront license payment may be followed by event-based payments subject to AbbVie's achievement of specified development, regulatory and sales-based milestones. In addition, AbbVie will pay tiered royalties if products under the collaboration are commercialized. Unless terminated earlier in accordance with its terms, the AbbVie Collaboration continues in effect until the later of: (i) expiration of the last to expire of the valid claims of our patents covering rHuPH20 or other specified patents developed under the collaboration which valid claim covers a product developed under the collaboration, and (ii) expiration of the last to expire royalty term for a product developed under the collaboration. The royalty term of a product developed under the AbbVie Collaboration, with respect to each country, consists of the period equal to the longer of: (a) the duration of any valid claim of our patents covering rHuPH20 or other specified patents developed under the collaboration which valid claim covers the product in such country or (b) ten years following the date of the first commercial sale of such product in such country. AbbVie may terminate the agreement prior to expiration for any reason in its entirety or on a target-by-target basis upon 90 days prior written notice to us. Upon any such termination, the license granted to AbbVie (in total or with respect to the terminated target, as applicable) will terminate provided, however, that in the event of expiration of the agreement, the licenses granted will become perpetual, non-exclusive and fully paid.

In December 2014, we and Janssen entered into a collaboration and license agreement, under which Janssen has the worldwide license to develop and commercialize products combining our patented rHuPH20 enzyme with Janssen proprietary biologics directed at up to five targets (the "Janssen Collaboration"). Targets, once selected, will be on an exclusive, global basis. As of December 31, 2015, we have received a $15.0 million payment for the license fee of one specified exclusive target, CD38. Janssen has the right to elect four additional targets in the future upon payment of additional fees. Unless terminated earlier in accordance with its terms, the Janssen Collaboration continues in effect until the later of (i) expiration of the last to expire of the valid claims of our patents covering rHuPH20 or other specified patents developed under the collaboration which valid claim covers a product developed under the collaboration, and (ii) expiration of the last to expire royalty term for a product developed under the collaboration. The royalty term of a product developed under the Janssen Collaboration, with respect to each country, consists of the period equal to the longer of: (a) the duration of any valid claim of our patents covering rHuPH20 or other specified patents developed under the collaboration which valid claim covers the product in such country or (b) ten years following the date of the first commercial sale of such product in such country. Janssen may terminate the agreement prior to expiration for any reason in its entirety or on a target-by-target basis upon 90 days prior written notice to us. Upon any such termination, the license granted to Janssen (in total or with respect to the terminated target, as applicable) will terminate provided, however, that in the event of expiration of the agreement, the licenses granted will become perpetual, non-exclusive and fully paid.

In December 2012, we and Pfizer entered into a collaboration and license agreement, under which Pfizer has the worldwide license to develop and commercialize products combining our patented rHuPH20 enzyme with Pfizer proprietary biologics directed at up to six targets (the "Pfizer Collaboration"). Targets may be selected on an exclusive or non-exclusive basis. As of December 31, 2015, we have received $11.0 million in upfront and license fee payments for the licenses to four specified exclusive targets. One of the targets is proprotein convertase subtilisin/kexin type 9, also known as PCSK9. Pfizer is also developing rivipansel directed to another target under the collaboration to treat vaso-occlusive crisis in individuals with sickle cell disease. Pfizer has the right to elect two additional targets in the future upon payment of additional fees. Unless terminated earlier in accordance with its terms, the Pfizer Collaboration continues in effect until the later of (i) expiration of the last to expire of the valid claims of our patents covering rHuPH20 or other specified patents developed under the collaboration which valid claim covers a product developed under the collaboration, and (ii) expiration of the last to expire royalty term for a product developed under the collaboration. The royalty term of a product developed under the Pfizer Collaboration, with respect to each country, consists of the period equal to the longer of: (a) the duration of any valid claim of our patents covering rHuPH20 or other specified patents developed under the collaboration which valid claim covers the product in such country or (b) ten years following the date of the first commercial sale of such product in such country. Pfizer may terminate the agreement prior to expiration for any reason in its entirety or on a target-by-target basis upon 30 days prior written notice to us. Upon any such termination, the license granted to Pfizer (in total or with respect to the terminated target, as applicable) will terminate, provided, however, that in the event of expiration of the agreement, the licenses granted will become perpetual, non-exclusive and fully paid.

At the inception of the Pfizer, Janssen, AbbVie and Lilly arrangements, we identified the deliverables in each arrangement to include the license, research and development services and supply of bulk rHuPH20. We have determined that the license, research and development services and supply of bulk rHuPH20 individually represent separate units of accounting, because each deliverable has standalone value. We determined that the rights to elect additional targets in the future upon the payment of additional license fees are substantive options that are not priced at a significant and incremental discount. Therefore, we determined for each collaboration that the rights to elect additional targets are not deliverables at the inception of the arrangement. The estimated selling prices for the units of accounting we identified were determined based on market conditions, the terms of comparable collaborative arrangements for similar technology in the pharmaceutical and biotech industry and entity-specific factors such as the terms of our previous collaborative agreements, our pricing practices and pricing objectives. The arrangement consideration was allocated to the deliverables based on the relative selling price method and the nature of the research and development services to be performed for the collaborator.

The amount allocable to the delivered unit or units of accounting is limited to the amount that is not contingent upon the delivery of additional items or meeting other specified performance conditions (non-contingent amount). As such, we excluded from the allocable arrangement consideration the event-based payments, milestone payments, annual exclusivity fees and royalties regardless of the probability of receipt. Based on the results of our analysis, we allocated the $11.0 million license fees from Pfizer, the $15.0 million upfront license fee from Janssen, the $23.0 million upfront license fee from AbbVie and the $25.0 million upfront license fee from Lilly to the license fee deliverable under each of the arrangements. We determined that the upfront payments were earned upon the granting of the worldwide, exclusive right to our technology to the collaborators in these arrangements. As a result, we recognized the $11.0 million license fees under the Pfizer Collaboration, the $15.0 million upfront license fee under the Janssen Collaboration, the $23.0 million upfront license fee under the AbbVie Collaboration and the $25.0 million upfront license fee under the Lilly Collaboration as revenues under collaborative agreements in the period when such license fees were earned. Revenues recognized related to event-based payments or milestone payments under these collaborations were $1.0 million, $0 and $0 for the years ended December 31, 2015, 2014 and 2013.

The collaborators are each solely responsible for the development, manufacturing and marketing of any products resulting from their respective collaborations. We are entitled to receive payments for research and development services and supply of bulk rHuPH20 to these collaborators if requested by such collaborator. We recognize amounts allocated to research and development services as revenues under collaborative agreements as the related services are performed. We recognize amounts allocated to the sales of bulk rHuPH20 as revenues under collaborative agreements when such bulk rHuPH20 has met all required specifications by the collaborators and the related title and risk of loss and damages have passed to the collaborators. We cannot predict the timing of delivery of research and development services and bulk rHuPH20 as they are at the collaborators' requests.

In May 2011 and June 2011, we entered into collaboration and license agreements with ViroPharma Incorporated and Intrexon Corporation, respectively. These collaboration agreements were terminated effective May 2014.

Pursuant to the terms of our collaboration agreements with Roche and Pfizer, certain future payments meet the definition of a milestone in accordance with the Milestone Method of Accounting. We are entitled to receive additional milestone payments for the successful development of the elected targets in the aggregate of up to approximately $54.0 million upon achievement of specified clinical development milestone events and up to approximately $12.0 million upon achievement of specified regulatory milestone events in connection with specified regulatory filings and receipt of marketing approvals.

5. Certain Balance Sheet Items

Accounts receivable, net consisted of the following (in thousands):

	December 31, 2015	December 31, 2014
Accounts receivable from revenues under collaborative agreements	$ 25,939	$ 1,266
Accounts receivable from product sales to collaborators	4,996	6,361
Accounts receivable from other product sales	2,442	2,133
Total accounts receivable	33,377	9,760
Allowance for distribution fees and discounts	(967)	(611)
Total accounts receivable, net	$ 32,410	$ 9,149

Inventories consisted of the following (in thousands):

	December 31, 2015	December 31, 2014
Raw materials	$ 677	$ 553
Work-in-process	8,481	5,207
Finished goods	331	646
Total inventories	$ 9,489	$ 6,406

Prepaid expenses and other assets consisted of the following (in thousands):

	December 31, 2015	December 31, 2014
Prepaid manufacturing expenses	$ 16,155	$ 6,339
Prepaid research and development expenses	9,225	2,380
Other prepaid expenses	1,198	1,094
Other assets	530	1,535
Total prepaid expenses and other assets	27,108	11,348
Less long-term portion	5,574	1,205
Total prepaid expenses and other assets, current	$ 21,534	$ 10,143

Property and equipment, net consisted of the following (in thousands):

	December 31, 2015	December 31, 2014
Research equipment	$ 9,666	$ 8,474
Computer and office equipment	2,570	2,178
Leasehold improvements	2,025	1,518
Subtotal	14,261	12,170
Accumulated depreciation and amortization	(10,318)	(9,219)
Property and equipment, net	$ 3,943	$ 2,951

Depreciation and amortization expense was approximately $1.7 million, $1.8 million and $1.2 million for the years ended December 31, 2015, 2014 and 2013, respectively.

Accrued expenses consisted of the following (in thousands):

	December 31, 2015	December 31, 2014
Accrued outsourced research and development expenses	$ 8,617	$ 4,383
Accrued compensation and payroll taxes	8,636	5,923
Accrued outsourced manufacturing expenses	6,205	2,112
Other accrued expenses	4,118	2,023
Total accrued expenses	27,576	14,441
Less long-term accrued outsourced research and development expenses	784	480
Total accrued expenses, current	$ 26,792	$ 13,961

Long-term accrued outsourced research and development is included in other long-term liabilities in the consolidated balance sheets.

Deferred revenue consisted of the following (in thousands):

	December 31, 2015	December 31, 2014
Collaborative agreements	$ 53,223	$ 53,479
Product sales	—	1,155
Total deferred revenue	53,223	54,634
Less current portion	9,304	7,367
Deferred revenue, net of current portion	$ 43,919	$ 47,267

6. Long-Term Debt, Net

In December 2013, we entered into an Amended and Restated Loan and Security Agreement (the "Loan Agreement") with Oxford Finance LLC ("Oxford") and Silicon Valley Bank ("SVB") (collectively, the "Lenders"), amending and restating in its entirety our original loan agreement with the Lenders, dated December 2012. The Loan Agreement provided for an additional $20 million principal amount of new term loan, bringing the total term loan balance to $50 million. The proceeds are to be used for working capital and general business requirements. The amended term loan facility matures on January 1, 2018.

In January 2015, we entered into the second amendment to the Loan Agreement with the Lenders, amending and restating the loan repayment schedules of the Loan Agreement. The amended and restated term loan repayment schedule provides for interest only payments through January 2016, followed by consecutive equal monthly payments of principal and interest in arrears starting in February 2016 and continuing through the previously established maturity date of January 2018. Consistent with the original loan, the Loan Agreement provides for a 7.55% interest rate on the term loan and a final interest payment equal to 8.5% of the original principal amount, or $4.25 million, which is due when the term loan becomes due or upon the prepayment of the facility. We have the option to prepay the outstanding balance of the term loan in full, subject to a prepayment fee of 1%.

In December 2015, we entered into a consent, release and third amendment to the Loan Agreement with the Lenders, in which the Lenders consent to (i) the formation of Halozyme Royalty LLC ("Halozyme Royalty") as a wholly-owned Subsidiary

of Halozyme, (ii) the release of liens and the sale of certain rights to receive royalty payments to Halozyme Royalty, and (iii) enter into a Credit Agreement with BioPharma Credit Investments IV Sub, LP., ("BioPharma"), as collateral agent and lender, and the other lenders party, whereby Halozyme Royalty will incur indebtedness from and grant liens on the royalty payments to BioPharma. This amendment allowed us to enter into a royalty-backed debt agreement. Refer to Note 15, *"Subsequent Event"*, for further information on our royalty-backed debt agreement.

In connection with the term loan, the debt offering costs have been recorded as a debt discount in our condensed consolidated balance sheets which, together with the final payment and fixed interest rate payments, are being amortized and recorded as interest expense throughout the life of the term loan using the effective interest rate method.

The amended term loan is secured by substantially all of the assets of the Company and our subsidiary, Halozyme, Inc., except that the collateral does not include any equity interests in Halozyme, Inc., any of our intellectual property (including all licensing, collaboration and similar agreements relating thereto), and certain other excluded assets. The Loan Agreement contains customary representations, warranties and covenants by us, which covenants limit our ability to convey, sell, lease, transfer, assign or otherwise dispose of certain of our assets; engage in any business other than the businesses currently engaged in by us or reasonably related thereto; liquidate or dissolve; make certain management changes; undergo certain change of control events; create, incur, assume, or be liable with respect to certain indebtedness; grant certain liens; pay dividends and make certain other restricted payments; make certain investments; make payments on any subordinated debt; and enter into transactions with any of our affiliates outside of the ordinary course of business or permit our subsidiaries to do the same. In addition, subject to certain exceptions, we are required to maintain with SVB our primary deposit accounts, securities accounts and commodities, and to do the same for our subsidiary, Halozyme, Inc.

The Loan Agreement also contains customary indemnification obligations and customary events of default, including, among other things, our failure to fulfill certain of our obligations under the Loan Agreement and the occurrence of a material adverse change which is defined as a material adverse change in our business, operations, or condition (financial or otherwise), a material impairment of the prospect of repayment of any portion of the loan, or a material impairment in the perfection or priority of lender's lien in the collateral or in the value of such collateral. In the event of default by us under the Loan Agreement, the Lenders would be entitled to exercise their remedies thereunder, including the right to accelerate the debt, upon which we may be required to repay all amounts then outstanding under the Loan Agreement, which could harm our financial condition.

As of December 31, 2015, we were in compliance with all material covenants under the Loan Agreement and there was no material adverse change in our business, operations or financial condition.

Future maturities and interest payments under the term loan as of December 31, 2015, are as follows (in thousands):

2016	$ 25,077
2017	27,013
2018	6,501
2019	—
2020	—
Total minimum payments	58,591
Less amount representing interest	(8,591)
Gross balance of long-term debt	50,000
Less unamortized debt discount	(167)
Present value of long-term debt	49,833
Less current portion of long-term debt	(21,862)
Long-term debt, less current portion and unamortized debt discount	$ 27,971

Interest expense, including amortization of debt discount, related to the long-term debt for the years ended December 31, 2015, 2014 and 2013 was approximately $5.2 million, $5.6 million and $3.3 million, respectively. Accrued interest, which is included in accrued expenses and other long-term liabilities, was $3.2 million and $2.0 million as of December 31, 2015 and December 31, 2014, respectively.

7. Stockholders' Equity

During 2015, we issued an aggregate of 1,926,368 shares of common stock, in connection with the exercises of stock options for cash in the aggregate amount of approximately $14.4 million. In addition, we issued 375,019 shares of common stock, net of RSAs canceled, in connection with the grants of RSAs. We issued 82,069 shares of common stock upon vesting of RSUs. The RSU holders surrendered 52,019 RSUs to pay for minimum withholding taxes totaling approximately $0.7 million. We issued 47,454 shares of common stock upon vesting of PRSUs. The PRSU holders surrendered 35,926 PRSUs to pay for minimum withholding taxes totaling approximately $0.6 million.

During 2014, we issued an aggregate of 1,432,206 shares of common stock in connection with the exercises of stock options for cash in the aggregate amount of approximately $7.8 million. In addition, we issued 789,345 shares of common stock, net of RSAs canceled, in connection with the grants of RSAs and 120,043 shares of common stock upon vesting of certain RSUs. The RSU holders surrendered 74,325 RSUs to pay for minimum withholding taxes totaling approximately $1.0 million.

In February 2014, we completed an underwritten public offering and issued 8,846,153 shares of common stock, including 1,153,846 shares sold pursuant to the full exercise of an over-allotment option granted to the underwriter. All of the shares were offered at a public offering price of $13.00 per share, generating approximately $107.7 million in net proceeds.

8. Equity Incentive Plans

We currently grant stock options, restricted stock awards and restricted stock units under the Amended and Restated 2011 Stock Plan ("2011 Stock Plan"), which provides for the grant of up to 19.5 million shares of common stock (subject to certain limitations as described in the Amended and Restated 2011 Stock Plan) to selected employees, consultants and non-employee members of our Board of Directors ("Outside Directors") as stock options, stock appreciation rights, restricted stock awards, restricted stock unit awards and performance awards. The 2011 Stock Plan was approved by the stockholders. Awards are subject to terms and conditions established by the Compensation Committee of our Board of Directors. During the year ended December 31, 2015, we granted share-based awards under the 2011 Stock Plan. At December 31, 2015, 8,969,113 shares were subject to outstanding awards and 7,440,487 shares were available for future grants of share-based awards. At the present time, management intends to issue new common shares upon the exercise of stock options, issuance of restricted stock awards and settlement of restricted stock unit awards and performance awards.

Total share-based compensation expense related to share-based awards was comprised of the following (in thousands):

	Year Ended December 31,		
	2015	2014	2013
Research and development	$ 9,795	$ 7,939	$ 4,476
Selling, general and administrative	11,043	7,335	5,062
Share-based compensation expense	$ 20,838	$ 15,274	$ 9,538

Share-based compensation expense by type of share-based award (in thousands):

	Year Ended December 31,		
	2015	2014	2013
Stock options	$ 11,145	$ 7,884	$ 5,499
RSAs, RSUs and PRSUs	9,693	7,390	4,039
	$ 20,838	$ 15,274	$ 9,538

Total unrecognized estimated compensation expense by type of award and the weighted average remaining requisite service period over which such expense is expected to be recognized (in thousands, unless otherwise noted):

	December 31, 2015	
	Unrecognized Expense	Remaining Weighted Average Recognition Period (years)
Stock options	$ 31,058	3.0
RSAs	$ 5,531	2.3
RSUs	$ 4,795	2.5
PRSUs	$ 79	1.1

Cash flows resulting from tax deductions in excess of the cumulative compensation cost recognized for options exercised (excess tax benefits) are classified as cash inflows provided by financing activities and cash outflows used in operating activities. Due to our net loss position, no tax benefits have been recognized in the consolidated statements of cash flows.

Stock Options. Options granted under the Plans must have an exercise price equal to at least 100% of the fair market value of our common stock on the date of grant. The options will generally have a maximum contractual term of ten years and vest at the rate of one-fourth of the shares on the first anniversary of the date of grant and 1/48 of the shares monthly thereafter. Certain option awards provide for accelerated vesting if there is a change in control (as defined in the Plans).

A summary of our stock option award activity as of and for the years ended December 31, 2015, 2014 and 2013 is as follows:

	Shares Underlying Stock Options	Weighted Average Exercise Price per Share	Weighted Average Remaining Contractual Term (years)	Aggregate Intrinsic Value
Outstanding at January 1, 2013	6,379,867	$6.59		
Granted	1,806,392	$7.14		
Exercised	(1,270,362)	$4.34		
Canceled/forfeited	(214,982)	$8.18		
Outstanding at December 31, 2013	6,700,915	$7.11		
Granted	2,271,143	$13.02		
Exercised	(1,432,206)	$5.43		
Canceled/forfeited	(1,185,960)	$9.39		
Outstanding at December 31, 2014	6,353,892	$9.18		
Granted	3,973,604	$16.26		
Exercised	(1,926,368)	$7.49		
Canceled/forfeited	(407,936)	$10.64		
Outstanding at December 31, 2015	7,993,192	$13.03	7.8	$38.9 million
Vested and expected to vest at December 31, 2015	7,313,178	$12.77	7.7	$37.1 million
Exercisable at December 31, 2015	2,839,265	$9.15	5.9	$23.2 million

The weighted average grant date fair values of options granted during the years ended December 31, 2015, 2014 and 2013 were $9.60 per share, $8.13 per share and $4.40 per share, respectively. The fair value of options vested during the years ended December 31, 2015, 2014 and 2013 was approximately $6.2 million, $4.8 million and $3.9 million, respectively. The total intrinsic value of options exercised during the years ended December 31, 2015, 2014 and 2013 was approximately $16.2 million, $8.1 million and $8.3 million, respectively. Cash received from stock option exercises for the years ended December 31, 2015, 2014 and 2013 was approximately $14.4 million, $7.8 million and $5.5 million, respectively.

The fair value of each option award is estimated on the date of grant using the Black-Scholes-Merton option pricing model ("Black-Scholes model") that uses the assumptions noted in the following table. Expected volatility is based on historical volatility of our common stock. The expected term of options granted is based on analyses of historical employee termination rates and option exercises. The risk-free interest rate is based on the U.S. Treasury yield for a period consistent with the expected term of the option in effect at the time of the grant. The dividend yield assumption is based on the expectation of no future dividend payments by us. Assumptions used in the Black-Scholes model were as follows:

	Year Ended December 31,		
	2015	2014	2013
Expected volatility	66.2-67.4%	66.6-71.8%	70.1-72.5%
Average expected term (in years)	5.6	5.7	5.7
Risk-free interest rate	1.34-1.92%	1.73-2.04%	0.86-2.00%
Expected dividend yield	0%	0%	0%

*Restricted Stock Awards***.** RSAs are grants that entitle the holder to acquire shares of our common stock at zero or a fixed price, which is typically nominal. The shares covered by a RSA cannot be sold, pledged, or otherwise disposed of until the award vests and any unvested shares may be reacquired by us for the original purchase price following the awardee's termination of service. The RSAs will generally vest at the rate of one-fourth of the shares on each anniversary of the date of grant. Annual grants of RSAs to Outside Directors typically vest in full the first day the awardee may trade our stock in compliance with our insider trading policy following the date immediately preceding the first annual meeting of stockholders following the grant date.

The following table summarizes our RSA activity during the years ended December 31, 2015, 2014 and 2013:

	Number of Shares	Weighted Average Grant Date Fair Value
Unvested at January 1, 2013	382,320	$10.21
Granted	476,096	$6.88
Vested	(211,178)	$8.78
Forfeited	(14,367)	$8.17
Unvested at December 31, 2013	632,871	$8.23
Granted	1,055,122	$11.15
Vested	(263,765)	$8.33
Forfeited	(265,777)	$10.86
Unvested at December 31, 2014	1,158,451	$10.26
Granted	515,695	$15.00
Vested	(721,990)	$10.11
Forfeited	(140,676)	$11.84
Unvested at December 31, 2015	811,480	$13.13

The estimated fair value of the RSAs was based on the market value of our common stock on the date of grant. The total grant date fair value of RSAs vested during the years ended December 31, 2015, 2014 and 2013 was approximately $7.3 million, $2.2 million and $1.9 million, respectively. The total intrinsic value of RSAs vested during the years ended December 31. 2015, 2014, 2013, was approximately $13.9 million, $3.0 million and $1.5 million, respectively.

*Restricted Stock Units***.** A RSU is a promise by us to issue a share of our common stock upon vesting of the unit. The RSUs will generally vest at the rate of one-fourth of the shares on each anniversary of the date of grant.

The following table summarizes our RSU activity during the years ended December 31, 2015, 2014 and 2013:

	Number of Shares	Weighted Average Grant Date Fair Value	Weighted Average Remaining Contractual Term (yrs)	Aggregate Intrinsic Value
Unvested at January 1, 2013	682,146	$10.61		
Granted	323,700	$6.69		
Vested	(154,124)	$10.41		
Forfeited	(115,367)	$9.76		
Outstanding at December 31, 2013	736,355	$9.06		
Granted	305,535	$13.71		
Vested	(194,368)	$9.12		
Forfeited	(385,200)	$8.84		
Outstanding at December 31, 2014	462,322	$11.12		
Granted	422,492	$14.75		
Vested	(134,088)	$10.93		
Forfeited	(84,512)	$10.86		
Outstanding at December 31, 2015	666,214	$13.49	2.5	$11.5 million

The estimated fair value of the RSUs was based on the market value of our common stock on the date of grant. The total grant date fair value of RSUs vested during the years ended December 31, 2015, 2014 and 2013 was approximately $1.5 million, $1.8 million and $1.6 million, respectively. The total intrinsic value of RSUs vested during the years ended December 31, 2015, 2014 and 2013 was approximately $1.8 million, $2.6 million and $1.1 million, respectively.

*Performance Restricted Stock Units***.** A PRSU is a promise by us to issue a share of our common stock upon achievement of a specific performance condition.

The following table summarizes our PRSU activity during the years ended December 31, 2015 and 2014:

	Number of Shares	Weighted Average Grant Date Fair Value	Weighted Average Remaining Contractual Term (yrs)	Aggregate Intrinsic Value
Outstanding at January 1, 2014	—	$ —		
Granted	540,742	$ 8.91		
Vested	—	—		
Forfeited	(109,504)	$ 8.91		
Outstanding at December 31, 2014	431,238	$ 8.91		
Granted	118,209	$ 11.19		
Vested	(83,380)	$ 9.48		
Forfeited	(156,360)	$ 9.21		
Outstanding at December 31, 2015	309,707	$ 9.48	1.1	$5.4 million

The estimated fair value of the PRSUs was based on the market value of our common stock on the date of grant. The total grant date fair value and intrinsic value of PRSUs vested during the year ended December 31, 2015 was approximately $0.8 million and $1.4 million, respectively.

9. Commitments and Contingencies

Operating Leases

Our administrative offices and research facilities are located in San Diego, California. We lease an aggregate of approximately 76,000 square feet of office and research space in four buildings. The leases commenced in June 2011 and November 2013 and continue through January 2018. The leases are subject to approximately 2.5% to 3.0% annual increases throughout the terms of the leases. We also pay a pro rata share of operating costs, insurance costs, utilities and real property taxes. We received incentives under the leases, including tenant improvement allowances and reduced or free rent, for which the unamortized deferred rent balances associated with these incentives was $0.8 million and $1.0 million as of December 31, 2015 and 2014, respectively.

In November 2015, we opened a satellite office in South San Francisco, California. We lease approximately 10,000 square feet of office space. The lease commenced in November 2015 and continues through January 2021. The lease is subject to approximately 3.0% annual increases throughout the term of the lease. We also pay a pro rata share of operating costs, insurance costs, utilities and real property taxes. We received incentives under the lease, including tenant improvement allowances and reduced or free rent, for which the unamortized deferred rent balances associated with these incentives was $0.4 million as of December 31, 2015.

Additionally, we lease certain office equipment under operating leases. Total rent expense was approximately $1.9 million, $1.9 million and $1.7 million for the years ended December 31, 2015, 2014 and 2013, respectively.

Approximate annual future minimum operating lease payments as of December 31, 2015 are as follows (in thousands):

Year:	Operating Leases
2016	$ 2,539
2017	2,606
2018	507
2019	413
2020	426
Thereafter	36
Total minimum lease payments	$ 6,527

Other Commitments

In order to scale up the production of bulk rHuPH20 and to identify another manufacturer that would help meet anticipated production obligations arising from our proprietary programs and our collaborations, we entered into a Technology Transfer Agreement and a Clinical Supply Agreement with Cook Pharmica LLC ("Cook"). The technology transfer was completed in 2008. In 2009, multiple batches of bulk rHuPH20 were produced to support planned future clinical studies.

In March 2010, we entered into a Commercial Supply Agreement with Cook (the "Cook Commercial Supply Agreement"). Under the terms of the Cook Commercial Supply Agreement, Cook will manufacture certain batches of bulk rHuPH20 that will be used for commercial supply of certain products and product candidates. Under the terms of the Cook Commercial Supply Agreement, we are committed to certain minimum annual purchases of bulk rHuPH20 equal to four quarters of forecasted supply. At December 31, 2015, we had a $5.7 million minimum purchase obligation in connection with the Cook Commercial Supply Agreement.

In March 2010, we entered into a second Commercial Supply Agreement with Avid (the "Avid Commercial Supply Agreement"). Under the terms of the Avid Commercial Supply Agreement, we are committed to certain minimum annual purchases of bulk rHuPH20 equal to three quarters of forecasted supply. In addition, Avid has the right to manufacture and supply a certain percentage of bulk rHuPH20 that will be used in the collaboration products. At December 31, 2015, we had a $30.2 million minimum purchase obligation in connection with this agreement.

In June 2011, we entered into a services agreement with another third party manufacturer for the technology transfer and manufacture of *Hylenex* recombinant. At December 31, 2015, we had a $0.9 million minimum purchase obligation in connection with this agreement.

Contingencies

We have entered into an in-licensing agreement with a research organization, which is cancelable at our option with 90 days written notice. Under the terms of this agreement, we have received license to know-how and technology claimed, in certain patents or patent applications. We are required to pay fees, milestones and/or royalties on future sales of products employing the technology or falling under claims of a patent, and some of the agreements require minimum royalty payments. We continually reassess the

value of the license agreement. If the in-licensed and research candidate is successfully developed, we may be required to pay milestone payments of approximately $9.3 million over the life of this agreement in addition to royalties on sales of the affected products. One of the milestone payments of $1.3 million is due upon the first dosing of a patient in our Phase 3 study of PEGPH20, which is expected to occur at the end of the first quarter of 2016. Due to the uncertainties of the development process, the timing and probability of the remaining milestone and royalty payments cannot be accurately estimated.

Legal Contingencies

From time to time, we may be involved in disputes, including litigation, relating to claims arising out of operations in the normal course of our business. Any of these claims could subject us to costly legal expenses and, while we generally believe that we have adequate insurance to cover many different types of liabilities, our insurance carriers may deny coverage or our policy limits may be inadequate to fully satisfy any damage awards or settlements. If this were to happen, the payment of any such awards could have a material adverse effect on our consolidated results of operations and financial position. Additionally, any such claims, whether or not successful, could damage our reputation and business. We currently are not 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 our consolidated results of operations or financial position.

10. Income Taxes

Significant components of our net deferred tax assets at December 31, 2015 and 2014 are shown below (in thousands). A valuation allowance of $182.5 million and $179.0 million has been established to offset the net deferred tax assets as of December 31, 2015 and 2014, respectively, as realization of such assets is uncertain.

	December 31,	
	2015	2014
Deferred tax assets:		
Net operating loss carryforwards	$ 104,505	$ 120,707
Deferred revenue	16,344	18,034
Research and development credits	54,846	34,146
Share-based compensation	6,286	5,381
Other, net	906	891
	182,887	179,159
Valuation allowance for deferred tax assets	(182,507)	(178,965)
Deferred tax assets, net of valuation	380	194
Deferred tax liabilities:		
Depreciation	(380)	(194)
Net deferred tax liabilities	(380)	(194)
Net deferred tax assets	$ —	$ —

The provision for income taxes on earnings subject to income taxes differs from the statutory federal income tax rate due to the following (in thousands):

	December 31,		
	2015	2014	2013
Federal income tax at 34%	$ (10,804)	$ (23,247)	$ (28,383)
State income tax, net of federal benefit	5,526	(1,761)	(1,745)
Increase in valuation allowance	3,897	16,998	33,525
Foreign income subject to tax at other than federal statutory rate	14,945	12,747	—
Tax effect on non-deductible expenses and other	6,042	540	5,219
Research and development credits	(19,606)	(5,277)	(8,616)
	$ —	$ —	$ —

At December 31, 2015, we had federal and California tax net operating loss carryforwards of approximately $320.0 million and $329.0 million, respectively. Included in these amounts are federal and California net operating losses of approximately $49.1 million and $34.2 million, respectively, attributable to stock option, RSA, RSU, and PRSU deductions for which the tax benefit

will be credited to equity when realized. The federal tax net operating loss carryforwards will begin to expire in 2018, unless previously utilized. The California tax net operating loss carryforwards will expire in 2016, 2017 and 2028 and beyond in the amounts of $13.1 million, $10.4 million and $302.0 million, respectively.

At December 31, 2015, we also had federal and California research and development tax credit carryforwards of approximately $28.0 million and $15.1 million, respectively. The federal research and development tax credits will begin to expire in 2024 unless previously utilized. The California research and development tax credits will carryforward indefinitely until utilized. Additionally, we had Orphan Drug Credit carryforwards of $16.9 million which will begin to expire in 2024.

Pursuant to Internal Revenue Code Section 382, the annual use of the net operating loss carryforwards and research and development tax credits could be limited by any greater than 50% ownership change during any three year testing period. As a result of any such ownership change, portions of our net operating loss carryforwards and research and development tax credits are subject to annual limitations. We completed an updated Section 382 analysis regarding the limitation of the net operating losses and research and development credits as of June 30, 2014. Based upon the analysis, we determined that ownership changes occurred in prior years. However, the annual limitations on net operating loss and research and development tax credit carryforwards will not have a material impact on the future utilization of such carryforwards.

At December 31, 2015, our unrecognized income tax benefits and uncertain tax positions were $4.9 million and would not, if recognized, affect the effective tax rate. We had no such unrecognized income tax benefits or uncertain tax positions at December 31, 2014. Interest and/or penalties related to uncertain income tax positions are recognized by us as a component of income tax expense. For the years ended December 31, 2015, 2014 and 2013, we recognized no interest or penalties.

We do not provide for U.S. income taxes on the undistributed earnings of our foreign subsidiary as it is our intention to utilize those earnings in the foreign operations for an indefinite period of time. At December 31, 2015 and 2014, there were no undistributed earnings in the foreign subsidiary.

We are subject to taxation in the U.S. and in various state and foreign jurisdictions. Our tax years for 1998 and forward are subject to examination by the U.S. and California tax authorities due to the carryforward of unutilized net operating losses and research and development credits.

11. Employee Savings Plan

We have an employee savings plan pursuant to Section 401(k) of the Internal Revenue Code. All employees are eligible to participate, provided they meet the requirements of the plan. We are not required to make matching contributions under the plan. However, we voluntarily contributed to the plan approximately $0.7 million, $0.7 million and $0.6 million for the years ended December 31, 2015, 2014 and 2013, respectively.

12. Related Party Transactions

In June 2011, we and Intrexon entered into the Intrexon Collaboration, under which Intrexon obtained a worldwide exclusive license for the use of rHuPH20 enzyme in the development of a subcutaneous injectable formulation of Intrexon's recombinant human alpha 1-antitrypsin (rHuA1AT). The Intrexon Collaboration was terminated in May 2014. Intrexon's chief executive officer and chairman of its board of directors, Randal J. Kirk, is also a member of our Board of Directors. The collaborative arrangement with Intrexon was reviewed and approved by our Board of Directors in accordance with our related party transaction policy. For the years ended December 31, 2015 and 2014, we recognized zero in revenue under collaborative agreements pursuant to the terms of the Intrexon Collaboration. In December 2013, we recognized $1.0 million in revenue under collaborative agreements pursuant to the terms of the Intrexon Collaboration.

13. Restructuring Expense

In November 2014, we completed a corporate reorganization to focus our resources on advancing our PEGPH20 oncology proprietary program and ENHANZE collaborations. This reorganization resulted in a reduction in the workforce of approximately 13%, primarily in research and development.

We recorded approximately $1.2 million of severance pay and benefits expense in connection with the reorganization, of which $1.1 million and $0.1 million was included in research and development expense and selling, general and administrative expense, respectively, in the consolidated statement of operations for the year ended December 31, 2014. No other restructuring charges were incurred. We made cash payments of $0.7 million related to the restructuring expense for the year ended December 31, 2014. As of December 31, 2014, the restructuring liability was approximately $0.5 million and was included in current accrued expenses. The restructuring liability was paid in full during the three months ended March 31, 2015.

14. Summary of Unaudited Quarterly Financial Information

The following is a summary of our unaudited quarterly results for the years ended December 31, 2015 and 2014 (in thousands):

	Quarter Ended			
2015 (Unaudited):	**March 31,**	**June 30,**	**September 30,**	**December 31,**
Total revenues[1] [2]	$ 18,666	$ 43,384	$ 20,780	$ 52,227
Gross profit on product sales	$ 3,366	$ 4,198	$ 4,121	$ 5,152
Total operating expenses	$ 32,577	$ 39,153	$ 44,017	$ 46,762
Net income (loss)	$ (15,108)	$ 3,019	$ (24,460)	$ 4,318
Net income (loss) per share:				
Basic	$ (0.12)	$ 0.02	$ (0.19)	$ 0.03
Diluted	$ (0.12)	$ 0.02	$ (0.19)	$ 0.03
Shares used in computing net income (loss) per share:				
Basic	125,299	126,144	126,921	127,197
Diluted	125,299	134,507	126,921	129,248

	Quarter Ended			
2014 (Unaudited):	**March 31,**	**June 30,**	**September 30,**	**December 31,**
Total revenues[3]	$ 11,966	$ 18,385	$ 14,606	$ 30,377
Gross profit on product sales	$ 3,048	$ 3,570	$ 4,476	$ 3,997
Total operating expenses	$ 37,185	$ 33,325	$ 33,632	$ 34,228
Net loss	$ (26,548)	$ (16,273)	$ (20,280)	$ (5,274)
Net loss per share, basic and diluted	$ (0.22)	$ (0.13)	$ (0.16)	$ (0.04)
Shares used in computing basic and diluted net loss per share	118,943	123,710	124,041	124,272

(1) Revenues for the quarter ended June 30, 2015 included $23.0 million in revenue under collaborative agreements from the AbbVie Collaboration.

(2) Revenues for the quarter ended December 31, 2015 included $25.0 million in revenue under collaborative agreements from the Lilly Collaboration.

(3) Revenues for the quarter ended December 31, 2014 included $15.0 million in revenue under collaborative agreements from the Janssen Collaboration.

15. Subsequent Event

In January 2016, through our subsidiary Halozyme Royalty, we received a $150 million loan (the "Royalty-backed Loan") pursuant to a credit agreement (the "Credit Agreement") with BioPharma Credit Investments IV Sub, LP and Athyrium Opportunities II Acquisition LP (the "Royalty-backed Lenders"). Under the terms of the Credit Agreement, Halozyme Therapeutics, Inc. transfered to Halozyme Royalty the right to receive certain royalty payments from the commercial sales of Herceptin SC, MabThera SC and HYQVIA. The royalty payments from the collaboration agreements will be used to repay the principal and interest on the loan (the "Royalty Payments"). The loan bears interest at a per annum rate of 8.75% plus the three-month LIBOR rate. The three-month LIBOR rate is subject to a floor of 0.7% and a cap of 1.5%.

Quarterly Royalty Payments from Baxalta and Roche will first be applied to pay (i) escrow fees payable by Halozyme, (ii) certain expenses incurred by the Royalty-backed Lenders in connection with the Credit Agreement and related transaction documents, including enforcement of their rights under the Credit Agreement and (iii) expenses incurred by Halozyme enforcing the right to indemnification under the collaboration and license agreements with Roche and Baxalta ("License Agreements"). The Credit Agreement provides that none of the remaining Royalty Payments are required to be applied to the Royalty-backed Loan prior to January 1, 2017, 50% of the remaining Royalty Payments are required to be applied to the Royalty-backed Loan between January 1, 2017 and January 1, 2018 and thereafter all remaining Royalty Payments must be applied to the Royalty-backed Loan. Additionally, the amounts available to repay the Royalty-backed Loan are subject to caps of $13.75 million per quarter in 2017, $18.75 million per quarter in 2018, $21.25 million per quarter in 2019 and $22.5 million per quarter in 2020 and thereafter. Amounts available to repay the Royalty-backed Loan will be applied first, to pay interest and second, to repay principal on the Royalty-backed Loan. Any accrued interest that is not paid on any applicable quarterly payment date will be capitalized and added to the principal balance of the Royalty-backed Loan. Halozyme Royalty will be entitled to receive and distribute to Halozyme any Royalty Payments that are not required to be applied to the Royalty-backed Loan or which are in excess of the foregoing caps.

The final maturity date of the Royalty-backed Loan will be the earlier of (i) the date when principal and interest is paid in full, (ii) the termination of Halozyme Royalty's right to receive royalties under the License Agreements, and (iii) December 31, 2050. Under the terms of the Credit Agreement, at any time after January 1, 2019, Halozyme Royalty may, subject to certain limitations, prepay the outstanding principal of the Royalty-backed Loan in whole or in part, at a price equal to 105% of the outstanding principal on the Royalty-backed Loan, plus accrued but unpaid interest. The Royalty-backed Loan constitutes an obligation of Halozyme Royalty, and is non-recourse to Halozyme.

Halozyme Therapeutics, Inc.

Schedule II

Valuation and Qualifying Accounts
(in thousands)

	Balance at Beginning of Period	Additions	Deductions	Balance at End of Period
For the year ended December 31, 2015				
Accounts receivable allowances [1]	$ 611	$ 4,150	$ (3,794)	$ 967
For the year ended December 31, 2014				
Accounts receivable allowances [1]	$ 610	$ 4,520	$ (4,519)	$ 611
For the year ended December 31, 2013				
Accounts receivable allowances [1]	$ 178	$ 2,979	$ (2,547)	$ 610

(1) Allowances are for chargebacks, prompt payment discounts and distribution fees related to *Hylenex* recombinant product sales.

Exhibit Index

Exhibit Number	Exhibit Title	Filed Herewith	Incorporated by Reference		
			Form	File No.	Date Filed
3.1	Composite Certification of Incorporation		10-Q	001-32335	8/7/2013
3.2	Certificate of Designation, Preferences and Rights of the terms of the Series A Preferred Stock		8-K	001-32335	11/20/2007
3.3	Bylaws, as amended		8-K	001-32335	12/12/2011
4.1	Amended Rights Agreement between Corporate Stock Transfer, as rights agent, and Registrant, dated November 12, 2007		10-K	001-32335	3/14/2008
10.1	License Agreement between University of Connecticut and Registrant, dated November 15, 2002		SB-2	333-114776	4/23/2004
10.2	First Amendment to the License Agreement between University of Connecticut and Registrant, dated January 9, 2006		8-K	001-32335	1/12/2006
10.3#	Halozyme Therapeutics, Inc. 2005 Outside Directors' Stock Plan		8-K	001-32335	7/6/2005
10.4#	Form of Stock Option Agreement (2005 Outside Directors' Stock Plan)		10-Q	001-32335	8/8/2006
10.5#	Form of Restricted Stock Agreement (2005 Outside Directors' Stock Plan)		10-Q	001-32335	8/8/2006
10.6#	Halozyme Therapeutics, Inc. 2006 Stock Plan		8-K	001-32335	3/24/2006
10.7#	Form of Stock Option Agreement (2006 Stock Plan)		10-Q	001-32335	8/8/2006
10.8#	Form of Restricted Stock Agreement (2006 Stock Plan)		10-Q	001-32335	8/8/2006
10.9#	Halozyme Therapeutics, Inc. 2008 Stock Plan		8-K	001-32335	3/19/2008
10.10#	Form of Stock Option Agreement (2008 Stock Plan)		10-Q	001-32335	8/7/2009
10.11#	Form of Restricted Stock Agreement (2008 Stock Plan)		10-Q	001-32335	8/7/2009
10.12#	Halozyme Therapeutics, Inc. 2008 Outside Directors' Stock Plan		8-K	001-32335	3/19/2008
10.13#	Form of Restricted Stock Agreement (2008 Outside Directors' Stock Plan)		10-Q	001-32335	8/7/2009

Exhibit Number	Exhibit Title	Filed Herewith	Incorporated by Reference		
			Form	File No.	Date Filed
10.14#	Halozyme Therapeutics, Inc. 2011 Stock Plan (as amended through May 6, 2015)		10-Q	001-32335	8/10/2015
10.15#	Form of Stock Option Agreement (2011 Stock Plan)		8-K	001-32335	5/6/2011
10.16#	Form of Stock Option Agreement for Executive Officers (2011 Stock Plan)		8-K	001-32335	5/6/2011
10.17#	Form of Restricted Stock Units Agreement for Officers (2011 Stock Plan)		10-Q	001-32335	8/10/2015
10.18#	Form of Restricted Stock Award Agreement for Officers (2011 Stock Plan)		10-Q	001-32335	8/10/2015
10.19#	Form of Restricted Stock Units Agreement (2011 Stock Plan)		8-K	001-32335	5/6/2011
10.20#	Form of Restricted Stock Award Agreement (2011 Stock Plan)		8-K	001-32335	5/6/2011
10.21#	Form of Stock Option Agreement (2011 Stock Plan -grants made on or after 11/4/2015)		10-Q	001-32335	11/9/2015
10.22#	Form of Restricted Stock Units Agreement (2011 Stock Plan - grants made on or after 11/4/2015)		10-Q	001-32335	11/9/2015
10.23#	Form of Restricted Stock Award Agreement (2011 Stock Plan - grants made on or after 11/4/2015)		10-Q	001-32335	11/9/2015
10.24#	Form of Indemnity Agreement for Directors and Executive Officers		8-K	001-32335	12/20/2007
10.25#	Severance Policy		10-Q	001-32335	5/9/2008
10.26#	Form of Amended and Restated Change In Control Agreement with Officer		10-K	001-32335	11/9/2015
10.27	Lease (11404 and 11408 Sorrento Valley Road)		8-K	001-32335	6/16/2011
10.28	Amended and Restated Lease (11388 Sorrento Valley Road), effective as of June 10, 2011		8-K	001-32335	6/16/2011
10.29	Lease (11436 Sorrento Valley Road), effective as of April 2013		10-K	001-32335	2/28/2013
10.30	First modification to Lease (11436 Sorrento Valley Road)		10-Q	001-32335	5/8/2013
10.31	Amended and Restated Loan and Security Agreement, dated December 27, 2013		10-K	001-32335	2/28/2014
10.32	Consent and First Amendment to Amended and Restated Loan and Security Agreement, dated June 10, 2014		10-Q	001-32335	8/11/2014
10.33	Second Amendment to Amended and Restated Loan and Security Agreement, dated January 23, 2015		10-K	001-32335	3/2/2015

Exhibit Number	Exhibit Title	Filed Herewith	Incorporated by Reference		
			Form	File No.	Date Filed
10.34	Consent, Release and Third Amendment to Amended and Restated Loan and Security Agreement, dated December 28, 2015	X			
10.35*	Credit Agreement, dated December 30, 2015	X			
21.1	Subsidiaries of Registrant	X			
23.1	Consent of Independent Registered Public Accounting Firm	X			
31.1	Certification of Chief Executive Officer pursuant to Rule 13a-14(a) and 15d-14(a) of the Securities Exchange Act of 1934, as amended	X			
31.2	Certification of Chief Financial Officer pursuant to Rule 13a-14(a) and 15d-14(a) of the Securities Exchange Act of 1934, as amended	X			
32	Certification of Chief Executive Officer and Chief Financial Officer pursuant to 18 U.S.C. 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002	X			
101.INS	XBRL Instance Document	X			
101.SCH	XBRL Taxonomy Extension Schema	X			
101.CAL	XBRL Taxonomy Extension Calculation Linkbase	X			
101.DEF	XBRL Taxonomy Extension Definition Linkbase	X			
101.LAB	XBRL Taxonomy Extension Label Linkbase	X			
101.PRE	XBRL Taxonomy Presentation Linkbase	X			

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* Confidential treatment has been granted (or requested) for certain portions of this exhibit. These portions have been omitted from this agreement and have been filed separately with the Securities and Exchange Commission.

\# Indicates management contract or compensatory plan or arrangement.

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CORPORATE INFORMATION

BOARD OF DIRECTORS

Jean-Pierre Bizzari, M.D.
Former Executive Vice President
Clinical Development
Celgene Corporation

James M. Daly
Former Executive Vice President
and Chief Commercial Officer,
Incyte Corporation

Kathryn E. Falberg
Chairman of the Board,
Halozyme Therapeutics

Jeffrey W. Henderson
Former Chief Financial Officer
of Cardinal Health
Director, FibroGen, Inc.
and Qualcomm Inc.

Kenneth J. Kelley
Advanced Leadership Fellow,
Harvard University

Randal J. Kirk
Chairman and
Chief Executive Officer,
Intrexon
Senior Managing Director
and Chief Executive Officer,
Third Security, LLC.

Connie L. Matsui
Former Executive Vice President,
Knowledge and Innovation Networks,
Biogen Idec

Matthew L. Posard
Executive Vice President and
Chief Commercial Officer,
Trovagene, Inc.

Helen Torley, M.B. Ch.B., M.R.C.P
President and Chief Executive Officer,
Halozyme Therapeutics

EXECUTIVE TEAM

Helen Torley, M.B. Ch.B., M.R.C.P
President and Chief Executive Officer,
Halozyme Therapeutics

Athena M. Countouriotis, M.D.
Senior Vice President &
Chief Medical Officer

William J. Fallon
Vice President, CMC Operations

Sunil Joshi
Vice President & Global Product
Team Lead, Oncology

Michael J. LaBarre, Ph.D.
Vice President and Chief Scientific Officer

Harry J. Leonhardt, Esq.
Senior Vice President, General Counsel,
Chief Compliance Officer and
Corporate Secretary

Jim S. Mazzola
Vice President,
Corporate Communication
and Investor Relations

Michael E. Paolucci
Vice President, Alliances
and Human Capital

Kenneth A. Schultz, M.D.
Vice President of Innovation,
Strategy & Business Development

Laurie D. Stelzer
Senior Vice President and
Chief Financial Officer

Kristina Vlaovic
Vice President of Regulatory & Safety

GENERAL INFORMATION

Corporate Headquarters
11388 Sorrento Valley Road
San Diego, CA 92121
858-794-8889

Outside Counsel
DLA Piper LLP (U.S.)
San Diego, California

Independent Auditors
Ernst & Young LLP
San Diego, California

Transfer Agent
Corporate Stock Transfer, Inc.
3200 Cherry Creek Drive South,
Suite 430
Denver, Colorado 80209
303-282-4800

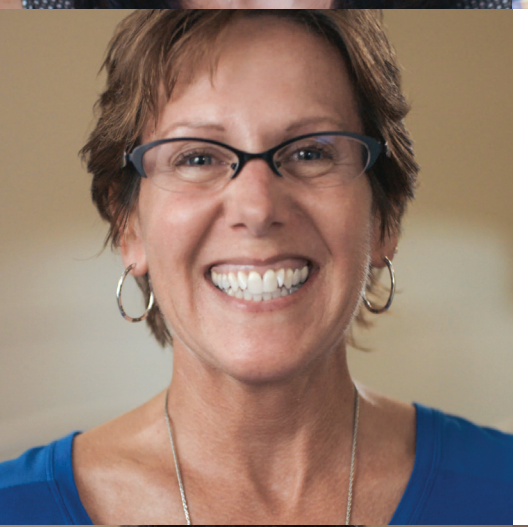
Form 10-K Annual Report
Each Stockholder may receive without charge a copy of the Annual Report on form 10-K filed with the Securities and Exchange Commission by written request addressed to Investor Relations at the address provided.

Stock Listing
Halozyme Therapeutics, Inc. common stock trades on the Nasdaq Stock Market under the symbol HALO.

SAFE HARBOR STATEMENT

This Annual Report contains forward-looking statements regarding our products in development, anticipated clinical, regulatory and commercial milestones, business intentions, financial conditions and results of operations and prospects and other statements concerning future matters. Words such as "expects," "anticipates," "intends," "plans," "believes," "seeks," "estimates" and similar expressions or variations of such words are intended to identify forward-looking statements, but are not the exclusive means of identifying forward-looking statements in the Annual Report. Actual results could differ materially from the expectations contained in forward-looking statements as a result of several factors, including unexpected expenditures and costs, unexpected results or delays in development and regulatory review, regulatory approval requirements, unexpected adverse events and competitive conditions. These and other factors that may result in differences are discussed in greater detail in the Company's reports on Forms 10-K, 10-Q, and other filings with the Securities and Exchange Commission.



Halozyme

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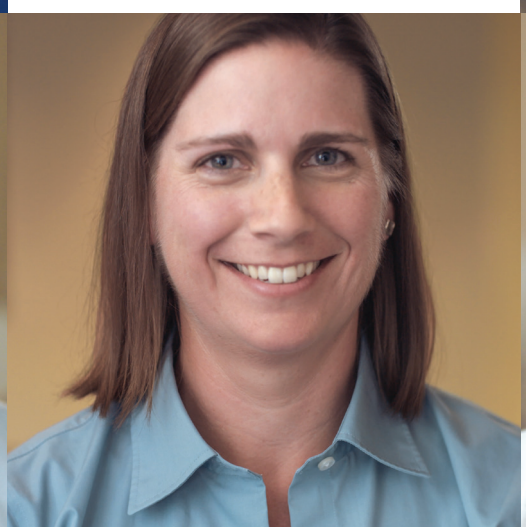



UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 10-K

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

For the fiscal year ended December 31, 2015

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: 001-32335

Halozyme Therapeutics, Inc.

(*Exact name of registrant as specified in its charter*)

Delaware	**88-0488686**
(State or other jurisdiction of incorporation or organization)	*(I.R.S. Employer Identification No.)*
11388 Sorrento Valley Road, San Diego, California	**92121**
(Address of principal executive offices)	*(Zip Code)*

(858) 794-8889
(Registrant's Telephone Number, Including Area Code)

Securities registered under Section 12(b) of the Act:

Title of Each Class	**Name of Each Exchange on Which Registered**
Common Stock, $0.001 Par Value	The NASDAQ Stock Market, LLC

Securities registered under 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 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 (§232.405 of this chapter) 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 this 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 ☐	Smaller reporting company ☐
	(Do not check if a 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 common equity held by non-affiliates of the registrant as of June 30, 2015 was approximately $2.4 billion based on the closing price on the NASDAQ Global Select Market reported for such date. Shares of common stock held by each officer and director and by each person who is known to own 10% or more of the outstanding common stock have been excluded in that such persons may be deemed to be affiliates of the registrant. This determination of affiliate status is not necessarily a conclusive determination for other purposes.

As of February 22, 2016 , there were 129,061,401 shares of the registrant's common stock issued, $0.001 par value per share, and outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the registrant's definitive Proxy Statement to be filed subsequent to the date hereof with the Securities and Exchange Commission pursuant to Regulation 14A in connection with the registrant's 2016 Annual Meeting of Stockholders are incorporated by reference into Part III of this Annual Report.

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This Annual Report on Form 10-K contains "forward-looking statements" within the meaning of the "safe harbor" provisions of Section 21E of the Securities Exchange Act of 1934, as amended, and Section 27A of the Securities Act of 1933, as amended. All statements, other than statements of historical fact, included herein, including without limitation those regarding our future product development and regulatory events and goals, product collaborations, our business intentions and financial estimates and anticipated results, are forward-looking statements. Words such as "expect," "anticipate," "intend," "plan," "believe," "seek," "estimate," "think," "may," "could," "will," "would," "should," "continue," "potential," "likely," "opportunity" and similar expressions or variations of such words are intended to identify forward-looking statements, but are not the exclusive means of identifying forward-looking statements in this Annual Report. Additionally, statements concerning future matters such as the development or regulatory approval of new products, enhancements of existing products or technologies, third party performance under key collaboration agreements, revenue and expense levels and other statements regarding matters that are not historical are forward-looking statements.

Although forward-looking statements in this Annual Report reflect the good faith judgment of our management, such statements can only be based on facts and factors currently known by us. Consequently, forward-looking statements are inherently subject to risks and uncertainties and actual results and outcomes may differ materially from the results and outcomes discussed in or anticipated by the forward-looking statements. Factors that could cause or contribute to such differences in results and outcomes include without limitation those discussed under the heading "Risk Factors" in Part I, Item 1A below, as well as those discussed elsewhere in this Annual Report. Readers are urged not to place undue reliance on these forward-looking statements, which speak only as of the date of this Annual Report. We undertake no obligation to revise or update any forward-looking statements in order to reflect any event or circumstance that may arise after the date of this Annual Report. Readers are urged to carefully review and consider the various disclosures made in this Annual Report, which attempt to advise interested parties of the risks and factors that may affect our business, financial condition, results of operations and prospects.

References to "Halozyme," "the Company," "we," "us," and "our" refer to Halozyme Therapeutics, Inc. and its wholly owned subsidiary, Halozyme, Inc., and Halozyme, Inc.'s wholly owned subsidiaries, Halozyme Holdings Ltd. and Halozyme Royalty LLC. References to "Notes" refer to the Notes to Consolidated Financial Statements included herein (refer to Part II, Item 8).

PART I

Item 1. *Business*

Overview

Halozyme Therapeutics, Inc. is a biotechnology company focused on developing and commercializing novel oncology therapies. We are seeking to translate our unique knowledge of the tumor microenvironment to create therapies that have the potential to improve cancer patient survival. Our research primarily focuses on human enzymes that alter the extracellular matrix and tumor microenvironment. The extracellular matrix is a complex matrix of proteins and carbohydrates surrounding the cell that provides structural support in tissues and orchestrates many important biological activities, including cell migration, signaling and survival. Over many years, we have developed unique technology and scientific expertise enabling us to pursue this target-rich environment for the development of therapies.

Our proprietary enzymes are used to facilitate the delivery of injected drugs and fluids, potentially enhancing the efficacy and the convenience of other drugs or can be used to alter tissue structures for potential clinical benefit. We exploit our technology and expertise using a two pillar strategy that we believe enables us to manage risk and cost by: (1) developing our own proprietary products in therapeutic areas with significant unmet medical needs, with a focus on oncology, and (2) licensing our technology to biopharmaceutical companies to collaboratively develop products that combine our technology with the collaborators' proprietary compounds.

The majority of our approved product and product candidates are based on rHuPH20, our patented recombinant human hyaluronidase enzyme. rHuPH20 is the active ingredient in our first commercially approved product, *Hylenex* ® recombinant, and it works by temporarily breaking down hyaluronan (or HA), a naturally occurring complex carbohydrate that is a major component of the extracellular matrix in tissues throughout the body such as skin and cartilage. We believe this temporary degradation creates an opportunistic window for the improved subcutaneous delivery of injectable biologics, such as monoclonal antibodies and other large therapeutic molecules, as well as small molecules and fluids. We refer to the application of rHuPH20 to facilitate the delivery of other drugs or fluids as our ENHANZE ™ Technology. We license the ENHANZE Technology to form collaborations with biopharmaceutical companies that develop or market drugs requiring or benefiting from injection via the subcutaneous route of administration.

We currently have ENHANZE collaborations with F. Hoffmann-La Roche, Ltd. and Hoffmann-La Roche, Inc. (Roche), Baxalta US Inc. and Baxalta GmbH (Baxalta), Pfizer Inc. (Pfizer), Janssen Biotech, Inc. (Janssen), AbbVie, Inc. (AbbVie), and Eli Lilly and Company (Lilly). We receive royalties from two of these collaborations, including royalties from sales of one product approved in both the United States and outside the United States from the Baxalta collaboration and from sales of two products approved for marketing outside the United States from the Roche collaboration. Future potential revenues from the sales and/or royalties of our approved products, product candidates, and ENHANZE collaborations will depend on the ability of Halozyme and our collaborators to develop, manufacture, secure and maintain regulatory approvals for approved products and product candidates and commercialize product candidates.

Our proprietary development pipeline consists primarily of clinical stage product candidates in oncology. Our lead oncology program is PEGPH20 (PEGylated recombinant human hyaluronidase), a molecular entity we are developing for the systemic treatment of tumors that accumulate HA. When HA accumulates in a tumor, it can cause higher pressure in the tumor, reducing blood flow into the tumor and with that, reduced access of cancer therapies to the tumor. PEGPH20 works by temporarily degrading HA surrounding cancer cells resulting in reduced pressure and increased blood flow to the tumor thereby enabling increased amounts of anticancer treatments administered concomitantly gaining access to the tumor. We are currently in Phase 2 and Phase 3 clinical testing for PEGPH20 in stage IV pancreatic ductal adenocarcinoma (PDA) (Studies 109-202 and 109-301), in Phase 1b clinical testing in non-small cell lung cancer (Study 107-201) and in Phase 1b clinical testing in non-small cell lung cancer and gastric cancer (Study 107-101).

Our principal offices and research facilities are located at 11388 Sorrento Valley Road, San Diego, California 92121. Our telephone number is (858) 794-8889 and our e-mail address is *info@halozyme.com*. Our website address is *www.halozyme.com*. Information found on, or accessible through, our website is not a part of, and is not incorporated into, this Annual Report on Form 10-K. Our periodic and current reports that we filed with the SEC are available on our website at *www.halozyme.com*, free of charge, as soon as reasonably practicable after we have electronically filed such material with, or furnished them to, the SEC, including our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K and any amendments to those reports. Further copies of these reports are located at the SEC's Public Reference Room at 100 F Street, N.W., Washington, D.C. 20549, and online at *http://www.sec.gov*.

Technology

rHuPH20 can be applied as a drug delivery platform to increase dispersion and absorption of other injected drugs and fluids that are injected under the skin or in the muscle thereby potentially enhancing efficacy or convenience. For example, rHuPH20 has been used to convert drugs that must be delivered intravenously into subcutaneous injections or to reduce the number of subcutaneous injections needed for effective therapy. When ENHANZE Technology is applied subcutaneously, the rHuPH20 acts locally and has a tissue half-life of less than 15 minutes. HA at the local site reconstitutes its normal density within a few days and, therefore, we anticipate that any effect of rHuPH20 on the architecture of the subcutaneous space is temporary.

Additionally, we are expanding our scientific work to develop other enzymes and agents that target the extracellular matrix's unique aspects, giving rise to potentially new molecular entities with a particular focus on oncology. We are developing a PEGylated version of the rHuPH20 enzyme (PEGPH20), that lasts for an extended period in the bloodstream (half-life of one to two days), and may therefore better target solid tumors that accumulate HA by degrading the surrounding HA and reducing the interstitial fluid pressure within malignant tumors to allow better penetration by co-administered agents.

Strategy

During 2015, we continued our strategy of focusing on developing our PEGPH20 product candidate for oncology as well as entering into new collaborations for ENHANZE Technology. This business model allows for growth in which revenue garnered from collaboration products helps fund our investment in PEGPH20 clinical development, with the goal of a future product approval that will support sustained growth.

Key aspects of our corporate strategy include the following:

- Focus on developing PEGPH20, our investigational new drug candidate, in multiple different tumors that accumulate high levels of HA. PEGPH20 is in Phase 2 and Phase 3 development in stage IV PDA and in Phase 1b development in non-small cell lung cancer and gastric cancer. Over time, it is our goal to study additional types of cancer and to advance this program toward regulatory approval and commercial launch.

- Focus on ENHANZE collaborations. We currently have six collaborations with three current product approvals and additional product candidates in development. We intend to work with our existing collaborators to expand our collaborations to add new targets and product candidates under the terms of the operative agreements. In addition, we will continue our efforts to enter into new collaborations to further exploit and derive additional value from our proprietary technology.

Product and Product Candidates

We have one marketed proprietary product and one proprietary product candidate targeting several indications in various stages of development. The following table summarizes our proprietary product and product candidate as well as products and product candidates under development with our collaborators:

Product, Collaboration Products and Product Candidates	Therapeutic Area	Research Focus	Preclinical	Phase 1	Phase 2	Phase 3	Filed	Approved
ONCOLOGY PIPELINE AND PRODUCT CANDIDATES								
PEGPH20 with ABRAXANE® (nab-paclitaxel) & gemcitabine	Oncology	Pancreatic Cancer						
PEGPH20 with modified FOLFIRINOX	Oncology	Pancreatic Cancer *(Investigator Sponsored Trial with SWOG)*						
PEGPH20 with docetaxel	Oncology	Non-Small Cell Lung Cancer (PRIMAL)						
PEGPH20 with KEYTRUDA® (pembrolizumab)	Oncology	Gastric/Non-Small Cell Lung Cancer						
PEGPH20 with HALAVEN® (eribulin)	Oncology	Breast Cancer (Eisai)						

Product, Collaboration Products and Product Candidates	Therapeutic Area	Approved Indication	Preclinical	Phase 1	Phase 2	Phase 3	Filed	Approved
PROPRIETARY APPROVED PRODUCT								
HYLENEX® recombinant *(hyaluronidase human injection)*	Various	Adjuvant for Sub-Q fluid delivery for dispersion & absorption of other injected drugs						U.S. & EU Approved
ENHANZE™ COLLABORATION APPROVED PRODUCTS								
Roche (up to 8 potential targets)								
Herceptin® SC (trastuzumab)	Oncology	Breast Cancer						EU Approved
MabThera® SC (rituximab)	Oncology	Non-Hodgkin's Lymphoma						EU Approved
Baxalta								
HYQVIA® [Immune Globulin Infusion 10% (Human) with Recombinant Human Hyaluronidase]	Immunology	Primary Immunodeficiency						U.S. & EU Approved

Product, Collaboration Products and Product Candidates	Therapeutic Area	Research Focus	Preclinical	Phase 1	Phase 2	Phase 3	Filed	Approved
ENHANZE™ COLLABORATION PRODUCT CANDIDATES								
Pfizer (up to 6 potential targets)								
riviponsel	Hematology	Vaso-occlusive crisis in Sickle Cell Anemia						
PCSK-9 (bococizumab)	Cardiovascular	Cholesterol Lowering						
Janssen (up to 5 potential targets)	Various							
daratumumab/CD38	Oncology	Multiple Myeloma						
AbbVie (up to 9 potential targets)	Various							
HUMIRA® (adalimumab)								
Lilly (up to 5 potential targets, 2 specified)	Various							

Proprietary Pipeline

Hylenex Recombinant (hyaluronidase human injection)

Hylenex recombinant is a formulation of rHuPH20 that has received FDA approval to facilitate subcutaneous fluid administration for achieving hydration, to increase the dispersion and absorption of other injected drugs and, in subcutaneous urography, to improve resorption of radiopaque agents. *Hylenex* recombinant is currently the number one prescribed branded hyaluronidase.

PEGPH20

We are developing PEGPH20 as a candidate for the systemic treatment of tumors that accumulate HA in combination with currently approved cancer therapies. 'PEG' refers to the attachment of polyethylene glycol to rHuPH20, thereby creating PEGPH20. One of the novel properties of PEGPH20 is that it lasts for an extended duration in the bloodstream and, therefore, can be administered systemically to maintain its therapeutic effect to treat disease.

Cancer malignancies, including pancreatic, lung, breast, gastric, colon and prostate cancers can accumulate high levels of HA and therefore we believe that PEGPH20 has the potential to help patients with these types of cancer when used with currently approved cancer therapies. Among solid tumors, PDA has been reported to be associated with the highest frequency of HA accumulation. Approximately 90,000 patients in the United States and the European Union will be diagnosed with PDA in 2016.

The pathologic accumulation of HA, along with other matrix components, creates a unique microenvironment for the growth of tumor cells compared to normal cells. We believe that depleting the HA component of the tumor microenvironment with PEGPH20 remodels the tumor microenvironment, resulting in tumor growth inhibition in animal models. Removal of HA from the tumor microenvironment results in expansion of previously constricted blood vessels allowing increased blood flow, potentially increasing the access of activated immune cells and factors in the blood into the tumor microenvironment. If PEGPH20 is administered in conjunction with other anti-cancer therapies, the increase in blood flow may allow anti-cancer therapies to have greater access to the tumor, which may enhance the treatment effect of therapeutic modalities like chemotherapies, monoclonal antibodies and other agents.

Study Halo 109-201 :

In January 2015, we presented the final results from Study 109-201, a multi-center, international open label dose escalation Phase 1b clinical study of PEGPH20 in combination with gemcitabine for the treatment of patients with stage IV PDA at the 2015 Gastrointestinal Cancers Symposium (also known as ASCO-GI meeting). This study enrolled 28 patients with previously untreated stage IV PDA. Patients were treated with one of three doses of PEGPH20 (1.0, 1.6 and 3.0 μg/kg twice weekly for four weeks, then weekly thereafter) in combination with gemcitabine 1000 mg/m2 administered intravenously. In this study, the confirmed overall response rate (complete response + partial response confirmed on a second scan as assessed by an independent radiology review) was 29 percent (7 of 24 patients) for those treated at therapeutic dose levels of PEGPH20 (1.6 and 3.0 μg/kg). Median progression-free survival (PFS) was 154 days (95% CI, 50-166) in the efficacy-evaluable population (n = 24). Among efficacy-evaluable patients with baseline tumor HA staining (n = 17), the median PFS in patients with high baseline tumor HA staining (6/17 patients) was substantially longer, 219 days, than in the patients with low baseline tumor HA staining (11/17 patients), 108 days. Median overall survival (OS) was 200 days (95% CI, 123-370) in the efficacy-evaluable population (n = 24). Among efficacy-evaluable patients with baseline tumor HA staining (n = 17), the median OS in patients with high baseline tumor HA staining (6/17 patients) was substantially longer, 395 days, than in the patients with low baseline tumor HA staining (11/17 patients), 174 days. The most common treatment-emergent adverse events (occurring in ≥ 15% of patients) were peripheral edema, muscle spasms, thrombocytopenia, fatigue, myalgia, anemia, and nausea. Thromboembolic (TE) events were reported in 8 patients (28.6%) and musculoskeletal events were reported in 21 patients (75%) which were generally grade 1/2 in severity.

Study Halo 109-202 :

In the second quarter of 2013, we initiated Study 109-202, a Phase 2 multicenter randomized clinical trial evaluating PEGPH20 as a first-line therapy for patients with stage IV PDA. The study was designed to enroll patients who would receive gemcitabine and nab-paclitaxel (ABRAXANE ®) either with or without PEGPH20. The primary endpoint is to measure the improvement in PFS in patients receiving PEGPH20 plus gemcitabine and nab-paclitaxel compared to those who are receiving gemcitabine and nab-paclitaxel alone. In April 2014, after 146 patients had been enrolled, the trial was put on clinical hold by Halozyme and the

FDA to assess a question raised by the Data Monitoring Committee regarding a possible difference in the TE events rate between the group of patients treated with PEGPH20, nab-paclitaxel and gemcitabine (PAG arm) versus the group of patients treated with nab-paclitaxel and gemcitabine without PEGPH20 (AG arm). This portion of the study and patients in this portion are now referred to as Stage 1. It should be noted that at the time of the clinical hold all patients remaining in the study continued on gemcitabine and nab-paclitaxel. In July 2014, the Study 109-202 was reinitiated (Stage 2) under a revised protocol, which excludes patients that are expected to be at a greater risk for TE events. The revised protocol provides for thromboembolism prophylaxis of all patients in both arms of the study with low molecular weight heparin, and adds evaluation of the TE events rate in Stage 2 PEGPH20-treated patients as a co-primary end point. Stage 2 of Study 109-202 enrolled an additional 133 patients, to add to the 146 patients already accrued in the clinical trial, with a 2:1 randomization for PAG compared to AG. We project to present mature PFS data and overall response rate in the fourth quarter of 2016.

In May 2015, interim findings from the ongoing Phase 2 clinical study of PEGPH20 for the potential treatment of patients with stage IV PDA were presented at the American Society of Clinical Oncology annual meeting. The trial included 135 treated patients in Stage 1, of whom a total of 44 patients -- 23 receiving PEGPH20 in combination with ABRAXANE ® and gemcitabine (PAG treatment arm) and 21 receiving ABRAXANE and gemcitabine alone (AG treatment arm) -- had available biopsies that were determined utilizing the Halozyme prototype HA assay in a retrospective analysis to have high levels of hyaluronan. PEGPH20 targets HA to help improve cancer therapy access to tumor cells. Results reported include:

- A more than doubling of median PFS of 9.2 months versus 4.3 months in high-HA patients treated with PAG vs. AG (hazard ratio of 0.39; p-value of 0.05);
- A more than doubling of overall response rate of 52 percent versus 24 percent (p-value of 0.038) and a duration of response of 8.1 months compared to 3.7 months in high-HA patients treated with PAG versus AG;
- In the 30 high-HA patients (15 PAG treatment arm versus 15 AG treatment arm) who were evaluated for response prior to the April 2014 clinical hold and subsequent PEGPH20 treatment discontinuation, the overall response rate was 73 percent versus 27 percent (p-value of 0.01), respectively, consistent with findings presented in January;
- A trend toward improvement in median overall survival of 12 months compared to 9 months in high-HA patients treated with PAG versus AG (hazard ratio of 0.62) despite discontinuation of PEGPH20 in more than half of the PAG-treated patients at the time of the clinical hold in April 2014.

Data was also presented on the rate of TE events in 55 patients treated in Stage 2 of the trial, which is currently randomizing patients at a 2:1 ratio of PAG versus AG. As noted above, Stage 2 began after a protocol amendment in July 2014, excluding patients at high risk of TE events and adding prophylaxis with low molecular weight heparin (enoxaparin) to all patients in both treatment arms. Reported results included a TE event rate of 13% in 38 patients treated with PAG versus 18% in 17 patients receiving AG.

We and the Data Monitoring Committee for Study 109-202 continue to closely monitor the occurrence of TE events in enrolled patients after the revision to the protocol. The revised protocol includes pre-specified analyses to evaluate the rate of TE events. While the pre-specified TE event rate analysis established in the protocol at the time of the clinical hold in 2014 have been passed, the continuation of Study 202 may be halted again if the FDA determines that imbalances in safety findings, including TE events, occur, or for any other emergent safety concerns.

In March 2015, we met with the FDA to discuss both the interim efficacy and safety data from Study 109-202, which included the potential risk profile including TE event rate. Based on the feedback from that meeting, we proceeded with a Phase 3 clinical study (Study 109-301) of PEGPH20 in patients with stage IV PDA, using a design allowing for potential marketing application based on either PFS or overall survival. The study will enroll patients whose tumors accumulate high levels of HA using a companion diagnostic test. The FDA provided feedback on the current companion diagnostic approach and confirmed that an approved companion diagnostic strategy is required for Phase 3 related tumor biopsy.

The use of PFS as the basis for marketing approval will be subject to the overall benefit and risk associated with PEGPH20 combined with nab-paclitaxel (ABRAXANE ®) and gemcitabine therapy, including the:

- Magnitude of the PFS treatment effect observed;
- Toxicity profile; and
- Interim overall survival data.

In June 2015, we received scientific advice/protocol assistance from the European Medicines Agency (EMA) regarding our Phase 3 study. The EMA agreed to the patient population, and the use of both PFS and OS as co-primary endpoints stating that OS is the preferred endpoint and that ultimate approval would require an overall positive benefit:risk balance.

In January 2016, an update on the Stage 1 PFS data utilizing the companion diagnostic that is currently in development with Ventana Medical Systems (Ventana) was presented. In a total of 43 high-HA patients, the data continued to show an improvement in median PFS when patients with high HA received PAG compared to AG (9.2 months compared to 6.3 months respectively); hazard ratio of 0.48 (95% CI: 0.16, 1.48). In addition, the overall response rate in the PAG treated patients was 55% (12 out of 22 patients) compared to 33% (7 out of 21 patients), which was not statistically significant. A modest improvement in median overall survival was seen in the PAG-treated high-HA patients. PEGPH20 was discontinued in over 40% of patients in the new companion diagnostic analysis due to the clinical hold in April 2014. We remain blinded to the efficacy results and project to present mature PFS and overall response rate from Stage 2 of Study 202 in the fourth quarter of 2016. For the secondary primary endpoint of the rate of TE events, we have passed the pre-specified analyses for TE events and are continuing with the Data Monitoring Committee to monitor the rate of TE events since implementing low-molecular weight heparin (LMWH) prophylaxis.

Additionally, an update on the rate of TE events in the PEGPH20 treatment arm in Stage 2 of Study 202 was provided. Reported results included a TE event rate with LMWH prophylaxis of 12% in 73 patients treated with PAG versus 9% in 34 patients receiving AG, and for those treated with 1mg/kg/day of LMWH, a TE event rate of 7% in 55 patients treated with PAG versus 4% in 27 patients receiving AG.

We also reported an update on the development of the companion diagnostic. Halozyme has partnered with Ventana to develop the companion diagnostic and announced the methodology and scoring algorithm have been finalized. Based on the cutpoint for the Ventana diagnostic, we now expect approximately 35 to 40 percent of stage IV PDA patients to have high-HA tumors, similar to the previously reported interim results from Stage 1 of Study 202 using the Halozyme prototype assay.

In February 2016, our partner Ventana submitted an investigational device exemption (IDE) application for our companion diagnostic test to enable patient selection in our Phase 3 Study 301 of PEGPH20 in high-HA patients.

Study Halo 109-301 :

In the first quarter of 2016, we initiated Study 109-301, a Phase 3 multicenter randomized clinical trial evaluating PEGPH20 as a first-line therapy for patients with stage IV PDA. The study will explore PEGPH20 with gemcitabine and ABRAXANE in stage IV PDA patients at approximately 200 sites in 20 countries located in North America, Europe, South America and Asia Pacific. First dosing of a patient is expected to occur in March 2016.

SWOG Study S1313 :

In October 2013, SWOG, a cancer research cooperative group of more than 4,000 researchers in over 500 institutions around the world, initiated a 144 patient Phase 1b/2 randomized clinical trial in some of their study centers, examining PEGPH20 in combination with modified FOLFIRINOX chemotherapy (mFOLFIRINOX) compared to mFOLFIRINOX treatment alone in patients with stage IV PDA (funded by the National Cancer Institute). This study was also placed on clinical hold temporarily at the time of the hold on Study 109-202. In September 2014, the FDA removed the clinical hold on patient enrollment and dosing of PEGPH20 in this SWOG cooperative study. The study has resumed under a revised protocol, and patient enrollment is continuing. The Phase 2 portion of the study, where up to 172 patients are planned to be enrolled, began in June 2015. As with Study 109-202, the occurrence of TE events will be closely monitored in enrolled patients, and the continuation of this study may be halted again in accordance with event rate rules established in the protocol, or for other safety reasons.

Other indications outside of pancreatic cancer :

Study HALO 107-201, PRIMAL Study : In December 2014, we initiated a Phase 1b/2 trial, to evaluate PEGPH20 in second line in combination with docetaxel (Taxotere ®) in non-small cell lung cancer patients. In this study, we expect to evaluate and identify the maximum tolerated dose (MTD) and safety of PEGPH20 plus docetaxel in previously treated patients with non-small cell lung cancer. Upon identification of the MTD we plan to expand the trial into a dose expansion phase in patients prospectively tested for HA status, and then ultimately a Phase 2 portion of the study to evaluate the safety and efficacy of PEGPH20 in second line HA-high non-small cell lung cancer patients in combination with docetaxel.

Study HALO 107-101, the immuno-oncology trial: We recently initiated a Phase 1b study exploring the combination of PEGPH20 and KEYTRUDA ® , an immuno-oncology agent in relapsed non-small cell lung cancer and gastric cancer. We expect to evaluate and identify the dose and safety of PEGPH20 plus KEYTRUDA prior to embarking on dose expansion in high-HA patients in this study.

Halozyme Eisai Clinical Collaboration: We expect a Phase 1b/2 study to be initiated in the second quarter of 2016, exploring the combination of PEGPH20 and eribulin in first line HER2-negative HA-high metastatic breast cancer. Halozyme and Eisai will jointly share the costs to conduct this global study.

Regulatory :

In September 2014, the FDA granted Fast Track designation for our program investigating PEGPH20 in combination with gemcitabine and nab-paclitaxel for the treatment of patients with stage IV PDA to demonstrate an improvement in overall survival. The Fast Track designation process was developed by the FDA to facilitate the development, and expedite the review of drugs to treat serious or life-threatening diseases and address unmet medical needs.

In October 2014, the FDA granted Orphan Drug designation for PEGPH20 for the treatment of pancreatic cancer. The FDA Office of Orphan Products Development's mission is to advance the evaluation and development of products (drugs, biologics, devices, or medical foods) that demonstrate promise for the diagnosis and/or treatment of rare diseases or conditions. In December 2014, the European Committee for Orphan Medicinal Products of the EMA designated PEGPH20 an orphan medicinal product for the treatment of pancreatic cancer.

In March 2015, we met with the FDA to discuss both the interim efficacy and safety data from Study 109-202 and to discuss the Phase 3 Study 109-301 as a potential registration study in stage IV PDA patients whose tumors are determined to have high levels of HA accumulation. In June 2015, we received scientific advice/protocol assistance from the EMA regarding our Phase 3 study. In addition, we continue our dialog with the FDA regarding the development of a companion diagnostic agent for detection and quantification of hyaluronan in the tumor tissue of cancer patients.

In February 2016, our partner Ventana submitted an IDE application for our companion diagnostic test to enable patient selection in our Phase 3 Study 301 of PEGPH20 in high-HA patients.

Collaborations

Roche Collaboration

In December 2006, we and Roche entered into a collaboration and license agreement under which Roche obtained a worldwide, exclusive license to develop and commercialize product combinations of rHuPH20 and up to thirteen Roche target compounds (the Roche Collaboration). Roche initially had the exclusive right to apply rHuPH20 to only three pre-defined Roche biologic targets with the option to exclusively develop and commercialize rHuPH20 with ten additional targets. As of December 31, 2015 , Roche has elected a total of five targets, two of which are exclusive, and retains the option to develop and commercialize rHuPH20 with three additional targets.

In September 2013, Roche launched a subcutaneous (SC) formulation of Herceptin (trastuzumab) (Herceptin SC) in Europe for the treatment of patients with HER2-positive breast cancer. This formulation utilizes our patented ENHANZE Technology and is administered in two to five minutes, rather than 30 to 90 minutes with the standard intravenous form. Roche received European marketing approval for Herceptin SC in August 2013. The European Commission's approval was based on data from Roche's Phase 3 HannaH study which showed that the subcutaneous formulation of Herceptin was associated with comparable efficacy

(pathological complete response, pCR) to Herceptin administered intravenously in women with HER2-positive early breast cancer and resulted in non-inferior trastuzumab plasma levels. Overall, the safety profile in both arms of the HannaH study was consistent with that expected from standard treatment with Herceptin and chemotherapy in this setting. No new safety signals were identified. Breast cancer is the most common cancer among women worldwide. Each year, about 1.7 million new cases of breast cancer are diagnosed worldwide, and over 500,000 women will die of the disease annually. In HER2-positive breast cancer, increased quantities of the human epidermal growth factor receptor 2 (HER2) are present on the surface of the tumor cells. This is known as "HER2 positivity" and affects approximately 15% to 20% of women with breast cancer. HER2-positive cancer is reported to be a particularly aggressive form of breast cancer.

In June 2014, Roche launched MabThera SC in Europe for the treatment of patients with common forms of non-Hodgkin lymphoma (NHL). This formulation utilizes our patented ENHANZE Technology and is administered in approximately five minutes compared to the approximately 2.5 hour infusion time for intravenous MabThera. The European Commission approved MabThera SC in March 2014. The European Commission's approval was based primarily on data from Roche's Phase 3 pivotal clinical studies, which was published in The Lancet Oncology. NHL is a type of cancer that affects lymphocytes (white blood cells). NHL represents approximately 85% of all lymphomas diagnosed and was responsible for approximately 200,000 annual deaths worldwide in 2012. Lymphomas are a cancer of the lymphatic system (composed of lymph vessels, lymph nodes and organs) which helps to keep the bodily fluid levels balanced and to defend the body against invasion by disease. Lymphoma develops when white blood cells (usually B-lymphocytes) in the lymph fluid become cancerous and begin to multiply and collect in the lymph nodes or lymphatic tissues such as the spleen. Some of these cells are released into the bloodstream and spread around the body, interfering with the body's production of healthy blood cells. Roche announced that it filed MabThera SC in Europe for previously untreated chronic lymphocytic leukemia in the fourth quarter of 2014.

Additional information about the Phase 3 Herceptin SC and Phase 3 MabThera SC clinical trials can be found at *www.clinicaltrials.gov* and *www.roche-trials.com* . Information available on these websites is not incorporated into this report.

Baxalta Collaboration

In September 2007, we and Baxalta entered into a collaboration and license agreement under which Baxalta obtained a worldwide, exclusive license to develop and commercialize product combinations of rHuPH20 with GAMMAGARD LIQUID (HYQVIA) (the Baxalta Collaboration). GAMMAGARD LIQUID is a current Baxalta product that is indicated for the treatment of primary immunodeficiency disorders associated with defects in the immune system.

In October 2014, Baxalta announced the launch and first shipments of Baxalta's HYQVIA product for treatment of adult patients with primary immunodeficiency in the U.S. HYQVIA was approved by the FDA in September 2014 and is the first subcutaneous immune globulin (IG) treatment approved for adult primary immunodeficiency patients with a dosing regimen requiring only one infusion up to once per month (every three to four weeks) and one injection site per infusion in most patients, to deliver a full therapeutic dose of IG. The majority of primary immunodeficiency patients today receive intravenous infusions in a doctor's office or infusion center, and current subcutaneous IG treatments require weekly or bi-weekly treatment with multiple infusion sites per treatment. The FDA's approval of HYQVIA was a significant milestone for us as it represented the first U.S. approved Biologic License Application (BLA) which utilizes our rHuPH20 platform.

In May 2013, the European Commission granted Baxalta marketing authorization in all EU Member States for the use of HYQVIA (solution for subcutaneous use) as replacement therapy for adult patients with primary and secondary immunodeficiencies. Baxalta launched HYQVIA in the first EU country in July 2013 and has continued to launch in additional countries.

Pfizer Collaboration

In December 2012, we and Pfizer entered into a collaboration and license agreement, under which Pfizer has the worldwide license to develop and commercialize products combining our rHuPH20 enzyme with Pfizer proprietary biologics directed to up to six targets in primary care and specialty care indications. Targets may be selected on an exclusive or non-exclusive basis. In September 2013, Pfizer elected the fourth therapeutic target on an exclusive basis. One of the targets is proprotein convertase subtilisin/kexin type 9 (PCSK9) which is the gene that provides instructions for making a protein that helps regulate the amount of cholesterol in the bloodstream. Pfizer initiated dosing of a subcutaneous formulation of rHuPH20 and bococizumab, an investigational PCSK9 inhibitor, in a Phase 1 trial in February 2016. Pfizer is also developing rivipansel directed to another target

under the collaboration to treat vaso-occlusive crisis in individuals with sickle cell disease and initiated dosing of a subcutaneous formulation of rHuPH20 and rivipansel in a Phase 1 clinical trial in October 2015.

Janssen Collaboration

In December 2014, we and Janssen entered into a collaboration and license agreement, under which Janssen has the worldwide license to develop and commercialize products combining our rHuPH20 enzyme with Janssen proprietary biologics directed to up to five targets. Targets may be selected on an exclusive basis. Janssen has elected CD38 as the first target on an exclusive basis. In November 2015, Janssen initiated dosing in a Phase 1b clinical trial evaluating subcutaneous delivery of daratumumab, using ENHANZE Technology, in multiple myeloma.

AbbVie Collaboration

In June 2015, we and AbbVie entered into a collaboration and license agreement, under which AbbVie has the worldwide license to develop and commercialize products combining our rHuPH20 enzyme with AbbVie proprietary biologics directed to up to nine targets. Targets may be selected on an exclusive basis. AbbVie has elected TNF alpha as the first target on an exclusive basis. AbbVie is developing rHuPH20 with adalimumab (HUMIRA ®) which may allow a reduced number of induction injections and deliver additional performance benefits.

Lilly Collaboration

In December 2015, we and Lilly entered into a collaboration and license agreement, under which Lilly has the worldwide license to develop and commercialize products combining our rHuPH20 enzyme with Lilly proprietary biologics directed to up to five targets. Targets may be selected on an exclusive basis. Lilly has elected one target on an exclusive basis and one target on a semi-exclusive basis.

For a further discussion of the material terms of our collaboration agreements, refer to Note 4, *Collaborative Agreements* , to our consolidated financial statements.

Customers

The following table indicates the percentage of total revenues in excess of 10% with any single customer:

	Year Ended December 31,		
	2015	**2014**	**2013**
Roche	42%	57%	64%
Lilly	19%	—	—
AbbVie	17%	—	—
Janssen	1%	20%	—

For additional information regarding our revenues from external customers, refer to Note 2, *Summary of Significant Accounting Policies — Concentrations of Credit Risk, Sources of Supply and Significant Customer* s, to our consolidated financial statements.

Patents and Proprietary Rights

Patents and other proprietary rights are essential to our business. Our success will depend in part on our ability to obtain patent protection for our inventions, to preserve our trade secrets and to operate without infringing the proprietary rights of third parties. Our strategy is to actively pursue patent protection in the U.S. and certain foreign jurisdictions for technology that we believe to be proprietary to us and that offers us a potential competitive advantage. Our patent portfolio includes 21 issued patents in the U.S., more than 235 issued patents in Europe and other countries in the world and more than 260 pending patent applications. In general, patents have a term of 20 years from the application filing date or earlier claimed priority date. Our issued patents will expire between 2022 and 2032. We have multiple patents and patent applications throughout the world pertaining to our recombinant human hyaluronidase and methods of use and manufacture, including an issued U.S. patent which expires in 2027 and an issued European patent which expires in 2024, which we believe cover the products and product candidates under our existing

collaborations, *Hylenex* recombinant, PEGPH20 and our endocrinology product candidates. In addition, we have, under prosecution throughout the world, multiple patent applications that relate specifically to individual product candidates under development, the expiration of which can only be definitely determined upon maturation into our issued patents. We believe our patent filings represent a barrier to entry for potential competitors looking to utilize these hyaluronidases.

In addition to patents, we rely on unpatented trade secrets, proprietary know-how and continuing technological innovation. We seek protection of these trade secrets, proprietary know-how and innovation, in part, through confidentiality and proprietary information agreements. Our policy is to require our employees, directors, consultants, advisors, collaborators, outside scientific collaborators and sponsored researchers, other advisors and other individuals and entities to execute confidentiality agreements upon the start of employment, consulting or other contractual relationships with us. These agreements provide that all confidential information developed or made known to the individual or entity during the course of the relationship is to be kept confidential and not disclosed to third parties except in specific circumstances. In the case of employees and some other parties, the agreements provide that all inventions conceived by the individual will be our exclusive property. Despite the use of these agreements and our efforts to protect our intellectual property, there will always be a risk of unauthorized use or disclosure of information. Furthermore, our trade secrets may otherwise become known to, or be independently developed by, our competitors.

We also file trademark applications to protect the names of our products and product candidates. These applications may not mature to registration and may be challenged by third parties. We are pursuing trademark protection in a number of different countries around the world. There can be no assurances that our registered or unregistered trademarks or trade names will not infringe on rights of third parties or will be acceptable to regulatory agencies.

Research and Development Activities

Our research and development expenses consist primarily of costs associated with the development and manufacturing of our product candidates, compensation and other expenses for research and development personnel, supplies and materials, costs for consultants and related contract research, clinical trials, facility costs and amortization and depreciation. We charge all research and development expenses to operations as they are incurred. Our research and development activities are primarily focused on the development of our various product candidates.

Due to the uncertainty in obtaining the FDA and other regulatory approvals, our reliance on third parties and competitive pressures, we are unable to estimate with any certainty the additional costs we will incur in the continued development of our proprietary product candidates for commercialization. However, we expect our research and development expenses for PEGPH20 to increase as our program advances into additional tumors and later stages of clinical development.

Manufacturing

We do not have our own manufacturing facility for our product and product candidates, or the capability to package our products. We have engaged third parties to manufacture bulk rHuPH20, PEGPH20 and *Hylenex* recombinant.

We have existing supply agreements with contract manufacturing organizations Avid Bioservices, Inc. (Avid) and Cook Pharmica LLC (Cook) to produce supplies of bulk rHuPH20. These manufacturers each produce bulk rHuPH20 under current Good Manufacturing Practices (cGMP) for clinical and commercial uses. Cook currently produces bulk rHuPH20 for use in *Hylenex* recombinant, product candidates and collaboration product candidates. Avid currently produces bulk rHuPH20 for use in collaboration products. We rely on their ability to successfully manufacture these batches according to product specifications. In addition, we are working to scale-up, validate and qualify a new facility operated by Avid as a manufacturer of bulk rHuPH20 for use in the products and product candidates under the Roche collaboration. It is important for our business for Cook and Avid to (i) retain their status as cGMP-approved manufacturing facilities; (ii) to successfully scale up bulk rHuPH20 production; and/or (iii) manufacture the bulk rHuPH20 required by us and our collaborators for use in our proprietary and collaboration products and product candidates. In addition to supply obligations, Avid and Cook will also provide support for data and information used in the chemistry, manufacturing and controls sections for FDA and other regulatory filings.

We have a commercial manufacturing and supply agreement with Patheon Manufacturing Services, LLC (Patheon) under which Patheon will provide the final fill and finishing steps in the production process of *Hylenex* recombinant. Under our commercial services agreement with Patheon, Patheon has agreed to fill and finish *Hylenex* recombinant product for us until December 31, 2019, subject to further extensions in accordance with the terms of the agreement. In addition, we are in the early stages of scaling

up our manufacturing of PEGPH20 with third party suppliers to support additional clinical trials, including a registration-enabling trial, and ultimately, if approved, potential commercial supply.

Sales, Marketing and Distribution

HYLENEX Recombinant

Our commercial activities currently focus on *Hylenex* recombinant. We have a team of sales specialists that provide hospital and surgery center customers with the information about *Hylenex* recombinant and information needed to obtain formulary approval for, and support utilization of, *Hylenex* recombinant. Our commercial activities also include marketing and related services and commercial support services such as commercial operations, managed markets and commercial analytics. We also employ third-party vendors, such as advertising agencies, market research firms and suppliers of marketing and other sales support related services to assist with our commercial activities.

We sell *Hylenex* recombinant in the U.S. to wholesale pharmaceutical distributors, who sell the product to hospitals and other end-user customers. We have engaged Integrated Commercial Solutions (ICS), a division of AmerisourceBergen Specialty Group, a subsidiary of AmerisourceBergen, to act as our exclusive distributor for commercial shipment and distribution of *Hylenex* recombinant to our customers in the United States. In addition to distribution services, ICS provides us with other key services related to logistics, warehousing, returns and inventory management, contract administration and chargebacks processing and accounts receivable management. In addition, we utilize third parties to perform various other services for us relating to regulatory monitoring, including call center management, adverse event reporting, safety database management and other product maintenance services.

Competition

The pharmaceutical industry is characterized by rapidly advancing technologies, intense competition and a strong emphasis on proprietary therapeutics. We face competition from a number of sources, some of which may target the same indications as our product or product candidates, including large pharmaceutical companies, smaller pharmaceutical companies, biotechnology companies, academic institutions, government agencies and private and public research institutions, many of which have greater financial resources, drug development experience, sales and marketing capabilities, including larger, well established sales forces, manufacturing capabilities, experience in obtaining regulatory approvals for product candidates and other resources than us. We face competition not only in the commercialization of *Hylenex* recombinant, but also for the in-licensing or acquisition of additional product candidates, and the out-licensing of our ENHANZE Technology. In addition, our collaborators face competition in the commercialization of the product candidates for which the collaborators seek marketing approval from the FDA or other regulatory authorities.

HYLENEX Recombinant

Hylenex recombinant is currently the only FDA approved recombinant human hyaluronidase on the market. The competitors for Hylenex recombinant include, but are not limited to, Valeant Pharmaceuticals International, Inc.'s FDA approved product, Vitrase ®, an ovine (ram) hyaluronidase, and Amphastar Pharmaceuticals, Inc.'s product, Amphadase ®, a bovine (bull) hyaluronidase. In addition, some commercial pharmacies compound hyaluronidase preparations for institutions and physicians even though compounded preparations are not FDA approved products.

Government Regulations

The FDA and comparable regulatory agencies in foreign countries regulate the manufacture and sale of the pharmaceutical products that we have developed or currently are developing. The FDA has established guidelines and safety standards that are applicable to the laboratory and preclinical evaluation and clinical investigation of therapeutic products and stringent regulations that govern the manufacture and sale of these products. The process of obtaining regulatory approval for a new therapeutic product usually requires a significant amount of time and substantial resources. The steps typically required before a product can be introduced for human use include:

- animal pharmacology studies to obtain preliminary information on the safety and efficacy of a drug; or
- laboratory and preclinical evaluation *in vitro* and *in vivo* including extensive toxicology studies.

The results of these laboratory and preclinical studies may be submitted to the FDA as part of an IND (Investigational New Drug) application. The sponsor of an IND application may commence human testing of the compound 30 days after submission of the IND, unless notified to the contrary by the FDA.

The clinical testing program for a new drug typically involves three phases:

- Phase 1 investigations are generally conducted in healthy subjects (in certain instances, Phase 1 studies that determine the maximum tolerated dose and initial safety of the product candidate are performed in patients with the disease);
- Phase 2 studies are conducted in limited numbers of subjects with the disease or condition to be treated and are aimed at determining the most effective dose and schedule of administration, evaluating both safety and whether the product demonstrates therapeutic effectiveness against the disease; and
- Phase 3 studies involve large, well-controlled investigations in diseased subjects and are aimed at verifying the safety and effectiveness of the drug.

Data from all clinical studies, as well as all laboratory and preclinical studies and evidence of product quality, are typically submitted to the FDA in a new drug application (NDA). The results of the preclinical and clinical testing of a biologic product candidate are submitted to the FDA in the form of a BLA, for evaluation to determine whether the product candidate may be approved for commercial sale. In responding to a BLA or NDA, the FDA may grant marketing approval, request additional information, or deny the application. Although the FDA's requirements for clinical trials are well established and we believe that we have planned and conducted our clinical trials in accordance with the FDA's applicable regulations and guidelines, these requirements, including requirements relating to testing the safety of drug candidates, may be subject to change as a result of recent announcements regarding safety problems with approved drugs. Additionally, we could be required to conduct additional trials beyond what we had planned due to the FDA's safety and/or efficacy concerns or due to differing interpretations of the meaning of our clinical data. (See Part I, Item 1A, *Risk Factors.*)

The FDA's Center for Drug Evaluation and Research must approve an NDA and the FDA's Center for Biologics Evaluation and Research must approve a BLA for a drug before it may be marketed in the United States. If we begin to market our proposed products for commercial sale in the U.S., any manufacturing operations that may be established in or outside the U.S. will also be subject to rigorous regulation, including compliance with cGMP. We also may be subject to regulation under the Occupational Safety and Health Act, the Environmental Protection Act, the Toxic Substance Control Act, the Export Control Act and other present and future laws of general application. In addition, the handling, care and use of laboratory animals are subject to the Guidelines for the Humane Use and Care of Laboratory Animals published by the National Institutes of Health.

Regulatory obligations continue post-approval, and include the reporting of adverse events when a drug is utilized in the broader patient population. Promotion and marketing of drugs is also strictly regulated, with penalties imposed for violations of FDA regulations, the Lanham Act and other federal and state laws, including the federal anti-kickback statute.

We currently intend to continue to seek, directly or through our collaborators, approval to market our products and product candidates in foreign countries, which may have regulatory processes that differ materially from those of the FDA. We anticipate that we will rely upon independent consultants to seek and gain approvals to market our proposed products in foreign countries or may rely on other pharmaceutical or biotechnology companies to license our proposed products. We cannot assure you that approvals to market any of our proposed products can be obtained in any country. Approval to market a product in any one foreign country does not necessarily indicate that approval can be obtained in other countries.

From time to time, legislation is drafted and introduced in Congress that could significantly change the statutory provisions governing the approval, manufacturing and marketing of drug products. In addition, FDA regulations and guidance are often revised or reinterpreted by the agency or reviewing courts in ways that may significantly affect our business and development of our product candidates and any products that we may commercialize. It is impossible to predict whether additional legislative changes will be enacted, or FDA regulations, guidance or interpretations changed, or what the impact of any such changes may be.

Segment Information

We operate our business as one segment, which includes all activities related to the research, development and commercialization of human enzymes. This segment also includes revenues and expenses related to (i) research and development activities conducted under our collaboration agreements with third parties and (ii) product sales of *Hylenex* recombinant. The chief operating decision-maker reviews the operating results on an aggregate basis and manages the operations as a single operating segment. We had no foreign based operations and minimal long-lived assets located in foreign countries as of and for the years ended December 31, 2015, 2014 and 2013 . Refer to the Notes for additional financial information regarding our operating segment.

Executive Officers of the Registrant

Information concerning our executive officers, including their names, ages and certain biographical information can be found in Part III, Item 10, *Directors, Executive Officers and Corporate Governance* . This information is incorporated by reference into Part I of this report.

Employees

As of February 22, 2016 , we had 216 full-time employees. None of our employees are unionized and we believe our employee relations to be good.

Item 1A. ***Risk Factors***

Risks Related To Our Business

We have generated only limited revenue from product sales to date; we have a history of net losses and negative cash flow, and we may never achieve or maintain profitability.

Relative to expenses incurred in our operations, we have generated only limited revenues from product sales, royalties, licensing fees, milestone payments, bulk rHuPH20 supply payments and research reimbursements to date, and we may never generate sufficient revenues from future product sales, licensing fees and milestone payments to offset expenses. Even if we ultimately do achieve significant revenues from product sales, royalties, licensing fees, research reimbursements, bulk rHuPH20 supply payments and/or milestone payments, we expect to incur significant operating losses over the next few years. We have never been profitable, and we may never become profitable. Through December 31, 2015 , we have incurred aggregate net losses of approximately $482.7 million .

If our product candidates do not receive and maintain regulatory approvals, or if approvals are not obtained in a timely manner, such failure or delay would substantially impair our ability to generate revenues.

Approval from the FDA or equivalent health authorities is necessary to manufacture and market pharmaceutical products in the U.S. and the other countries in which we anticipate doing business have similar requirements. The process for obtaining FDA and other regulatory approvals is extensive, time-consuming, risky and costly, and there is no guarantee that the FDA or other regulatory bodies will approve any applications that may be filed with respect to any of our product candidates, or that the timing of any such approval will be appropriate for the desired product launch schedule for a product candidate. We and our collaborators attempt to provide guidance as to the timing for the filing and acceptance of such regulatory approvals, but such filings and approvals may not occur when we or our collaborators expect, or at all. The FDA or other foreign regulatory agency may refuse or delay approval of our product candidates for failure to collect sufficient clinical or animal safety data and require us or our collaborators to conduct additional clinical or animal safety studies which may cause lengthy delays and increased costs to our programs. For example, the approval of Baxalta's HYQVIA BLA was delayed until we and Baxalta provided additional preclinical data sufficient to address concerns regarding non-neutralizing antibodies to rHuPH20 that were detected in the registration trial. Although these antibodies have not been associated with any known adverse clinical effects, and the HYQVIA BLA was approved by the FDA in September 2014, we cannot assure you that they will not arise and have an adverse impact on future development of products which include rHuPH20, future sales of *Hylenex* recombinant, our ability to enter into collaborations, or be raised by the FDA or other health authorities in connection with testing or approval of products including rHuPH20.

We and our collaborators may not be successful in obtaining approvals for any additional potential products in a timely manner, or at all. Refer to the risk factor titled " *Our proprietary and collaboration product candidates or companion diagnostic assays may not receive regulatory approvals or their development may be delayed for a variety of reasons, including delayed or unsuccessful clinical trials, regulatory requirements or safety concerns* " for additional information relating to the approval of product candidates.

Additionally, even with respect to products which have been approved for commercialization, in order to continue to manufacture and market pharmaceutical products, we or our collaborators must maintain our regulatory approvals. If we or any of our collaborators are unsuccessful in maintaining our regulatory approvals, our ability to generate revenues would be adversely affected.

We will likely need to raise additional capital in the future and there can be no assurance that we will be able to obtain such funds.

We will likely need to raise additional capital in the future to continue the development of our product candidates or for other current corporate purposes. Our current cash reserves and expected revenues during the next few years will not be sufficient for us to continue the development of our proprietary product candidates, to fund general operations and conduct our business at the level desired. In addition, if we engage in acquisitions of companies, products or technologies in order to execute our business strategy, we may need to raise additional capital. We may raise additional capital in the future through one or more financing vehicles that may be available to us including (i) the public offering of securities; (ii) new collaborative agreements; (iii) expansions or revisions to existing collaborative relationships; (iv) private financings; and/or (v) other equity or debt financings.

In view of our stage of development, business prospects, the nature of our capital structure and general market conditions, if we are required to raise additional capital in the future, the additional financing may not be available on favorable terms, or at all. If additional capital is not available on favorable terms when needed, we will be required to raise capital on adverse terms or significantly reduce operating expenses through the restructuring of our operations or deferral of one or more product development programs. If we raise additional capital, a substantial number of additional shares may be issued, and these shares will dilute the ownership interest of our current investors.

Use of our product candidates or those of our collaborators could be associated with side effects or adverse events.

As with most pharmaceutical products, use of our product candidates or those of our collaborators could be associated with side effects or adverse events which can vary in severity (from minor reactions to death) and frequency (infrequent or prevalent). Side effects or adverse events associated with the use of our product candidates or those of our collaborators may be observed at any time, including in clinical trials or when a product is commercialized, and any such side effects or adverse events may negatively affect our or our collaborators' ability to obtain or maintain regulatory approval or market our product candidates. Side effects such as toxicity or other safety issues associated with the use of our product candidates or those of our collaborators could require us or our collaborators to perform additional studies or halt development or commercialization of these product candidates or expose us to product liability lawsuits which will harm our business. We or our collaborators may be required by regulatory agencies to conduct additional animal or human studies regarding the safety and efficacy of our pharmaceutical product candidates which we have not planned or anticipated. Furthermore, there can be no assurance that we or our collaborators will resolve any issues related to any product related adverse events to the satisfaction of the FDA or any regulatory agency in a timely manner or ever, which could harm our business, prospects and financial condition. For example, in April 2014, a clinical hold was placed on patient enrollment and dosing of PEGPH20 in Study 202 as a result of a possible difference in the TE event rate that had been observed at that time in the trial between the group of patients treated with PEGPH20 versus the group of patients treated without PEGPH20. The clinical hold was lifted by FDA in June 2014, and we have completed enrollment and resumed dosing of PEGPH20 in Study 202 under a revised clinical protocol. We and the data monitoring committee for Study 202 continue to closely monitor the occurrence of TE events in enrolled patients after the protocol amendments. While the pre-specified TE event rate analysis established in the protocol at the time of the clinical hold in 2014 have been passed, the continuation of Study 202 may be halted again if the FDA determines that imbalances in safety findings, including TE events, occur.

If our contract manufacturers are unable to manufacture and supply to us bulk rHuPH20 or other raw materials in the quantity and quality required by us or our collaborators for use in our products and product candidates, our product development and commercialization efforts could be delayed or stopped and our collaborations could be damaged.

We have existing supply agreements with contract manufacturing organizations Avid Bioservices, Inc. (Avid) and Cook Pharmica LLC (Cook) to produce bulk rHuPH20. These manufacturers each produce bulk rHuPH20 under current cGMP for clinical uses. Cook currently produces bulk rHuPH20 for use in *Hylenex* recombinant, product candidates and collaboration product candidates. Avid currently produces bulk rHuPH20 for use in collaboration products. In addition to supply obligations, Avid and Cook will also provide support for the chemistry, manufacturing and controls sections for FDA and other regulatory filings. We rely on their ability to successfully manufacture these batches according to product specifications. If either Avid or Cook: (i) is unable to retain its status as an FDA approved manufacturing facility; (ii) is unable to otherwise successfully scale up bulk rHuPH20 production to meet corporate or regulatory authority quality standards; or (iii) fails to manufacture and supply bulk rHuPH20 in the quantity and quality required by us or our collaborators for use in our proprietary and collaboration products and product candidates for any other reason, our business will be adversely affected. In addition, a significant change in such parties' or other third party manufacturers' business or financial condition could adversely affect their abilities to fulfill their contractual obligations to us. We have not established, and may not be able to establish, favorable arrangements with additional bulk rHuPH20 manufacturers and suppliers of the ingredients necessary to manufacture bulk rHuPH20 should the existing manufacturers and suppliers become unavailable or in the event that our existing manufacturers and suppliers are unable to adequately perform their responsibilities. We have attempted to mitigate the impact of a potential supply interruption through the establishment of excess bulk rHuPH20 inventory where possible, but there can be no assurances that this safety stock will be maintained or that it will be sufficient to address any delays, interruptions or other problems experienced by Avid and/or Cook. Any delays, interruptions or other problems regarding the ability of Avid and/or Cook to supply bulk rHuPH20 or the ability of other third party manufacturers, to supply other raw materials or ingredients necessary to produce our products on a timely basis could: (i) cause the delay of clinical trials or otherwise delay or prevent the regulatory approval of proprietary or collaboration product candidates; (ii) delay or prevent the effective commercialization of proprietary or collaboration products; and/or (iii) cause us to breach contractual obligations to deliver bulk rHuPH20 to our collaborators. Such delays would likely damage our relationship with our collaborators, and they would have a material adverse effect on royalties and thus our business and financial condition.

If we or any party to a key collaboration agreement fails to perform material obligations under such agreement, or if a key collaboration agreement, is terminated for any reason, our business could significantly suffer.

We have entered into multiple collaboration agreements under which we may receive significant future payments in the form of milestone payments, target designation fees, maintenance fees and royalties. We are dependent on our collaborators to develop and commercialize product candidates subject to our collaborations in order for us to realize any financial benefits from these collaborations. Our collaborators may not devote the attention and resources to such efforts that we would ourselves, change their promotional efforts or simultaneously develop and commercialize products in competition to those products we have licensed to them. Any of these actions could not be visible to us immediately and could negatively impact the benefits and revenue we receive from such collaboration. In addition, in the event that a party fails to perform under a key collaboration agreement, or if a key collaboration agreement is terminated, the reduction in anticipated revenues could delay or suspend our product development activities for some of our product candidates, as well as our commercialization efforts for some or all of our products. Specifically, the termination of a key collaboration agreement by one of our collaborators could materially impact our ability to enter into additional collaboration agreements with new collaborators on favorable terms, if at all. In certain circumstances, the termination of a key collaboration agreement would require us to revise our corporate strategy going forward and reevaluate the applications and value of our technology.

Most of our current proprietary and collaboration products and product candidates rely on the rHuPH20 enzyme, and any adverse development regarding rHuPH20 could substantially impact multiple areas of our business, including current and potential collaborations, as well as proprietary programs.

rHuPH20 is a key technological component of ENHANZE Technology and our most advanced proprietary and collaboration products and product candidates, including the current and future products and product candidates under our Roche, Pfizer, Janssen, Baxalta, AbbVie and Lilly collaborations, our PEGPH20 program, and *Hylenex* recombinant. If there is an adverse development

for rHuPH20 (e.g., an adverse regulatory determination relating to rHuPH20, if we are unable to obtain sufficient quantities of rHuPH20, if we are unable to obtain or maintain material proprietary rights to rHuPH20 or if we discover negative characteristics of rHuPH20), multiple areas of our business, including current and potential collaborations, as well as proprietary programs would be substantially impacted. For example, elevated anti-rHuPH20 antibody titers were detected in the registration trial for Baxalta's HYQVIA product as well as in a former collaborator's product in a Phase 2 clinical trial with rHuPH20, but have not been associated, in either case, with any adverse events. We monitor for antibodies to rHuPH20 in our collaboration and proprietary programs, and although we do not believe at this time that the incidence of non-neutralizing anti-rHuPH20 antibodies in either the HYQVIA program or the former collaborator's program will have a significant impact on our other proprietary and other collaboration product candidates, there can be no assurance that there will not be other such occurrences in the foregoing programs or our other programs or that concerns regarding these antibodies will not also be raised by the FDA or other health authorities in the future, which could result in delays or discontinuations of our development or commercialization activities or deter entry into additional collaborations with third parties.

We routinely evaluate, and may modify, our business strategy and our strategic focus to only a few fields or applications of our technology which may increase or decrease the risk for potential negative impact of adverse developments.

We routinely evaluate our business strategy, and may modify this strategy in the future in light of our assessment of unmet medical needs, growth potential, resource requirements, regulatory issues, competition, risks and other factors. As a result of these strategic evaluations, we may focus our resources and efforts on one or a few programs or fields and may suspend or reduce our efforts on other programs and fields. For example, in the third quarter of 2014, we decided to focus our resources on advancing PEGPH20 and expanding utilization of our ENHANZE platform. While we believe these are applications with the greatest potential value, we have reduced the diversification of our programs and increased our dependence on the success of the areas we are pursuing. By focusing on one or a few areas, we increase the potential impact on us if one of those programs or product candidates does not successfully complete clinical trials, achieve commercial acceptance or meet expectations regarding sales and revenue. Our decision to focus on one or a few programs may also reduce the value of programs that are no longer within our principal strategic focus, which could impair our ability to pursue collaborations or other strategic alternatives for those programs we are not pursuing.

Our proprietary and collaboration product candidates or companion diagnostic assays may not receive regulatory approvals or their development may be delayed for a variety of reasons, including delayed or unsuccessful clinical trials, regulatory requirements or safety concerns.

Clinical testing of pharmaceutical products is a long, expensive and uncertain process, and the failure or delay of a clinical trial can occur at any stage, including the patient enrollment stage. Even if initial results of preclinical and nonclinical studies or clinical trial results are promising, we or our collaborators may obtain different results in subsequent trials or studies that fail to show the desired levels of safety and efficacy, or we may not, or our collaborators may not, obtain applicable regulatory approval for a variety of other reasons. Preclinical, nonclinical, and clinical trials for any of our proprietary or collaboration product candidates or development of any collaboration companion diagnostic assays could be unsuccessful, which would delay or preclude regulatory approval and commercialization of the product candidates or companion diagnostic assays. In the U.S. and other jurisdictions, regulatory approval can be delayed, limited or not granted for many reasons, including, among others:

- clinical results may not meet prescribed endpoints for the studies or otherwise provide sufficient data to support the efficacy of our product candidates;
- clinical and nonclinical test results may reveal side effects, adverse events or unexpected safety issues associated with the use of our product candidates; for example, in April 2014, a clinical hold was placed on patient enrollment and dosing of PEGPH20 in Study 202 as a result of a possible difference in the TE event rate that had been observed at that time in the trial between the group of patients treated with PEGPH20 versus the group of patients treated without PEGPH20. The clinical hold was lifted by FDA in June 2014, and we have completed enrollment and resumed dosing of PEGPH20 in Study 202 under a revised clinical protocol;
- Completion of clinical trials may be delayed for a variety of reasons including the amount of time it may take to identify and enroll patients with high levels of HA in our target population;
- regulatory review may not find a product candidate safe or effective enough to merit either continued testing or final approval;

- regulatory review may not find that the data from preclinical testing and clinical trials justifies approval;
- regulatory authorities may require that we change our studies or conduct additional studies which may significantly delay or make continued pursuit of approval commercially unattractive;
- a regulatory agency may reject our trial data or disagree with our interpretations of either clinical trial data or applicable regulations;
- a regulatory agency may approve only a narrow use of our product or may require additional safety monitoring and reporting through Risk Evaluation and Mitigation Strategies (REMS) or conditions to assure safe use program;
- the cost of clinical trials required for product approval may be greater than what we originally anticipate, and we may decide to not pursue regulatory approval for such a product;
- a regulatory agency may not approve our manufacturing processes or facilities, or the processes or facilities of our collaborators, our contract manufacturers or our raw material suppliers;
- a regulatory agency may identify problems or other deficiencies in our existing manufacturing processes or facilities, or the existing processes or facilities of our collaborators, our contract manufacturers or our raw material suppliers;
- a regulatory agency may change its formal or informal approval requirements and policies, act contrary to previous guidance, adopt new regulations or raise new issues or concerns late in the approval process; or
- a product candidate may be approved only for indications that are narrow or under conditions that place the product at a competitive disadvantage, which may limit the sales and marketing activities for such product candidate or otherwise adversely impact the commercial potential of a product.

If a proprietary or collaboration product candidate or companion diagnostic assay is not approved in a timely fashion or obtained on commercially viable terms, or if development of any product candidate or a companion diagnostic assay is terminated due to difficulties or delays encountered in the regulatory approval process, it could have a material adverse impact on our business, and we would become more dependent on the development of other proprietary or collaboration product candidates and/or our ability to successfully acquire other products and technologies. There can be no assurances that any proprietary or collaboration product candidate or companion diagnostic assay will receive regulatory approval in a timely manner, or at all. There can be no assurance that we will be able to gain clarity as to the FDA's requirements or that the requirements may be satisfied in a commercially feasible way, in which case our ability to enter into collaborations with third parties or explore other strategic alternatives to exploit this opportunity will be limited or may not be possible.

We anticipate that certain proprietary and collaboration products will be marketed, and perhaps manufactured, in foreign countries. The process of obtaining regulatory approvals in foreign countries is subject to delay and failure for the reasons set forth above, as well as for reasons that vary from jurisdiction to jurisdiction. The approval process varies among countries and jurisdictions and can involve additional testing. The time required to obtain approval may differ from that required to obtain FDA approval. Foreign regulatory agencies may not provide approvals on a timely basis, if at all. Approval by the FDA does not ensure approval by regulatory authorities in other countries or jurisdictions, and approval by one foreign regulatory authority does not ensure approval by regulatory authorities in other foreign countries or jurisdictions or by the FDA.

Our third party collaborators are responsible for providing certain proprietary materials that are essential components of our collaboration products and product candidates, and any failure to supply these materials could delay the development and commercialization efforts for these collaboration products and product candidates and/or damage our collaborations.

Our development and commercialization collaborators are responsible for providing certain proprietary materials that are essential components of our collaboration products and product candidates. For example, Roche is responsible for producing the Herceptin and MabThera required for its subcutaneous products and Baxalta is responsible for producing the GAMMAGARD LIQUID for its product HYQVIA. If a collaborator, or any applicable third party service provider of a collaborator, encounters difficulties in the manufacture, storage, delivery, fill, finish or packaging of the collaboration product or product candidate or component of such product or product candidate, such difficulties could (i) cause the delay of clinical trials or otherwise delay or prevent the regulatory approval of collaboration product candidates; and/or (ii) delay or prevent the effective commercialization of collaboration products. Such delays could have a material adverse effect on our business and financial condition.

We rely on third parties to prepare, fill, finish and package our products and product candidates, and if such third parties should fail to perform, our commercialization and development efforts for our products and product candidates could be delayed or stopped.

We rely on third parties to store and ship bulk rHuPH20 on our behalf and to also prepare, fill, finish and package our products and product candidates prior to their distribution. If we are unable to locate third parties to perform these functions on terms that are acceptable to us, or if the third parties we identify fail to perform their obligations, the progress of clinical trials could be delayed or even suspended and the commercialization of approved product candidates could be delayed or prevented. In addition, we are in the early stages of scaling up our manufacturing of PEGPH20 with third party suppliers to support additional clinical trials, including a Phase 3 trial, and ultimately, if approved, potential commercial supply. If our contract manufacturers are unable to successfully manufacture and supply PEGPH20, the progress of our clinical trials could be delayed or halted for a period of time.

If we are unable to sufficiently develop our sales, marketing and distribution capabilities or enter into successful agreements with third parties to perform these functions, we will not be able to fully commercialize our products.

We may not be successful in marketing and promoting our approved product, *Hylenex* recombinant, or any other products we develop or acquire in the future. Our sales, marketing and distribution capabilities are very limited. In order to commercialize any products successfully, we must internally develop substantial sales, marketing and distribution capabilities or establish collaborations or other arrangements with third parties to perform these services. We do not have extensive experience in these areas, and we may not be able to establish adequate in-house sales, marketing and distribution capabilities or engage and effectively manage relationships with third parties to perform any or all of such services. To the extent that we enter into co-promotion or other licensing arrangements, our product revenues are likely to be lower than if we directly marketed and sold our products, and any revenues we receive will depend upon the efforts of third parties, whose efforts may not meet our expectations or be successful. These third parties would be largely responsible for the speed and scope of sales and marketing efforts, and may not dedicate the resources necessary to maximize product opportunities. Our ability to cause these third parties to increase the speed and scope of their efforts may also be limited. In addition, sales and marketing efforts could be negatively impacted by the delay or failure to obtain additional supportive clinical trial data for our products. In some cases, third party collaborators are responsible for conducting these additional clinical trials, and our ability to increase the efforts and resources allocated to these trials may be limited.

If we or our collaborators fail to comply with regulatory requirements applicable to promotion, sale and manufacturing of approved products, regulatory agencies may take action against us or them, which could significantly harm our business.

Any approved products, along with the manufacturing processes, post-approval clinical data, labeling, advertising and promotional activities for these products, are subject to continual requirements and review by the FDA, state and foreign regulatory bodies. Regulatory authorities subject a marketed product, its manufacturer and the manufacturing facilities to continual review and periodic inspections. We, our collaborators and our respective contractors, suppliers and vendors, will be subject to ongoing regulatory requirements, including complying with regulations and laws regarding advertising, promotion and sales of drug products, required submissions of safety and other post-market information and reports, registration requirements, cGMP regulations (including requirements relating to quality control and quality assurance, as well as the corresponding maintenance of records and documentation), and the requirements regarding the distribution of samples to physicians and recordkeeping requirements. Regulatory agencies may change existing requirements or adopt new requirements or policies. We, our collaborators and our respective contractors, suppliers and vendors, may be slow to adapt or may not be able to adapt to these changes or new requirements.

In particular, regulatory requirements applicable to pharmaceutical products make the substitution of suppliers and manufacturers costly and time consuming. We have minimal internal manufacturing capabilities and are, and expect to be in the future, entirely dependent on contract manufacturers and suppliers for the manufacture of our products and for their active and other ingredients. The disqualification of these manufacturers and suppliers through their failure to comply with regulatory requirements could negatively impact our business because the delays and costs in obtaining and qualifying alternate suppliers (if such alternative suppliers are available, which we cannot assure) could delay clinical trials or otherwise inhibit our ability to bring approved products to market, which would have a material adverse effect on our business and financial condition. Likewise, if we, our collaborators and our respective contractors, suppliers and vendors involved in sales and promotion of our products do

not comply with applicable laws and regulations, for example off-label or false or misleading promotion, this could materially harm our business and financial condition.

Failure to comply with regulatory requirements may result in any of the following:

- restrictions on our products or manufacturing processes;
- warning letters;
- withdrawal of the products from the market;
- voluntary or mandatory recall;
- fines;
- suspension or withdrawal of regulatory approvals;
- suspension or termination of any of our ongoing clinical trials;
- refusal to permit the import or export of our products;
- refusal to approve pending applications or supplements to approved applications that we submit;
- product seizure;
- injunctions; or
- imposition of civil or criminal penalties.

We currently have significant debt and failure by us to fulfill our obligations under the applicable loan agreements may cause the repayment obligations to accelerate.

In December 2015, our subsidiaries, Halozyme, Inc. (Halozyme) and Halozyme Royalty LLC (Halozyme Royalty) entered into a credit agreement (the Credit Agreement) with BioPharma Credit Investments IV Sub, LP and Athyrium Opportunities II Acquisition LP (the Royalty-backed Lenders) pursuant to which we borrowed $150 million through Halozyme Royalty (the Royalty-backed Loan). The Royalty-backed Loan will be repaid primarily from a specified percentage of the royalty payments we receive under our collaboration agreements with Roche and Baxalta (the Royalty Payments).

The obligations of Halozyme Royalty under the Credit Agreement to repay the Royalty-backed Loan may be accelerated upon the occurrence of certain events of default under the Credit Agreement, including but not limited to:

- if any payment of principal is not made within three days of when such payment is due and payable or otherwise made in accordance with the terms of the Credit Agreement;
- if any representations or warranties made in the Credit Agreement or any other transaction document proves to be incorrect or misleading in any material respect when made;
- if there occurs a default in the performance of affirmative and negative covenants set forth in the Credit Agreement or any other transaction document;
- the failure by either Baxalta or Roche to pay material amounts owed under our collaboration agreements because of an actual breach or default by us under the collaboration agreements;
- the voluntary or involuntary commencement of bankruptcy proceedings by either Halozyme or Halozyme Royalty and other insolvency related defaults;
- any materially adverse effect on the binding nature of any of the transaction documents or the collaboration agreements with Baxalta and Roche; or
- Halozyme ceases to own, of record and beneficially, 100% of the equity interests in Halozyme Royalty.

The Credit Agreement also contains covenants applicable to Halozyme and Halozyme Royalty, including certain visitation, information and audits rights granted to the collateral agent and the lenders and restrictions on the conduct of business, including continued compliance with the Baxalta and Roche collaboration agreements and specified affirmative actions regarding the escrow account established to facilitate payment of Royalty Payments to the Royalty-backed Lenders or other specified parties. The Credit Agreement also contains covenants solely applicable to Halozyme Royalty, including restrictions on incurring indebtedness, creating or granting liens, making acquisitions and making specified restricted payments. These covenants could make it more difficult for us to execute our business strategy.

In connection with the Royalty-backed Loan, Halozyme Royalty granted a first priority lien and security interest (subject only to permitted liens) in all of its assets and all real, intangible and personal property, including all of its right, title and interest in and to the Royalty Payments.

In December 2013, we entered into an Amended and Restated Loan and Security Agreement (the Loan Agreement) with Oxford Finance LLC (Oxford) and Silicon Valley Bank (SVB) (collectively, the Lenders), amending and restating in its entirety our original loan agreement with the Lenders, dated December 2012. The Loan Agreement provided for an additional $20 million principal amount of new term loan, bringing the total term loan balance to $50 million. The proceeds are to be used for working capital and general business requirements. In January 2015, we entered into the Second Amendment to the Amended and Restated Loan and Security Agreement and First Amendment to Disbursement Letter (the Amendment) with the Lenders, amending and restating the loan payment schedules of the Amended and Restated Loan and Security Agreement. The amended and restated term loan repayment schedule provides for interest only payments through January 2016, followed by consecutive equal monthly payments of principal and interest in arrears starting in February 2016 and continuing through the previously established maturity date of January 2018. The amended and restated term loan facility is secured by substantially all of the assets of the Company and its subsidiary, Halozyme, Inc., except that the collateral does not include any equity interests in Halozyme, Inc., any intellectual property (including all licensing, collaboration and similar agreements relating thereto), and certain other excluded assets. The Loan Agreement contains customary representations, warranties and covenants by us, which covenants limit our ability to convey, sell, lease, transfer, assign or otherwise dispose of certain of our assets; engage in any business other than the businesses currently engaged in by us or reasonably related thereto; liquidate or dissolve; make certain management changes; undergo certain change of control events; create, incur, assume, or be liable with respect to certain indebtedness; grant certain liens; pay dividends and make certain other restricted payments; make certain investments; make payments on any subordinated debt; and enter into transactions with any of our affiliates outside of the ordinary course of business or permit our subsidiaries to do the same. In addition, subject to certain exceptions, we are required to maintain with SVB our primary deposit accounts, securities accounts and commodities, and to do the same for our domestic subsidiary. Complying with these covenants may make it more difficult for us to successfully execute our business strategy.

The Loan Agreement also contains customary indemnification obligations and customary events of default, including, among other things, our failure to fulfill certain of our obligations under the Loan Agreement and the occurrence of a material adverse change which is defined as a material adverse change in our business, operations or condition (financial or otherwise), a material impairment of the prospect of repayment of any portion of the loan, or a material impairment in the perfection or priority of lender's lien in the collateral or in the value of such collateral.

Our ability to make payments on our debt will depend on our future operating performance and ability to generate cash and may also depend on our ability to obtain additional debt or equity financing. We will need to use cash to pay principal and interest on our debt, thereby reducing the funds available to fund our research and development programs, strategic initiatives and working capital requirements. If we are unable to generate sufficient cash to service our debt obligation, an event of default may occur. In the event of default by us under the Credit Agreement or the Loan Agreement, the lenders would be entitled to exercise their remedies thereunder, including the right to accelerate the debt, upon which we may be required to repay all amounts then outstanding under the Credit Agreement or the Loan Agreement which could harm our financial condition.

If proprietary or collaboration product candidates are approved for marketing but do not gain market acceptance, our business may suffer and we may not be able to fund future operations.

Assuming that our proprietary or collaboration product candidates obtain the necessary regulatory approvals for commercial sale, a number of factors may affect the market acceptance of these existing product candidates or any other products which are developed or acquired in the future, including, among others:

- the price of products relative to other therapies for the same or similar treatments;
- the perception by patients, physicians and other members of the health care community of the effectiveness and safety of these products for their prescribed treatments relative to other therapies for the same or similar treatments;
- our ability to fund our sales and marketing efforts and the ability and willingness of our collaborators to fund sales and marketing efforts;
- the degree to which the use of these products is restricted by the approved product label;

- the effectiveness of our sales and marketing efforts and the effectiveness of the sales and marketing efforts of our collaborators;
- the introduction of generic competitors; and
- the extent to which reimbursement for our products and related treatments will be available from third party payors including government insurance programs (Medicare and Medicaid) and private insurers.

If these products do not gain market acceptance, we may not be able to fund future operations, including the development or acquisition of new product candidates and/or our sales and marketing efforts for our approved products, which would cause our business to suffer.

In addition, our proprietary and collaboration product candidates will be restricted to the labels approved by FDA and applicable regulatory bodies, and these restrictions may limit the marketing and promotion of the ultimate products. If the approved labels are restrictive, the sales and marketing efforts for these products may be negatively affected.

Developing and marketing pharmaceutical products for human use involves significant product liability risks for which we currently have limited insurance coverage.

The testing, marketing and sale of pharmaceutical products involves the risk of product liability claims by consumers and other third parties. Although we maintain product liability insurance coverage, product liability claims can be high in the pharmaceutical industry, and our insurance may not sufficiently cover our actual liabilities. If product liability claims were to be made against us, it is possible that the liabilities may exceed the limits of our insurance policy, or our insurance carriers may deny, or attempt to deny, coverage in certain instances. If a lawsuit against us is successful, then the lack or insufficiency of insurance coverage could materially and adversely affect our business and financial condition. Furthermore, various distributors of pharmaceutical products require minimum product liability insurance coverage before purchase or acceptance of products for distribution. Failure to satisfy these insurance requirements could impede our ability to achieve broad distribution of our proposed products, and higher insurance requirements could impose additional costs on us. In addition, since many of our collaboration product candidates include the pharmaceutical products of a third party, we run the risk that problems with the third party pharmaceutical product will give rise to liability claims against us.

Our inability to attract, hire and retain key management and scientific personnel could negatively affect our business.

Our success depends on the performance of key management and scientific employees with relevant experience. For example, in order to pursue our current business strategy, we will need to recruit and retain personnel experienced in oncology drug development which is a highly competitive market for talent. We depend substantially on our ability to hire, train, motivate and retain high quality personnel, especially our scientists and management team. Particularly in view of the small number of employees on our staff to cover our numerous programs and key functions, if we are unable to retain existing personnel or identify or hire additional personnel, we may not be able to research, develop, commercialize or market our products and product candidates as expected or on a timely basis and we may not be able to adequately support current and future alliances with strategic collaborators.

Furthermore, if we were to lose key management personnel, we would likely lose some portion of our institutional knowledge and technical know-how, potentially causing a substantial delay in one or more of our development programs until adequate replacement personnel could be hired and trained. We currently have a severance policy applicable to all employees and a change in control policy applicable to senior executives.

We do not have key man life insurance policies on the lives of any of our employees.

Our operations might be interrupted by the occurrence of a natural disaster or other catastrophic event.

Our operations, including laboratories, offices and other research facilities, are located in four buildings in San Diego, California. In addition, we have a satellite office in South San Francisco, California. We depend on our facilities and on our collaborators, contractors and vendors for the continued operation of our business. Natural disasters or other catastrophic events, interruptions in the supply of natural resources, political and governmental changes, wildfires and other fires, floods, explosions, actions of animal rights activists, earthquakes and civil unrest could disrupt our operations or those of our collaborators, contractors and vendors. Even though we believe we carry commercially reasonable business interruption and liability insurance, and our contractors may carry liability insurance that protect us in certain events, we may suffer losses as a result of business interruptions that exceed the coverage available under our and our contractors' insurance policies or for which we or our contractors do not have coverage. Any natural disaster or catastrophic event could have a significant negative impact on our operations and financial results. Moreover, any such event could delay our research and development programs.

If we or our collaborators do not achieve projected development, clinical, regulatory or sales goals in the timeframes we publicly announce or otherwise expect, the commercialization of our products and the development of our product candidates may be delayed and, as a result, our stock price may decline, and we may face lawsuits relating to such declines.

From time to time, we or our collaborators may publicly articulate the estimated timing for the accomplishment of certain scientific, clinical, regulatory and other product development goals. The accomplishment of any goal is typically based on numerous assumptions, and the achievement of a particular goal may be delayed for any number of reasons both within and outside of our control. If scientific, regulatory, strategic or other factors cause us to not meet a goal, regardless of whether that goal has been publicly articulated or not, our stock price may decline rapidly. For example, the announcement in April 2014 of the temporary halting of our Phase 2 clinical trial for PEGPH20 caused a rapid decline in our stock price. Stock price declines may also trigger direct or derivative shareholder lawsuits. As with any litigation proceeding, the eventual outcome of any legal action is difficult to predict. If any such lawsuits occur, we will incur expenses in connection with the defense of these lawsuits, and we may have to pay substantial damages or settlement costs in connection with any resolution thereof. Although we have insurance coverage against which we may claim recovery against some of these expenses and costs, the amount of coverage may not be adequate to cover the full amount or certain expenses and costs may be outside the scope of the policies we maintain. In the event of an adverse outcome or outcomes, our business could be materially harmed from depletion of cash resources, negative impact on our reputation, or restrictions or changes to our governance or other processes that may result from any final disposition of the lawsuit. Moreover, responding to and defending pending litigation significantly diverts management's attention from our operations.

In addition, the consistent failure to meet publicly announced milestones may erode the credibility of our management team with respect to future milestone estimates.

Future acquisitions could disrupt our business and harm our financial condition.

In order to augment our product pipeline or otherwise strengthen our business, we may decide to acquire additional businesses, products and technologies. As we have limited experience in evaluating and completing acquisitions, our ability as an organization to make such acquisitions is unproven. Acquisitions could require significant capital infusions and could involve many risks, including, but not limited to, the following:

- we may have to issue convertible debt or equity securities to complete an acquisition, which would dilute our stockholders and could adversely affect the market price of our common stock;
- an acquisition may negatively impact our results of operations because it may require us to amortize or write down amounts related to goodwill and other intangible assets, or incur or assume substantial debt or liabilities, or it may cause adverse tax consequences, substantial depreciation or deferred compensation charges;
- we may encounter difficulties in assimilating and integrating the business, products, technologies, personnel or operations of companies that we acquire;
- certain acquisitions may impact our relationship with existing or potential collaborators who are competitive with the acquired business, products or technologies;
- acquisitions may require significant capital infusions and the acquired businesses, products or technologies may not generate sufficient value to justify acquisition costs;

- we may take on liabilities from the acquired company such as debt, legal liabilities or business risk which could be significant;
- an acquisition may disrupt our ongoing business, divert resources, increase our expenses and distract our management;
- acquisitions may involve the entry into a geographic or business market in which we have little or no prior experience; and
- key personnel of an acquired company may decide not to work for us.

If any of these risks occurred, it could adversely affect our business, financial condition and operating results. There is no assurance that we will be able to identify or consummate any future acquisitions on acceptable terms, or at all. If we do pursue any acquisitions, it is possible that we may not realize the anticipated benefits from such acquisitions or that the market will not view such acquisitions positively.

Security breaches may disrupt our operations and harm our operating results.

The wrongful use, theft, deliberate sabotage or any other type of security breach with respect to any of our information technology storage and access systems could result in the disruption of our ability to use such systems or disclosure or dissemination of our proprietary and confidential information that is electronically stored, including research or clinical data, resulting in a material adverse impact on our business, operating results and financial condition. Our security and data recovery measures may not be adequate to protect against computer viruses, break-ins, and similar disruptions from unauthorized tampering with our electronic storage systems. Furthermore, any physical break-in or trespass of our facilities could result in the misappropriation, theft, sabotage or any other type of security breach with respect to our proprietary and confidential information, including research or clinical data or damage to our research and development equipment and assets. Such adverse effects could be material and irrevocable to our business, operating results and financial condition.

Risks Related To Ownership of Our Common Stock

Our stock price is subject to significant volatility.

We participate in a highly dynamic industry which often results in significant volatility in the market price of common stock irrespective of company performance. As a result, the high and low sales prices of our common stock during the twelve months ended December 31, 2015 were $25.25 and $9.47 , respectively. We expect our stock price to continue to be subject to significant volatility and, in addition to the other risks and uncertainties described elsewhere in this Annual Report on Form 10-K and all other risks and uncertainties that are either not known to us at this time or which we deem to be immaterial, any of the following factors may lead to a significant drop in our stock price:

- the presence of competitive products to those being developed by us;
- failure (actual or perceived) of our collaborators to devote attention or resources to the development or commercialization of product candidates licensed to such collaborator;
- a dispute regarding our failure, or the failure of one of our third party collaborators, to comply with the terms of a collaboration agreement;
- the termination, for any reason, of any of our collaboration agreements;
- the sale of common stock by any significant stockholder, including, but not limited to, direct or indirect sales by members of management or our Board of Directors;
- the resignation, or other departure, of members of management or our Board of Directors;
- general negative conditions in the healthcare industry;
- general negative conditions in the financial markets;
- the cost associated with obtaining regulatory approval for any of our proprietary or collaboration product candidates;
- the failure, for any reason, to secure or defend our intellectual property position;
- for those products that are not yet approved for commercial sale, the failure or delay of applicable regulatory bodies to approve such products;
- identification of safety or tolerability issues;

- failure of clinical trials to meet efficacy endpoints;
- suspensions or delays in the conduct of clinical trials or securing of regulatory approvals;
- adverse regulatory action with respect to our and our collaborators' products and product candidates such as clinical holds, imposition of onerous requirements for approval or product recalls;
- our failure, or the failure of our third party collaborators, to successfully commercialize products approved by applicable regulatory bodies such as the FDA;
- our failure, or the failure of our third party collaborators, to generate product revenues anticipated by investors;
- disruptions in our clinical or commercial supply chains, including disruptions caused by problems with a bulk rHuPH20 contract manufacturer or a fill and finish manufacturer for any product or product candidate;
- the sale of additional debt and/or equity securities by us;
- our failure to obtain financing on acceptable terms or at all; or
- a restructuring of our operations.

Future transactions where we raise capital may negatively affect our stock price.

We are currently a "Well-Known Seasoned Issuer" and may file automatic shelf registration statements at any time with the SEC. Sales of substantial amounts of shares of our common stock or other securities under our shelf registration statements could lower the market price of our common stock and impair our ability to raise capital through the sale of equity securities. In the future, we may issue additional options, warrants or other derivative securities convertible into our common stock.

Our rights agreement and anti-takeover provisions in our charter documents and Delaware law may make an acquisition of us more difficult.

We are party to a Rights Agreement designed to deter abusive takeover tactics and to encourage prospective acquirers to negotiate with our board of directors rather than attempt to acquire us in a manner or on terms that our board deems unacceptable, which could delay or discourage takeover attempts that stockholders may consider favorable.

In addition, anti-takeover provisions in our charter documents and Delaware law may make an acquisition of us more difficult. First, our board of directors is classified into three classes of directors. Under Delaware law, directors of a corporation with a classified board may be removed only for cause unless the corporation's certificate of incorporation provides otherwise. Our amended and restated certificate of incorporation, as amended, does not provide otherwise. In addition, our bylaws limit who may call special meetings of stockholders, permitting only stockholders holding at least 50% of our outstanding shares to call a special meeting of stockholders. Our amended and restated certificate of incorporation, as amended, does not include a provision for cumulative voting for directors. Under cumulative voting, a minority stockholder holding a sufficient percentage of a class of shares may be able to ensure the election of one or more directors. Finally, our bylaws establish procedures, including advance notice procedures, with regard to the nomination of candidates for election as directors and stockholder proposals.

These provisions may discourage potential takeover attempts, discourage bids for our common stock at a premium over market price or adversely affect the market price of, and the voting and other rights of the holders of, our common stock. These provisions could also discourage proxy contests and make it more difficult for stockholders to elect directors other than the candidates nominated by our board of directors.

In addition, because we are incorporated in Delaware, we are governed by the provisions of Section 203 of the Delaware General Corporation Law, which may prohibit large stockholders from consummating a merger with, or acquisition of, us.

These provisions may deter an acquisition of us that might otherwise be attractive to stockholders.

Risks Related to Our Industry

Our products must receive regulatory approval before they can be sold, and compliance with the extensive government regulations is expensive and time consuming and may result in the delay or cancellation of product sales, introductions or modifications.

Extensive industry regulation has had, and will continue to have, a significant impact on our business. All pharmaceutical companies, including ours, are subject to extensive, complex, costly and evolving regulation by the health regulatory agencies

including the FDA (and with respect to controlled drug substances, the U.S. Drug Enforcement Administration (DEA)) and equivalent foreign regulatory agencies and state and local/regional government agencies. The Federal Food, Drug and Cosmetic Act, the Controlled Substances Act and other domestic and foreign statutes and regulations govern or influence the testing, manufacturing, packaging, labeling, storing, recordkeeping, safety, approval, advertising, promotion, sale and distribution of our products. We are dependent on receiving FDA and other governmental approvals, including regulatory approvals in jurisdictions outside the United States, prior to manufacturing, marketing and shipping our products. Consequently, there is always a risk that the FDA or other applicable governmental authorities, including those outside the United States, will not approve our products or may impose onerous, costly and time-consuming requirements such as additional clinical or animal testing. Regulatory authorities may require that we change our studies or conduct additional studies, which may significantly delay or make continued pursuit of approval commercially unattractive. For example, the approval of Baxalta's HYQVIA BLA was delayed by the FDA until we and Baxalta provided additional preclinical data sufficient to address concerns regarding non-neutralizing antibodies to rHuPH20 that were detected in the registration trial. Although these antibodies have not been associated with any known adverse clinical effects, and the HYQVIA BLA was approved by the FDA in September 2014, the FDA or other foreign regulatory agency may, at any time, halt our and our collaborators' development and commercialization activities due to safety concerns. In addition, even if our products are approved, regulatory agencies may also take post-approval action limiting or revoking our ability to sell our products. Any of these regulatory actions may adversely affect the economic benefit we may derive from our products and therefore harm our financial condition.

Under certain of these regulations, we and our contract suppliers and manufacturers are subject to periodic inspection of our or their respective facilities, procedures and operations and/or the testing of products by the FDA, the DEA and other authorities, which conduct periodic inspections to confirm that we and our contract suppliers and manufacturers are in compliance with all applicable regulations. The FDA also conducts pre-approval and post-approval reviews and plant inspections to determine whether our systems, or our contract suppliers' and manufacturers' processes, are in compliance with cGMP and other FDA regulations. If we, or our contract supplier, fail these inspections, we may not be able to commercialize our product in a timely manner without incurring significant additional costs, or at all.

In addition, the FDA imposes a number of complex regulatory requirements on entities that advertise and promote pharmaceuticals including, but not limited to, standards and regulations for direct-to-consumer advertising, off-label promotion, industry-sponsored scientific and educational activities, and promotional activities involving the internet.

We may be subject, directly or indirectly, to various broad federal and state healthcare laws. If we are unable to comply, or have not fully complied, with such laws, we could face civil, criminal and administrative penalties, damages, monetary fines, disgorgement, possible exclusion from participation in Medicare, Medicaid and other federal healthcare programs, contractual damages, reputational harm, diminished profits and future earnings and curtailment or restructuring of our operations, any of which could adversely affect our ability to operate.

Our business operations and activities may be directly, or indirectly, subject to various broad federal and state healthcare laws, including without limitation, anti-kickback laws, the Foreign Corrupt Practices Act, false claims laws, civil monetary penalty laws, data privacy and security laws, tracing and tracking laws, as well as transparency laws regarding payments or other items of value provided to healthcare providers. These laws may restrict or prohibit a wide range of business activities, including, but not limited to, research, manufacturing, distribution, pricing, discounting, marketing and promotion and other business arrangements. These laws may impact, among other things, our current activities with principal investigators and research subjects, as well as sales, marketing and education programs. Many states have similar healthcare fraud and abuse laws, some of which may be broader in scope and may not be limited to items or services for which payment is made by a government health care program.

Efforts to ensure that our business arrangements will comply with applicable healthcare laws may involve substantial costs. While we have adopted a healthcare corporate compliance program, it is possible that governmental and enforcement authorities will conclude that our business practices may not comply with current or future statutes, regulations or case law interpreting applicable fraud and abuse or other healthcare laws. If our operations or activities are found to be in violation of any of the laws described above or any other governmental regulations that apply to us, we may be subject to, without limitation, civil, criminal and administrative penalties, damages, monetary fines, disgorgement, possible exclusion from participation in Medicare, Medicaid

and other federal healthcare programs, contractual damages, reputational harm, diminished profits and future earnings and curtailment or restructuring of our operations, any of which could adversely affect our ability to operate.

In addition, any sales of products outside the U.S. will also likely subject us to foreign equivalents of the healthcare laws mentioned above, among other foreign laws.

We may be required to initiate or defend against legal proceedings related to intellectual property rights, which may result in substantial expense, delay and/or cessation of the development and commercialization of our products.

We primarily rely on patents to protect our intellectual property rights. The strength of this protection, however, is uncertain. For example, it is not certain that:

- we will be able to obtain patent protection for our products and technologies;
- the scope of any of our issued patents will be sufficient to provide commercially significant exclusivity for our products and technologies;
- others will not independently develop similar or alternative technologies or duplicate our technologies and obtain patent protection before we do; and
- any of our issued patents, or patent pending applications that result in issued patents, will be held valid, enforceable and infringed in the event the patents are asserted against others.

We currently own or license several patents and also have pending patent applications applicable to rHuPH20 and other proprietary materials. There can be no assurance that our existing patents, or any patents issued to us as a result of our pending patent applications, will provide a basis for commercially viable products, will provide us with any competitive advantages, or will not face third party challenges or be the subject of further proceedings limiting their scope or enforceability. Any weaknesses or limitations in our patent portfolio could have a material adverse effect on our business and financial condition. In addition, if any of our pending patent applications do not result in issued patents, or result in issued patents with narrow or limited claims, this could result in us having no or limited protection against generic or biosimilar competition against our product candidates which would have a material adverse effect on our business and financial condition.

We may become involved in interference proceedings in the U.S. Patent and Trademark Office, or other proceedings in other jurisdictions, to determine the priority, validity or enforceability of our patents. In addition, costly litigation could be necessary to protect our patent position.

We also rely on trademarks to protect the names of our products (e.g. *Hylenex* recombinant). We may not be able to obtain trademark protection for any proposed product names we select. In addition, product names for pharmaceutical products must be approved by health regulatory authorities such as the FDA in addition to meeting the legal standards required for trademark protection and product names we propose may not be timely approved by regulatory agencies which may delay product launch. In addition, our trademarks may be challenged by others. If we enforce our trademarks against third parties, such enforcement proceedings may be expensive.

We also rely on trade secrets, unpatented proprietary know-how and continuing technological innovation that we seek to protect with confidentiality agreements with employees, consultants and others with whom we discuss our business. Disputes may arise concerning the ownership of intellectual property or the applicability or enforceability of these agreements, and we might not be able to resolve these disputes in our favor.

In addition to protecting our own intellectual property rights, third parties may assert patent, trademark or copyright infringement or other intellectual property claims against us. If we become involved in any intellectual property litigation, we may be required to pay substantial damages, including but not limited to treble damages, attorneys' fees and costs, for past infringement if it is ultimately determined that our products infringe a third party's intellectual property rights. Even if infringement claims against us are without merit, defending a lawsuit takes significant time, may be expensive and may divert management's attention from other business concerns. Further, we may be stopped from developing, manufacturing or selling our products until we obtain a license from the owner of the relevant technology or other intellectual property rights. If such a license is available at all, it may require us to pay substantial royalties or other fees.

Patent protection for protein-based therapeutic products and other biotechnology inventions is subject to a great deal of uncertainty, and if patent laws or the interpretation of patent laws change, our competitors may be able to develop and commercialize products based on our discoveries.

Patent protection for protein-based therapeutic products is highly uncertain and involves complex legal and factual questions. In recent years, there have been significant changes in patent law, including the legal standards that govern the scope of protein and biotechnology patents. Standards for patentability of full-length and partial genes, and their corresponding proteins, are changing. Recent court decisions have made it more difficult to obtain patents, by making it more difficult to satisfy the patentable subject matter requirement and the requirement of non-obviousness, have decreased the availability of injunctions against infringers, and have increased the likelihood of challenging the validity of a patent through a declaratory judgment action. Taken together, these decisions could make it more difficult and costly for us to obtain, license and enforce our patents. In addition, the Leahy-Smith America Invents Act (HR 1249) was signed into law in September 2011, which among other changes to the U.S. patent laws, changes patent priority from "first to invent" to "first to file," implements a post-grant opposition system for patents and provides for a prior user defense to infringement. These judicial and legislative changes have introduced significant uncertainty in the patent law landscape and may potentially negatively impact our ability to procure, maintain and enforce patents to provide exclusivity for our products.

There also have been, and continue to be, policy discussions concerning the scope of patent protection awarded to biotechnology inventions. Social and political opposition to biotechnology patents may lead to narrower patent protection within the biotechnology industry. Social and political opposition to patents on genes and proteins and recent court decisions concerning patentability of isolated genes may lead to narrower patent protection, or narrower claim interpretation, for isolated genes, their corresponding proteins and inventions related to their use, formulation and manufacture. Patent protection relating to biotechnology products is also subject to a great deal of uncertainty outside the U.S., and patent laws are evolving and undergoing revision in many countries. Changes in, or different interpretations of, patent laws worldwide may result in our inability to obtain or enforce patents, and may allow others to use our discoveries to develop and commercialize competitive products, which would impair our business.

If third party reimbursement and customer contracts are not available, our products may not be accepted in the market.

Our ability to earn sufficient returns on our products will depend in part on the extent to which reimbursement for our products and related treatments will be available from government health administration authorities, private health insurers, managed care organizations and other healthcare providers.

Third-party payors are increasingly attempting to limit both the coverage and the level of reimbursement of new drug products to contain costs. Consequently, significant uncertainty exists as to the reimbursement status of newly approved healthcare products. Third party payors may not establish adequate levels of reimbursement for the products that we commercialize, which could limit their market acceptance and result in a material adverse effect on our revenues and financial condition.

Customer contracts, such as with group purchasing organizations and hospital formularies, will often not offer contract or formulary status without either the lowest price or substantial proven clinical differentiation. If our products are compared to animal-derived hyaluronidases by these entities, it is possible that neither of these conditions will be met, which could limit market acceptance and result in a material adverse effect on our revenues and financial condition.

The rising cost of healthcare and related pharmaceutical product pricing has led to cost containment pressures that could cause us to sell our products at lower prices, resulting in less revenue to us.

Any of the proprietary or collaboration products that have been, or in the future are, approved by the FDA may be purchased or reimbursed by state and federal government authorities, private health insurers and other organizations, such as health maintenance organizations and managed care organizations. Such third party payors increasingly challenge pharmaceutical product pricing. The trend toward managed healthcare in the U.S., the growth of such organizations, and various legislative proposals and enactments to reform healthcare and government insurance programs, including the Medicare Prescription Drug Modernization Act of 2003, could significantly influence the manner in which pharmaceutical products are prescribed and purchased, resulting in lower prices and/or a reduction in demand. Such cost containment measures and healthcare reforms could adversely affect our ability to sell our products.

In March 2010, the U.S. adopted the Patient Protection and Affordable Care Act, as amended by the Health Care and Education Reconciliation Act (the Healthcare Reform Act). This law substantially changes the way healthcare is financed by both governmental and private insurers, and significantly impacts the pharmaceutical industry. The Healthcare Reform Act contains a number of provisions that are expected to impact our business and operations, in some cases in ways we cannot currently predict. Changes that may affect our business include those governing enrollment in federal healthcare programs, reimbursement changes, fraud and abuse and enforcement. These changes will impact existing government healthcare programs and will result in the development of new programs, including Medicare payment for performance initiatives and improvements to the physician quality reporting system and feedback program.

Additional provisions of the Healthcare Reform Act may negatively affect our revenues in the future. For example, the Healthcare Reform Act imposes a non-deductible excise tax on pharmaceutical manufacturers or importers that sell branded prescription drugs to U.S. government programs that we believe will impact our revenues from our products. In addition, as part of the Healthcare Reform Act's provisions closing a funding gap that currently exists in the Medicare Part D prescription drug program, we will also be required to provide a 50% discount on branded prescription drugs dispensed to beneficiaries under this prescription drug program. We expect that the Healthcare Reform Act and other healthcare reform measures that may be adopted in the future could have a material adverse effect on our industry generally and on our ability to maintain or increase our product sales or successfully commercialize our product candidates or could limit or eliminate our future spending on development projects.

Furthermore, individual states have become increasingly aggressive in passing legislation and implementing regulations designed to control pharmaceutical product pricing, including price or patient reimbursement constraints, discounts, restrictions on certain product access, importation from other countries and bulk purchasing. Legally mandated price controls on payment amounts by third party payors or other restrictions could negatively and materially impact our revenues and financial condition. We anticipate that we will encounter similar regulatory and legislative issues in most other countries outside the U.S.

We face intense competition and rapid technological change that could result in the development of products by others that are superior to our proprietary and collaboration products under development.

Our proprietary and collaboration products have numerous competitors in the U.S. and abroad including, among others, major pharmaceutical and specialized biotechnology firms, universities and other research institutions that have developed competing products. The competitors for *Hylenex* recombinant include, but are not limited to, Valeant Pharmaceuticals International, Inc.'s FDA-approved product, Vitrase ®, an ovine (ram) hyaluronidase, and Amphastar Pharmaceuticals, Inc.'s product, Amphadase ®, a bovine (bull) hyaluronidase. For our PEGPH20 product candidate, such competitors may include major pharmaceutical and specialized biotechnology firms. These competitors may develop technologies and products that are more effective, safer, or less costly than our current or future proprietary and collaboration product candidates or that could render our technologies and product candidates obsolete or noncompetitive. Many of these competitors have substantially more resources and product development, manufacturing and marketing experience and capabilities than we do. In addition, many of our competitors have significantly greater experience than we do in undertaking preclinical testing and clinical trials of pharmaceutical product candidates and obtaining FDA and other regulatory approvals of products and therapies for use in healthcare.

Item 1B. ***Unresolved Staff Comments***

None.

Item 2. ***Properties***

Our administrative offices and research facilities are currently located in San Diego, California. We lease an aggregate of approximately 76,000 square feet of office and research space for a monthly rent expense of approximately $145,000 , net of costs and property taxes associated with the operation and maintenance of the subleased facilities. In addition, we have a satellite office in South San Francisco, California, where we lease approximately 10,000 square feet of office space for a monthly rent expense of approximately $26,000. We believe the current space is adequate for our immediate needs.

Item 3. ***Legal Proceedings***

From time to time, we may be involved in disputes, including litigation, relating to claims arising out of operations in the normal course of our business. Any of these claims could subject us to costly legal expenses and, while we generally believe that we have adequate insurance to cover many different types of liabilities, our insurance carriers may deny coverage or our policy limits may be inadequate to fully satisfy any damage awards or settlements. If this were to happen, the payment of any such awards could have a material adverse effect on our consolidated results of operations and financial position. Additionally, any such claims, whether or not successful, could damage our reputation and business. We currently are not 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 our consolidated results of operations or financial position.

Item 4. ***Mine Safety Disclosures***

Not applicable.

PART II

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

Market Information

Our common stock is listed on the NASDAQ Global Select Market under the symbol "HALO." The following table sets forth the high and low sales prices per share of our common stock during each quarter of the two most recent fiscal years:

	2015		2014	
	High	Low	High	Low
First Quarter	$16.55	$9.47	$18.18	$11.28
Second Quarter	$22.85	$13.91	$12.97	$6.88
Third Quarter	$25.25	$12.80	$10.70	$8.58
Fourth Quarter	$18.65	$12.80	$10.00	$7.51

On February 22, 2016 , the closing sales price of our common stock on the NASDAQ Global Select Market was $8.19 per share. As of February 22, 2016 , we had approximately 21,000 stockholders of record and beneficial owners of our common stock.

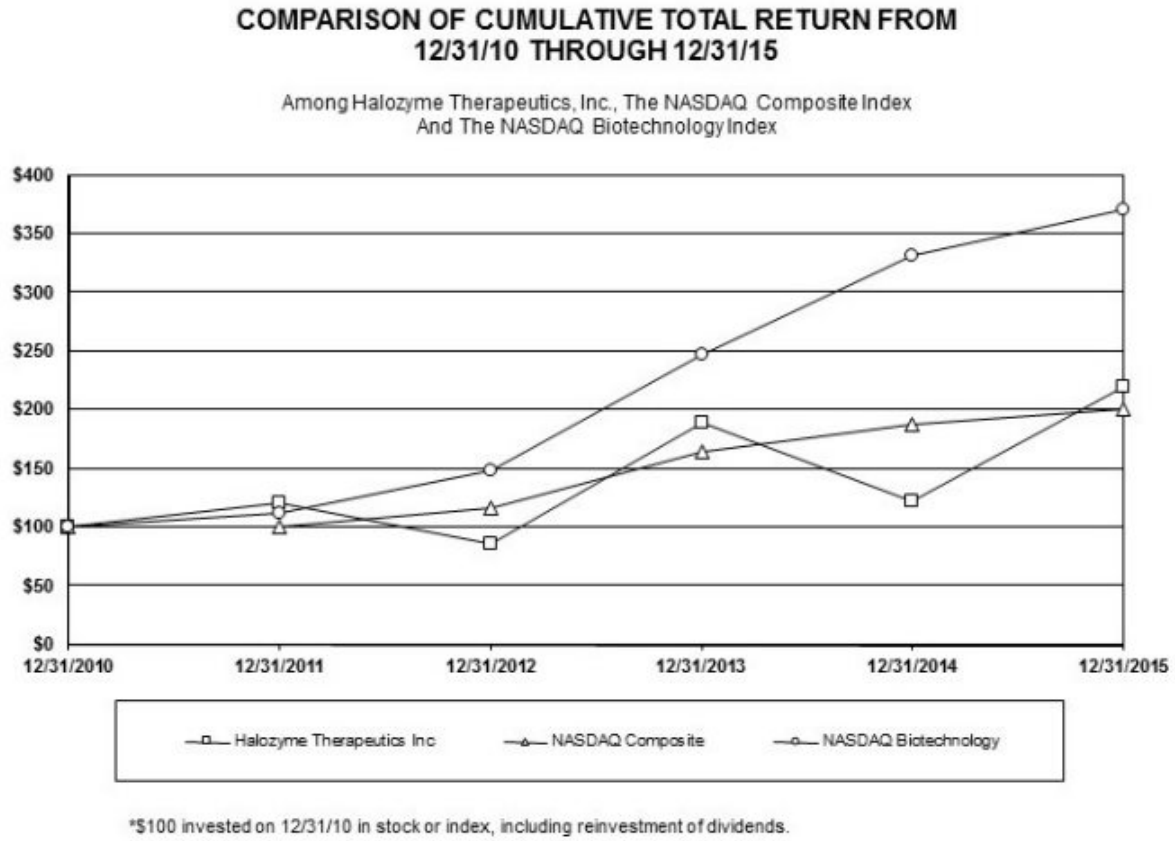
Dividends

We have never declared or paid any dividends on our common stock. We currently intend to retain available cash for funding operations; therefore, we do not expect to pay any dividends on our common stock in the foreseeable future. In addition, the provisions of our Loan Agreement limit, among other things, our ability to pay dividends and make certain other payments. Any future determination to pay dividends on our common stock will be at the discretion of our board of directors and will depend upon, among other factors, our results of operations, financial condition, capital requirements, contract restrictions, business prospects and other factors our board of directors may deem relevant.

Stock Performance Graph and Cumulative Total Return

Notwithstanding any statement to the contrary in any of our previous or future filings with the SEC, 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, or the Exchange Act, and it shall not be deemed to be incorporated by reference into any of our filings under the Securities Act of 1933, as amended, or the Exchange Act, except to the extent we specifically incorporate it by reference into such filing.

The graph below compares Halozyme Therapeutics, Inc.'s cumulative five-year total shareholder return on common stock with the cumulative total returns of the NASDAQ Composite Index and the NASDAQ Biotechnology Index. The graph tracks the performance of a $100 investment in our common stock and in each of the indexes (with the reinvestment of all dividends) from December 31, 2010 to December 31, 2015. The historical stock price performance included in this graph is not necessarily indicative of future stock price performance.



	12/31/2010	12/31/2011	12/31/2012	12/31/2013	12/31/2014	12/31/2015
Halozyme Therapeutics, Inc.	$100	$120	$85	$189	$122	$219
NASDAQ Composite	$100	$99	$116	$163	$187	$200
NASDAQ Biotechnology	$100	$112	$148	$246	$331	$370

Item 6. ***Selected Financial Data***

The selected consolidated financial data set forth below as of December 31, 2015 and 2014 , and for the fiscal years ended December 31, 2015, 2014 and 2013 , are derived from our audited consolidated financial statements included elsewhere in this report. This information should be read in conjunction with those consolidated financial statements, the notes thereto, and with " *Management's Discussion and Analysis of Financial Condition and Results of Operations* ." The selected consolidated financial data set forth below as of December 31, 2013, 2012 and 2011, and for the fiscal years ended December 31, 2012 and 2011, are derived from our audited consolidated financial statements that are contained in reports previously filed with the SEC, not included herein.

Summary Financial Information

	Year Ended December 31,				
Statement of Operations Data:	**2015** [1]	**2014** [2]	**2013** [3]	**2012** [4]	**2011** [5]
	(in thousands, except for per share amounts)				
Total revenues	$ 135,057	$ 75,334	$ 54,799	$ 42,325	$ 56,086
Net loss	$ (32,231)	$ (68,375)	$ (83,479)	$ (53,552)	$ (19,770)
Net loss per share, basic and diluted	$ (0.25)	$ (0.56)	$ (0.74)	$ (0.48)	$ (0.19)
Shares used in computing net loss per share, basic and diluted	126,704	122,690	112,805	111,077	102,566

	As of December 31,				
Balance Sheet Data:	**2015**	**2014**	**2013**	**2012**	**2011**
			(in thousands)		
Cash and cash equivalents and available-for-sale marketable securities	$ 108,339	$ 135,623	$ 71,503	$ 99,501	$ 52,376
Working capital	$ 109,315	$ 136,990	$ 70,293	$ 111,682	$ 46,236
Total assets	$ 181,789	$ 165,977	$ 101,793	$ 134,728	$ 65,759
Deferred revenue	$ 53,223	$ 54,634	$ 53,143	$ 43,846	$ 40,884
Long-term debt, net	$ 27,971	$ 49,860	$ 49,772	$ 29,662	$ —
Total liabilities	$ 138,790	$ 124,625	$ 121,783	$ 85,875	$ 54,858
Stockholders' equity (deficit)	$ 42,999	$ 41,352	$ (19,991)	$ 48,854	$ 10,900

(1) Revenues in 2015 included $23.0 million and $25.0 million in license fees from collaboration agreements with AbbVie and Lilly, respectively.

(2) Revenues in 2014 included a $15.0 million license fee from the Janssen Collaboration.

(3) Revenues in 2013 reflected increases in supply of bulk rHuPH20 to Roche and product sales of *Hylenex* recombinant, which was relaunched in December 2011.

(4) Revenues in 2012 included $9.5 million in license fees from the Pfizer Collaboration.

(5) Revenues in 2011 included $18.0 million in license fees from collaboration agreements with ViroPharma Incorporated and Intrexon Corporation and $18.1 million related to recognition of unamortized deferred prepaid product-based payments and unamortized deferred upfront payment in connection with the termination of the collaboration with Baxalta for the marketing rights of *Hylenex* recombinant in July 2011.

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

In addition to historical information, the following discussion contains forward-looking statements that are subject to risks and uncertainties. Actual results may differ substantially from those referred to herein due to a number of factors, including but not limited to risks described in the Part I, Item 1A, Risks Factors, and elsewhere in this Annual Report. References to "Notes" are Notes included in our Notes to Consolidated Financial Statements.

Overview

Halozyme Therapeutics, Inc. is a biotechnology company focused on developing and commercializing novel oncology therapies. We are seeking to translate our unique knowledge of the tumor microenvironment to create therapies that can improve cancer survival. Our research primarily focuses on human enzymes that alter the extracellular matrix and tumor microenvironment. The extracellular matrix is a complex matrix of proteins and carbohydrates surrounding the cell that provides structural support in tissues and orchestrates many important biological activities, including cell migration, signaling and survival. Over many years, we have developed unique technology and scientific expertise enabling us to pursue this target-rich environment for the development of therapies.

Our proprietary enzymes are used to facilitate the delivery of injected drugs and fluids, potentially enhancing the efficacy and the convenience of other drugs or to alter tissue structures for potential clinical benefit. We exploit our technology and expertise using a two pillar strategy that we believe enables us to manage risk and cost by: (1) developing our own proprietary products in therapeutic areas with significant unmet medical needs, with a focus on oncology, and (2) licensing our technology to biopharmaceutical companies to collaboratively develop products that combine our technology with the collaborators' proprietary compounds.

The majority of our approved product and product candidates are based on rHuPH20, our patented recombinant human hyaluronidase enzyme. rHuPH20 is the active ingredient in our first commercially approved product, *Hylenex* ® recombinant, and it works by temporarily breaking down hyaluronan (or HA), a naturally occurring substance that is a major component of the extracellular matrix in tissues throughout the body such as skin and cartilage. We believe this temporary degradation creates an opportunistic window for the improved subcutaneous delivery of injectable biologics, such as monoclonal antibodies and other large therapeutic molecules, as well as small molecules and fluids. We refer to the application of rHuPH20 to facilitate the delivery of other drugs or fluids as our ENHANZE ™ Technology. We license the ENHANZE Technology to form collaborations with biopharmaceutical companies that develop or market drugs requiring or benefiting from injection via the subcutaneous route of administration.

We currently have ENHANZE collaborations with F. Hoffmann-La Roche, Ltd. and Hoffmann-La Roche, Inc. (Roche), Baxalta US Inc. and Baxalta GmbH (Baxalta), Pfizer Inc. (Pfizer), Janssen Biotech, Inc. (Janssen), AbbVie, Inc. (AbbVie), and Eli Lilly and Company (Lilly). We receive royalties from two of these collaborations, including royalties from sales of one product approved in the United States and outside the United States from the Baxalta collaboration and from sales of two products approved for marketing outside the United States from the Roche collaboration. Future potential revenues from the sales and/or royalties of our approved products, product candidates, and ENHANZE collaborations will depend on the ability of Halozyme and our collaborators to develop, manufacture, secure and maintain regulatory approvals for approved products and product candidates and commercialize product candidates.

Our proprietary development pipeline consists of a clinical stage product candidate in oncology and research-stage oncology projects. Our lead oncology program is PEGPH20 (PEGylated recombinant human hyaluronidase), a molecular entity we are developing for the systemic treatment of tumors that accumulate HA. When HA accumulates in a tumor, it can cause higher pressure in the tumor, reducing blood flow into the tumor and with that, reduced access of cancer therapies to the tumor. PEGPH20 works by temporarily degrading HA surrounding cancer cells resulting in reduced pressure and increased blood flow to the tumor thereby enabling increased amounts of anticancer treatments administered concomitantly gaining access to the tumor. We are currently in Phase 2 and Phase 3 clinical testing for PEGPH20 in stage IV PDA (Studies 109-202 and 109-301), in Phase 1b clinical testing in non-small cell lung cancer (Study 107-201) and in Phase 1b clinical testing in non-small cell lung cancer and gastric cancer (Study 107-101).

Our 2015 and recent key accomplishments and events are as follows:

- In the first quarter of 2016, we initiated the Phase 3 study of PEGPH20 (Halozyme Study 301) in previously untreated stage IV PDA patients. Dosing of the first patient is planned to occur by the end of March 2016.
- In February 2016, we completed enrollment of 133 patients in Halozyme Study 202 and project to present mature PFS results of Stage 2 of the study in the fourth quarter of 2016.
- In February 2016, our partner Ventana filed an IDE with the FDA for the companion diagnostic test we co-developed to prospectively identify patients with high levels of HA.
- In February 2016, Pfizer dosed the first patient in the Phase 1 clinical trial evaluating subcutaneous delivery of bococizumab, an investigational PCSK9 inhibitor developed by Pfizer, with ENHANZE Technology.
- In January 2016, through our subsidiary, Halozyme Royalty LLC (Halozyme Royalty), we received a $150.0 million loan secured by future royalties received from our collaborations with Roche and Baxalta.
- In January 2016, AbbVie dosed the first patient in the Phase 1 clinical trial evaluating subcutaneous delivery of adalimumab (HUMIRA ®) with ENHANZE Technology.
- In December 2015, we entered into a collaboration and license agreement with Lilly, under which Lilly has the worldwide license to develop and commercialize products combining our ENHANZE Technology with Lilly proprietary biologics directed to up to five targets. Targets may be selected on an exclusive basis. We received $25.0 million for the license with two specified targets.
- In November 2015, we finalized our assay methodology and pathology-based scoring algorithm with Ventana for our affinity-histochemistry companion diagnostic.
- In November 2015, we announced the dosing of the first patient in a Phase 1b clinical trial of PEGPH20 in combination with Merck's immuno-oncology drug KEYTRUDA (pembrolizumab) for patients with advanced non-small cell lung and gastric cancers.
- In November 2015, Janssen dosed the first patient in a Phase 1b clinical trial evaluating subcutaneous delivery of daratumumab (DARZALEX ®) with ENHANZE Technology in multiple myeloma.
- In October 2015, Pfizer dosed the first patient in the Phase 1 clinical trial evaluating subcutaneous delivery of rivipansel with our ENHANZE Technology for the treatment of individuals with vaso-occlusive crisis of sickle cell disease.
- In July 2015, we entered into a clinical collaboration agreement with Eisai Co. Ltd. (Eisai) to evaluate Eisai's agent eribulin mesylate Halaven ® (eribulin) in combination with PEGPH20 in first line HER2-negative HA-high metastatic breast cancer patients.
- In June 2015, we entered into a collaboration and license agreement with AbbVie, under which AbbVie has the worldwide license to develop and commercialize products combining our ENHANZE Technology with AbbVie proprietary biologics directed to up to nine targets. Targets may be selected on an exclusive basis. We received $23.0 million for the license with one specified target, HUMIRA.
- In May 2015, we entered into a global collaboration agreement with Ventana, a member of the Roche Group, to collaborate on the development of, and for Ventana to ultimately commercialize, a companion diagnostic assay for use with PEGPH20. The Ventana assay will be used to identify high levels of HA. Under the agreement, Ventana will develop an in vitro diagnostic (IVD), under design control, using our proprietary HA binding protein, with the intent of submitting it for regulatory approval in the United States, Europe and other countries.
- In January 2015, we disclosed initial efficacy and safety data from an interim assessment of Stage 1 of Study 109-202, a Phase 2 multicenter, randomized clinical trial evaluating PEGPH20 as a first-line therapy for patients with stage IV PDA. We also presented the final results from Study 109-201, a multi-center, international open label dose escalation Phase 1b clinical study of PEGPH20 in combination with gemcitabine for the treatment of patients with stage IV PDA at the 2015 Gastrointestinal Cancers Symposium (also known as ASCO-GI meeting).

Results of Operations

Comparison of Years Ended December 31, 2015, 2014 and 2013

Product Sales, Net — Product sales increased in 2015 compared to 2014 by $8.3 million, or 22%, primarily due to the sale of bulk rHuPH20 to Baxalta of $6.4 million in 2015, compared to no sales in 2014, and a $2.9 million increase in product sales of *Hylenex* recombinant, which increased to $16.1 million in 2015 from $13.2 million in 2014. Product sales increased in 2014 compared to 2013 by $13.4 million, or 55%, primarily due to a $9.8 million increase in product sales of bulk rHuPH20 to Roche and a $4.1 million increase in product sales of *Hylenex* recombinant. Prior to the receipt of the European marketing approval of Roche's Herceptin SC product in August 2013 and MabThera SC product in March 2014, and Baxalta's HYQVIA product in May 2013, revenue from bulk rHuPH20 supply for these collaboration products was recorded as revenues under collaborative agreements instead of product sales revenue.

Revenues Under Collaborative Agreements — Revenues under collaborative agreements for the years ended December 31, 2015, 2014 and 2013 were as follows (in thousands):

	2015	Change	2014	Change	2013
Upfront payments, license maintenance fees and amortization of deferred upfront, license fees and product-based payments:					
Lilly	$ 25,000	n/a	$ —	n/a	$ —
AbbVie	23,000	n/a	—	n/a	—
Roche	3,269	8%	3,028	31%	2,308
Pfizer	2,000	100%	1,000	(33%)	1,500
Baxalta	765	0%	765	27%	604
Janssen	—	(100)%	15,000	n/a	—
Other	—	n/a	—	(100%)	2,000
	54,034	173%	19,793	209%	6,412
Reimbursements for research and development services:					
Roche [(1)]	2,556	(63%)	6,923	(64%)	19,086
Janssen	834	n/a	—	n/a	—
Baxalta [(1)]	292	(76%)	1,209	(70%)	4,059
Other	284	76%	161	(79%)	770
	3,966	(52%)	8,293	(65%)	23,915
Total revenues under collaborative agreements	$ 58,000	107%	$ 28,086	(7%)	$ 30,327

(1) Subsequent to the European approvals of Roche's Herceptin SC product in August 2013 and MabThera SC product in March 2014 and Baxalta's HYQVIA product in May 2013, revenue from supply of bulk rHuPH20 for those products to the collaborators was recorded as product sales.

In 2015, we recognized $25.0 million in license fee revenue in connection with the Lilly Collaboration and $23.0 million in license fee revenue in connection with the AbbVie Collaboration. In 2014, we recognized $15.0 million in license fee revenue in connection with the Janssen Collaboration. Revenue from reimbursements for research and development services and bulk rHuPh20 supply decreased in 2015 compared to 2014 mainly due to a reduction in services provided to Roche compared to the same period in 2014. Revenue from reimbursements for research and development services and bulk rHuPh20 supply decreased in 2014 compared to 2013 mainly due to revenue from supply of bulk rHuPH20 for Roche collaboration products being recognized as product sales revenue in 2014, as opposed to revenue from reimbursements for research and development services in the same period in 2013. The decrease was also due to a decrease in reimbursements for manufacturing services to support the launches by Roche and Baxalta. Research and development services rendered by us on behalf of our collaborators are at the request of the collaborators; therefore, the amount of future revenues related to reimbursable research and development services is uncertain.

We expect the non-reimbursement revenues under our collaborative agreements to continue to fluctuate in future periods based on our collaborators' abilities to meet various clinical and regulatory milestones set forth in such agreements and our abilities to obtain new collaborative agreements.

Royalties – Royalty revenue was $31.0 million in 2015 compared to $9.4 million in 2014 and $33,000 in 2013. The increase relates primarily to increased sales of Herceptin SC by Roche since the launch of Herceptin SC in September 2013. We recognize royalties on sales of the collaboration products by the collaborators in the quarter following the quarter in which the corresponding sales occurred. In general, we expect royalty revenue to increase in future periods reflecting expected increases in sales of collaboration products, although there may be periods with flat or declining royalty revenue as sales of products under collaborations vary.

Cost of Product Sales — Cost of product sales increased in 2015 compared to 2014 by $6.5 million, or 29%, primarily due to the increased product sales of bulk rHuPH20 for HYQVIA. Cost of product sales increased in 2014 compared to 2013 by $16.5 million, or 264%, primarily due to the increased product sales of bulk rHuPH20 for Herceptin SC.

Prior to European marketing approvals of Roche's collaboration products, Herceptin SC in August 2013 and MabThera SC in March 2014, and Baxalta's collaboration HYQVIA product in May 2013, all costs related to the manufacturing of bulk rHuPH20 for these collaboration products were charged to research and development expenses in the periods such costs were incurred. Therefore, cost of product sales of bulk rHuPH20 for these collaboration products in 2013 was materially reduced due to the exclusion of those manufacturing costs that were charged to research and development expenses in the periods prior to receiving marketing approvals.

Cost of product sales of bulk rHuPH20 for collaboration products in 2014 excluded $1.0 million in manufacturing costs, of which $0.9 million and $0.1 million were charged to research and development expenses for 2013 and 2012, respectively. Cost of product sales of bulk rHuPH20 for collaboration products in 2013 excluded $10.0 million in manufacturing costs, of which $9.0 million and $1.0 million were charged to research and development expenses in 2013 and 2012, respectively. The estimated selling price of the zero-cost inventory of bulk rHuPH20 for Herceptin SC on hand as of December 31, 2013, was approximately $1.3 million. We sold all of this inventory in 2014. In 2015, the cost of product sales of bulk rHuPH20 was approximately 81% of bulk rHuPH20 product sales revenue.

Research and Development — Research and development expenses consist of external costs, salaries and benefits and allocation of facilities and other overhead expenses related to research manufacturing, clinical trials, preclinical and regulatory activities. Research and development expenses incurred for the years ended December 31, 2015, 2014 and 2013 were as follows (in thousands):

	2015	Change	2014	Change	2013
Programs					
Product Candidates:					
PEGPH20	$ 75,616	117 %	$ 34,857	86 %	$ 18,742
Ultrafast insulin program	1,634	(93)%	22,424	(9)%	24,723
Hylenex recombinant	1,468	(72)%	5,318	(50)%	10,734
ENHANZE collaborations [(1)]	3,181	(53)%	6,799	(78)%	31,104
rHuPH20 platform [(2)]	7,333	26 %	5,807	(1)%	5,895
HTI-501	5	(100)%	1,447	(47)%	2,712
Other	3,999	31 %	3,044	12 %	2,730
Total research and development expenses	$ 93,236	17 %	$ 79,696	(18)%	$ 96,640

(1) Subsequent to the European approvals of Roche's Herceptin SC product in August 2013 and MabThera SC product in March 2014 and Baxalta's HYQVIA product in May 2013, the manufacturing costs of bulk rHuPH20 for these collaboration products were capitalized as inventory.

(2) Includes research, development and manufacturing expenses related to our proprietary rHuPH20 enzyme. These expenses were not designated to a specific program at the time the expenses were incurred.

Research and development expenses relating to our PEGPH20 program in 2015 increased by 117%, compared to 2014 primarily due to increased clinical trial activities. Research and development expenses relating to our ultrafast insulin program in 2015 decreased by 93% compared to 2014 primarily due to decreased clinical trial and manufacturing activities. Research and development expenses relating to *Hylenex* recombinant program decreased in 2015 by 72% compared to 2014 mainly due to the completion of the technology transfer and validation campaign with a second manufacturer for *Hylenex* recombinant in 2014. Research and development expenses relating to our ENHANZE collaborations in 2015 decreased by 53%, primarily due to a decrease in manufacturing expenses related to our collaboration with Roche. We expect total research and development expenses to increase in future periods reflecting expected increases in our PEGPH20 development activities.

Research and development expenses relating to our PEGPH20 program in 2014 increased by 86%, compared to 2013 primarily due to the increased clinical trial activities mostly relating to Study 109-202. Research and development expenses relating to *Hylenex* recombinant program decreased in 2014 by 50% compared to 2013 mainly due to the completion of the technology transfer and validation campaign with a second manufacturer for *Hylenex* recombinant in 2014. Research and development expenses relating to our ENHANZE collaborations in 2014 decreased by 78%, primarily due to a $12.0 million decrease resulting from capitalizing manufacturing costs for approved collaboration products in the current period, an $8.1 million decrease in other outsourced regulatory and manufacturing activities to support our collaboration with Roche and a $2.5 million decrease in preclinical activities to support Baxalta. Subsequent to the European approvals of Roche's Herceptin SC product in August 2013 and MabThera SC product in March 2014 and Baxalta's HYQVIA product in May 2013, the manufacturing costs of bulk rHuPH20 for these collaboration products were capitalized as inventory.

Selling, General and Administrative — Selling, general and administrative (SG&A) expenses increased in 2015 compared to 2014 by $4.1 million, or 11%, primarily due to the increase in compensation costs, including a $3.7 million increase in stock-based compensation.

SG&A expenses increased in 2014 compared to 2013 by $3.6 million, or 11%, primarily due to the increase in compensation costs, including a $2.3 million increase in stock-based compensation.

Interest Expense — Interest expense included interest expense and amortization of the debt discount related to the long-term debt. Interest expense decreased by $0.4 million in 2015 as compared to 2014 . Interest expense increased by $2.3 million in 2014 as compared to 2013 due to the $20.0 million increase in the principal balance of the long-term debt in December 2013.

Liquidity and Capital Resources

Our principal sources of liquidity are our existing cash, cash equivalents and available-for-sale marketable securities. As of December 31, 2015 , we had cash, cash equivalents and marketable securities of approximately $108.3 million. We will continue to have significant cash requirements to support product development activities. The amount and timing of cash requirements will depend on the progress and success of our clinical development programs, regulatory and market acceptance, and the resources we devote to research and other commercialization activities.

We believe that our current cash, cash equivalents and marketable securities will be sufficient to fund our operations for at least the next twelve months. We currently anticipate an increase of cash and cash equivalents of approximately $35 million to $55 million for the year ending December 31, 2016, which includes cash received in January 2016 of $25 million paid by Lilly and $150 million from the royalty-backed debt agreement, and will depend on the progress of various preclinical and clinical programs, the timing of our manufacturing scale up and the achievement of various milestones and royalties under our existing collaborative agreements. We expect to fund our operations going forward with existing cash resources, anticipated revenues from our existing collaborations and cash that we may raise through future transactions, such as the $150 million royalty-backed loan we received in January 2016. Refer to Note 15, *Subsequent Event* , for further information on our royalty-backed debt agreement. We may finance future cash needs through any one of the following financing vehicles: (i) the public offering of securities; (ii) new collaborative agreements; (iii) expansions or revisions to existing collaborative relationships; (iv) private financings; and/or (v) other equity or debt financings.

We are a “well known seasoned issuer”, which allows us to file an automatically effective shelf registration statement on Form S-3 which would allow us, from time to time, to offer and sell equity, debt securities and warrants to purchase any of such securities, either individually or in units. We may, in the future, offer and sell equity, debt securities and warrants to purchase any of such securities, either individually or in units to raise capital to fund the continued development of our product candidates, the commercialization of our products or for other general corporate purposes.

Our existing cash, cash equivalents and marketable securities may not be adequate to fund our operations until we become profitable, if ever. We cannot be certain that additional financing will be available when needed or, if available, financing will be obtained on favorable terms. If we are unable to raise sufficient funds, we may need to delay, scale back or eliminate some or all of our research and development programs, delay the launch of our product candidates, if approved, and/or restructure our operations. If we raise additional funds by issuing equity securities, substantial dilution to existing stockholders could result. If we raise additional funds by incurring debt financing, the terms of the debt may involve significant cash payment obligations, the issuance of warrants that may ultimately dilute existing stockholders when exercised and covenants that may restrict our ability to operate our business.

Cash Flows

Operating Activities

Net cash used in operations was $37.1 million in 2015 compared to $47.5 million in 2014. The $10.4 million decrease in utilization of cash in operations was mainly due to an increase of license fees and royalties from our collaborators; offset in part by increased spending on our R&D programs.

Net cash used in operations was $47.5 million in 2014 compared to $49.3 million in 2013. The $1.8 million decrease in utilization of cash in operations was mainly due to the receipt of a $15.0 million license fee payment from the Janssen Collaboration; offset in part by the timing of the collection of accounts receivable and the payment of accounts payable.

Investing Activities

Net cash provided by investing activities was $5.9 million in 2015 compared to net cash used of $33.0 million in 2014 and $47.9 million in 2013. The change in 2015 compared to 2014 was primarily due to the $17.4 million decrease in purchases of

marketable securities and $22.4 million increase in proceeds from the maturities of marketable securities. The decrease in 2014 compared to 2013 was primarily due to a $53.9 million increase in proceeds from maturities of marketable securities; offset in part by a $39.9 million increase in purchases of marketable securities in 2014.

Financing Activities

Net cash provided by financing activities was $13.1 million in 2015 compared to $114.5 million in 2014 and $25.1 million in 2013. Net cash provided by financing activities in 2015 consisted of $13.1 million in net proceeds from issuance of common stock under equity incentive plans. Net cash provided by financing activities in 2014 consisted of $107.7 million in net proceeds from the sale of our common stock in February 2014 and $6.8 million in net proceeds from option exercises. Net cash provided by financing activities in 2013 consisted of net proceeds of $20.0 million from the amended long-term debt and $5.1 million in net proceeds from option exercises.

Long-Term Debt

In December 2013, we entered into an Amended and Restated Loan and Security Agreement (the Loan Agreement) with Oxford Finance LLC (Oxford) and Silicon Valley Bank (SVB) (collectively, the Lenders), amending and restating in its entirety our original loan agreement with the Lenders, dated December 2012. The Loan Agreement provided for an additional $20 million principal amount of new term loan, bringing the total term loan balance to $50 million. The proceeds are to be used for working capital and general business requirements. The amended term loan facility matures on January 1, 2018. The outstanding term loan was $49.8 million as of December 31, 2015, net of unamortized debt discount of $0.2 million.

In January 2015, we and the Lenders entered into a second amendment to the Loan Agreement (the Amendment) amending and restating the loan repayment schedule of the Loan Agreement. The amended and restated loan repayment schedule provides for interest only payments in arrears through January 2016, followed by consecutive equal monthly payments of principal and interest in arrears starting in February 2016 and continuing through the previously established maturity date. Consistent with the original loan, the Loan Agreement provides for a 7.55% interest rate on the term loan and a final interest payment equal to 8.5% of the original principal amount, or $4.25 million, which is due when the term loan becomes due or upon the prepayment of the facility. We have the option to prepay the outstanding balance of the term loan in full, subject to a prepayment fee of 1% to 3% depending upon when the prepayment occurs.

In December 2015, we entered into a consent, release and third amendment to the Loan Agreement with the Lenders, in which the Lenders consented to (i) the formation of Halozyme Royalty as a wholly-owned subsidiary of Halozyme, (ii) the release of liens and the sale of certain rights to receive royalty payments to Halozyme Royalty, and (iii) entering into a Credit Agreement with BioPharma Credit Investments IV Sub, LP., (BioPharma), as collateral agent and lender, and the other lenders party, whereby Halozyme Royalty will incur indebtedness from and grant liens on the royalty payments to BioPharma. This amendment allowed us to enter into a royalty-backed debt agreement. Refer to Note 15, *Subsequent Event* , for further information on our royalty-backed debt agreement.

The amended and restated term loan facility is secured by substantially all of the assets of the Company and its subsidiary, Halozyme, Inc., except that the collateral does not include any equity interests in Halozyme, Inc. and any intellectual property (including all licensing, collaboration and similar agreements relating thereto), and certain other excluded assets. The Loan Agreement contains customary representations, warranties and covenants by us, which covenants limit our ability to convey, sell, lease, transfer, assign or otherwise dispose of certain of our assets; engage in any business other than the businesses currently engaged in by us or reasonably related thereto; liquidate or dissolve; make certain management changes; undergo certain change of control events; create, incur, assume, or be liable with respect to certain indebtedness; grant certain liens; pay dividends and make certain other restricted payments; make certain investments; make payments on any subordinated debt; and enter into transactions with any of our affiliates outside of the ordinary course of business or permit our subsidiaries to do the same. In addition, subject to certain exceptions, we are required to maintain with SVB our primary deposit accounts, securities accounts and commodities, and to do the same for our domestic subsidiary.

The Loan Agreement also contains customary indemnification obligations and customary events of default, including, among other things, our failure to fulfill certain of our obligations under the Loan Agreement and the occurrence of a material adverse change which is defined as a material adverse change in our business, operations or condition (financial or otherwise), a material

impairment of the prospect of repayment of any portion of the loan, or a material impairment in the perfection or priority of lender's lien in the collateral or in the value of such collateral. In the event of default by us under the Loan Agreement, the Lenders would be entitled to exercise their remedies thereunder, including the right to accelerate the debt, upon which we may be required to repay all amounts then outstanding under the Loan Agreement, which could harm our financial condition.

Off-Balance Sheet Arrangements

As of December 31, 2015 , 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 other contractually narrow or limited purposes. In addition, we did not engage in trading activities involving non-exchange traded contracts. As such, we are not materially exposed to any financing, liquidity, market or credit risk that could arise if we had engaged in such relationship.

Contractual Obligations

As of December 31, 2015 , future minimum payments due under our contractual obligations are as follows (in thousands):

	Payments Due by Period				
Contractual Obligations [1,5]	**Total**	**Less than 1 Year**	**1-3 Years**	**4-5 Years**	**More than 5 Years**
Long-term debt, including interest [2]	$ 58,592	$ 25,077	$ 33,515	$ —	$ —
Operating leases [3]	6,527	2,539	3,526	462	—
Third-party manufacturing obligations [4]	39,897	37,466	2,431	—	—
Purchase obligations	960	344	616	—	—
Total	$ 105,976	$ 65,426	$ 40,088	$ 462	$ —

(1) Does not include milestone or contractual payment obligations contingent upon the achievement of certain milestones or events if the amount and timing of such obligations are unknown or uncertain. Our in-license agreement is cancelable with written notice within 90 days. We may be required to pay up to approximately $9.3 million in milestone payments, plus sales royalties, in the event that all scientific research under these agreements is successful. One of the milestone payments of $1.3 million is due upon the first dosing of a patient in our Phase 3 study of PEGPH20, which is expected to occur at the end of the first quarter of 2016.

(2) Long-term debt obligations include future monthly interest payments based on a fixed rate of 7.55% and a final payment of $4.25 million for our long-term debt due in January 2018.

(3) Includes minimum lease payments related to leases of our office and research facilities and certain autos under non-cancelable operating leases.

(4) We have contracted with third-party manufacturers for the supply of bulk rHuPH20 and fill/finish of *Hylenex* recombinant. Under these agreements, we are required to purchase certain quantities each year during the terms of the agreements. The amounts presented represent our estimates of the minimum required payments under these agreements.

(5) Excludes contractual obligations already recorded on our consolidated balance sheet as current liabilities.

Contractual obligations for purchases of goods or services include agreements that are enforceable and legally binding on us and that specify all significant terms, including fixed or minimum quantities to be purchased; fixed, minimum or variable price provisions; and the approximate timing of the transaction. For obligations with cancellation provisions, the amounts included in the preceding table were limited to the non-cancelable portion of the agreement terms or the minimum cancellation fee.

For the restricted stock units and performance stock units granted, the number of shares issued on the date the restricted stock units vest is net of the minimum statutory withholding requirements that we pay in cash to the appropriate taxing authorities on behalf of our employees. The obligation to pay the relevant taxing authority is not included in the preceding table, as the amount is contingent upon continued employment. In addition, the amount of the obligation is unknown, as it is based in part on the market price of our common stock when the awards vest.

The expected timing of payments of the obligations above is estimated based on current information. Timing of payments and actual amounts paid may be different, depending on the time of receipt of goods or services, or changes to agreed-upon amounts for some obligations.

Our future capital uses and requirements depend on numerous forward-looking factors. These factors may include, but are not limited to, the following:

- the rate of progress and cost of research and development activities;
- the number and scope of our research activities;
- the costs of filing, prosecuting, defending and enforcing any patent claims and other intellectual property rights;
- our ability to establish and maintain product discovery and development collaborations, including scale-up manufacturing costs for our collaborators' product candidates;
- the amount of royalties from our collaborators;
- the amount of product sales for *Hylenex* recombinant;
- the costs of obtaining and validating additional manufacturers of *Hylenex* recombinant;
- the effect of competing technological and market developments;
- the terms and timing of any collaborative, licensing and other arrangements that we may establish; and
- the extent to which we acquire or in-license new products, technologies or businesses.

Critical Accounting Policies and Estimates

The discussion and analysis of our financial condition and results of operations are based on our consolidated financial statements, which have been prepared in accordance with U.S. generally accepted accounting principles, or U.S. GAAP. The preparation of our consolidated financial statements requires us to make estimates and judgments that affect the reported amounts of assets, liabilities, revenues and expenses and related disclosure of contingent assets and liabilities. We review our estimates on an ongoing basis. We base our estimates on historical experience and on various other assumptions that we believe to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities. Actual results may differ from these estimates under different assumptions or conditions. We believe the following accounting policies to be critical to the judgments and estimates used in the preparation of our consolidated financial statements.

Revenue Recognition

We generate revenues from product sales and collaborative agreements. Payments received under collaborative agreements may include nonrefundable fees at the inception of the agreements, license fees, milestone payments for specific achievements designated in the collaborative agreements, reimbursements of research and development services and supply of bulk rHuPH20 and/or royalties on sales of products resulting from collaborative arrangements.

We recognize revenue in accordance with the authoritative guidance on revenue recognition. Revenue is recognized when all of the following criteria are met: (1) persuasive evidence of an arrangement exists; (2) delivery has occurred or services have been rendered; (3) the seller's price to the buyer is fixed or determinable; and (4) collectibility is reasonably assured.

Refer to Note 2, *Summary of Significant Accounting Policies - Adoption and Pending Adoption of Recent Accounting Pronouncements* , of our consolidated financial statements for further discussion of our revenue recognition policies for product sales and revenues under our collaborative agreements and Note 4, *Collaborative Agreements,* of our consolidated financial statements for a further discussion of our collaborative agreements.

Share-Based Payments

We use the fair value method to account for share-based payments in accordance with the authoritative guidance for share-based compensation. The fair value of each option award is estimated on the date of grant using a Black-Scholes-Merton option pricing model (Black-Scholes model) that uses assumptions regarding a number of complex and subjective variables. Changes in these assumptions may lead to variability with respect to the amount of expense we recognize in connection with share-based payments. Refer to Note 2, *Summary of Significant Accounting Policies - Adoption and Pending Adoption of Recent Accounting Pronouncements* , of our consolidated financial statements for a further discussion of share-based payments.

Research and Development Expenses

Research and development expenses include salaries and benefits, facilities and other overhead expenses, external clinical trial expenses, research related manufacturing services, contract services and other outside expenses. Research and development expenses are charged to operations as incurred when these expenditures relate to our research and development efforts and have no alternative future uses. After receiving marketing approval from the FDA or comparable regulatory agencies in foreign countries for a product, costs related to purchases or manufacturing of bulk rHuPH20 for such product are capitalized as inventory. The manufacturing costs of bulk rHuPH20 for the collaboration products, Herceptin SC, MabThera SC and HYQVIA, which were incurred after the receipt of marketing approvals are capitalized as inventory. Refer to Note 2, *Summary of Significant Accounting Policies - Adoption and Pending Adoption of Recent Accounting Pronouncements* , of our consolidated financial statements for a further discussion of research and development expenses.

Due to the uncertainty in obtaining the FDA and other regulatory approvals, our reliance on third parties and competitive pressures, we are unable to estimate with any certainty the additional costs we will incur in the continued development of our proprietary product candidates for commercialization. However, we expect our research and development expenses to increase this year as we continue with our clinical trial programs and continue to develop and manufacture our product candidates.

Clinical development timelines, likelihood of success and total costs vary widely. We anticipate that we will make ongoing determinations as to which research and development projects to pursue and how much funding to direct to each project on an ongoing basis in response to existing resource levels, the scientific and clinical progress of each product candidate, and other market and regulatory developments. We plan on focusing our resources on those proprietary and collaboration product candidates that represent the most valuable economic and strategic opportunities.

Product candidate completion dates and costs vary significantly for each product candidate and are difficult to estimate. The lengthy process of seeking regulatory approvals and the subsequent compliance with applicable regulations require the expenditure of substantial resources. Any failure by us to obtain, or any delay in obtaining, regulatory approvals could cause our research and development expenditures to increase and, in turn, have a material adverse effect on our results of operations. We cannot be certain when, or if, our product candidates will receive regulatory approval or whether any net cash inflow from our other product candidates, or development projects, will commence.

Recent Accounting Pronouncements

Refer to Note 2, *Summary of Significant Accounting Policies - Adoption and Pending Adoption of Recent Accounting Pronouncements* , of our consolidated financial statements for a discussion of recent accounting pronouncements and their effect, if any, on us.

Item 7A. ***Quantitative and Qualitative Disclosures About Market Risk***

As of December 31, 2015 , our cash equivalents and marketable securities consisted of investments in money market funds and corporate debt obligations. These investments were made in accordance with our investment policy which specifies the categories, allocations, and ratings of securities we may consider for investment. The primary objective of our investment activities is to preserve principal while at the same time maximizing the income we receive without significantly increasing risk. Some of the financial instruments that we invest in could be subject to market risk. This means that a change in prevailing interest rates may cause the value of the instruments to fluctuate. For example, if we purchase a security that was issued with a fixed interest rate and the prevailing interest rate later rises, the value of that security will probably decline. As of December 31, 2015 based on our current investment portfolio, we do not believe that our results of operations would be materially impacted by an immediate change of 10% in interest rates.

We do not hold or issue derivatives, derivative commodity instruments or other financial instruments for speculative trading purposes. Further, we do not believe our cash, cash equivalents and marketable securities have significant risk of default or illiquidity. We made this determination based on discussions with our investment advisors and a review of our holdings. While we believe our cash, cash equivalents and marketable securities do not contain excessive risk, we cannot provide absolute assurance that in the future our investments will not be subject to adverse changes in market value. All of our cash equivalents and marketable securities are recorded at fair market value.

Item 8. ***Financial Statements and Supplementary Data***

Our financial statements are annexed to this report beginning on page F-1.

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

None.

Item 9A. ***Control and Procedures***

Evaluation of Disclosure Controls and Procedures

We maintain disclosure controls and procedures that are designed to ensure that information required to be disclosed in our Exchange Act reports is recorded, processed, summarized and reported within the timelines specified in the Securities and Exchange Commission's rules and forms, and that such information is accumulated and communicated to our management, including our Chief Executive Officer and Chief Financial Officer, as appropriate, to allow timely decision regarding required disclosure. In designing and evaluating the disclosure controls and procedures, management recognized that any controls and procedures, no matter how well designed and operated, can only provide reasonable assurance of achieving the desired control objectives, and in reaching a reasonable level of assurance, management necessarily was required to apply its judgment in evaluating the cost-benefit relationship of possible controls and procedures.

Under the supervision and with the participation of our management, including our principal executive officer and principal financial officer, we conducted an evaluation of our disclosure controls and procedures, as such term is defined under Rule 13a-15(e) promulgated under the Securities Exchange Act of 1934, as amended. Based on this evaluation, our principal executive officer and our principal financial officer concluded that our disclosure controls and procedures were effective as of the end of the period covered by this Annual Report on Form 10-K.

Changes in Internal Control Over Financial Reporting

There have been no significant changes in our internal control over financial reporting that occurred during the quarter ended December 31, 2015 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Management's Report on Internal Control Over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting. Internal control over financial reporting is defined in Rule 13a-15(f) and Rule 15d-15(f) promulgated under the Securities Exchange Act of 1934 as a process designed by, or under the supervision of, our principal executive and principal financial officers and effected by our board of directors, management and other personnel, 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 and includes those policies and procedures that:

- Pertain to the maintenance of records that in reasonable detail accurately and fairly reflect the transactions and dispositions 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 authorizations 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 our financial statements.

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

Our management assessed the effectiveness of our internal control over financial reporting as of December 31, 2015 . In making this assessment, our management used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) in Internal Control-Integrated Framework (2013 framework) (the COSO criteria). Based on our assessment, management concluded that, as of December 31, 2015 , our internal control over financial reporting is effective based on the COSO criteria.

The independent registered public accounting firm that audited the consolidated financial statements that are included in this Annual Report on Form 10-K has issued an audit report on the effectiveness of our internal control over financial reporting as of December 31, 2015 . The report appears below.

Report of Independent Registered Public Accounting Firm

The Board of Directors and Stockholders
Halozyme Therapeutics, Inc.

We have audited Halozyme Therapeutics, Inc.'s internal control over financial reporting as of December 31, 2015 , 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). Halozyme 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, Halozyme Therapeutics, Inc. maintained, in all material respects, effective internal control over financial reporting as of December 31, 2015 , based on the COSO criteria **.**

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the consolidated balance sheets of Halozyme Therapeutics, Inc. as of December 31, 2015 and 2014, and the related consolidated statements of operations, comprehensive loss, cash flows, and stockholders' equity (deficit) for each of the three years in the period ended December 31, 2015 of Halozyme Therapeutics, Inc. and our report dated February 29, 2016 expressed an unqualified opinion thereon.

/s/ Ernst & Young LLP

San Diego, California
February 29, 2016

Item 9B. ***Other Information***

None.

PART III

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

The information required by this item regarding directors is incorporated by reference to our definitive Proxy Statement (the Proxy Statement) to be filed with the Securities and Exchange Commission in connection with our 2016 Annual Meeting of Stockholders under the heading "Election of Directors." The information required by this item regarding compliance with Section 16(a) of the Securities Exchange Act of 1934, as amended, is incorporated by reference to the information under the caption "Compliance with Section 16(a) of the Exchange Act" to be contained in the Proxy Statement. The information required by this item regarding our code of ethics is incorporated by reference to the information under the caption "Code of Conduct and Ethics" to be contained in the Proxy Statement. The information required by this item regarding our audit committee is incorporated by reference to the information under the caption "Board Meetings and Committees—Audit Committee" to be contained in the Proxy Statement. The information required by this item regarding material changes, if any, to the process by which stockholders may recommend nominees to our board of directors is incorporated by reference to the information under the caption "Board Meetings and Committees—Nominating and Governance Committee" to be contained in the Proxy Statement.

Executive Officers

Helen I. Torley, M.B. Ch. B., M.R.C.P. (53), President, Chief Executive Officer and Director. Dr. Torley joined Halozyme in January 2014 as President and Chief Executive Officer and as a member of Halozyme's Board of Directors. Throughout her career, Dr. Torley has led several successful product launches, including Kyprolis®, Prolia®, Sensipar®, and Miacalcin®. Prior to joining Halozyme, Dr. Torley served as Executive Vice President and Chief Commercial Officer for Onyx Pharmaceuticals (Onyx) from August 2011 to December 2013 overseeing the collaboration with Bayer on Nexavar® and Stivarga® and the U.S. launch of Kyprolis. She was responsible for the development of Onyx's commercial capabilities in ex-US markets and in particular, in Europe. Prior to Onyx, Dr. Torley spent 10 years in management positions at Amgen Inc., most recently serving as Vice President and General Manager of the US Nephrology Business Unit from 2003 to 2009 and the U.S. Bone Health Business Unit from 2009 to 2011. From 1997 to 2002, she held various senior management positions at Bristol-Myers Squibb, including Regional Vice President of Cardiovascular and Metabolic Sales and Head of Cardiovascular Global Marketing. She began her career at Sandoz/Novartis, where she ultimately served as Vice President of Medical Affairs, developing and conducting post-marketing clinical studies across all therapeutic areas, including oncology. Dr. Torley serves on the board of directors of Relypsa, Inc., a biopharmaceutical company. Before joining the industry, Dr. Torley was in medical practice as a senior registrar in rheumatology at the Royal Infirmary in Glasgow, Scotland. Dr. Torley received her Bachelor of Medicine and Bachelor of Surgery degrees (M.B. Ch.B.) from the University of Glasgow and is a Member of the Royal College of Physicians (M.R.C.P).

Laurie D. Stelzer (48), Senior Vice President, Chief Financial Officer. Ms. Stelzer joined Halozyme in 2015 as Senior Vice President, Chief Financial Officer. Prior to joining Halozyme, Ms. Stelzer served from April 2014 to January 2015 as the Senior Vice President of Finance supporting R&D, Technical Operations and M&A at Shire, Inc. Prior to that she was the Division CFO for the Regenerative Medicine Division and the Head of Investor Relations at Shire from March 2012 to April 2014. Prior to Shire, Ms. Stelzer held positions of increasing responsibility for 15 years at Amgen, Inc. including Interim Treasurer, Head of Emerging Markets Expansion, Executive Director of Global Commercial Finance and Head of Global Accounting. Early in her career, she held various finance and accounting positions in the real estate and banking industries. Ms. Stelzer received her MBA from the Anderson School at the University of California, Los Angeles, and a Bachelor of Science in Accounting from Arizona State University.

Athena Countouriotis, M.D. (44), Senior Vice President, Chief Medical Officer. Dr. Countouriotis joined Halozyme in January 2015 as Senior Vice President, Chief Medical Officer. From February 2012 to January 2015, Dr. Countouriotis served as chief medical officer at Ambit Biosciences Corporation, a pharmaceutical company, which was acquired by Daiichi Sankyo in November 2014. From August 2007 to February 2012, Dr. Countouriotis was a clinical leader within the Pfizer Inc., a pharmaceutical company, Oncology Business Unit. From October 2005 to August 2007, she was director of oncology global clinical research at Bristol-Myers Squibb Company, a pharmaceutical company, with responsibility for leading clinical development of Sprycel ® in acute lymphoblastic leukemia and chronic myeloid leukemia. Earlier in her career, she held the position as Associate Medical Director at Cell Therapeutics, Inc., a biopharmaceutical company. Dr. Countouriotis received a B.S. from the University of California, Los Angeles, and an M.D. at Tufts University School of Medicine. She received her initial training in pediatrics at the University of California, Los Angeles, and additional training at the Fred Hutchinson Cancer Research Center in the Pediatric Hematology/Oncology Program.

Harry J. Leonhardt, Esq. (59), Senior Vice President, General Counsel, Chief Compliance Officer and Corporate Secretary. Mr. Leonhardt joined Halozyme in April 2015 as Senior Vice President, General Counsel, Chief Compliance Officer and Corporate Secretary. Mr. Leonhardt brings more than 30 years of executive management, corporate legal, intellectual property, compliance, business development and mergers and acquisitions experience to Halozyme, with an extensive background in the biotechnology industry. Prior to joining Halozyme, Mr. Leonhardt was an arbitrator before the International Centre for Dispute Resolution and a consultant in the biotechnology industry from January 2013 to April 2015. He served as Senior Vice President, Legal and Compliance, and Corporate Secretary at Amylin Pharmaceuticals, Inc., a biotechnology company, from September 2011 to January 2013 and previously served in other senior management legal positions at Amylin since September 2007. Prior to Amylin, he served as Senior Vice President, General Counsel and Corporate Secretary at Senomyx, Inc., a company focused on taste receptor technology and the development of novel flavor ingredients for the food and beverage industry, from September 2003 to September 2007. From February 2001 to September 2003, Mr. Leonhardt was Executive Vice President, General Counsel and Corporate Secretary at Genoptix, Inc. and from July 1996 to November 2000, he served as Vice President and then Senior Vice President, General Counsel and Corporate Secretary at Nanogen, Inc. Prior to Nanogen, Mr. Leonhardt held positions of increasing responsibility at Allergan, Inc. including Chief Litigation Counsel and General Counsel for European Operations. Early in his career, he was an attorney at Lyon & Lyon LLP where he represented a number of prominent clients in the biotech, pharmaceutical and consumer products industries. Mr. Leonhardt received a B.S. in Pharmacy from the University of the Sciences and a Juris Doctorate from the University of Southern California School of Law.

Item 11. ***Executive Compensation***

The information required by this item is incorporated by reference to the information under the caption " *Executive Compensation* " to be contained in the Proxy Statement.

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

Other than as set forth below, the information required by this item is incorporated by reference to the information under the caption " *Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters* " to be contained in the Proxy Statement.

Equity Compensation Plan Information

The following table summarizes our compensation plans under which our equity securities are authorized for issuance as of December 31, 2015 :

Plan Category	Number of Shares to Be Issued upon Exercise of Outstanding Options and Restricted Stock Units (a)	Weighted Average Exercise Price of Outstanding Options and Restricted Stock Units [2] (b)	Number of Shares Remaining Available for Future Issuance under Equity Compensation Plans (Excluding Shares Reflected in Column (a)) (c)
Equity compensation plans approved by stockholders [1]	8,969,113	$13.03	7,440,487
Equity compensation plans not approved by stockholders	—	—	—
	8,969,113	$13.03	7,440,487

(1) Represents stock options, restricted stock units, and performance restricted stock units under the Amended and Restated 2011 Stock Plan, 2008 Stock Plan, 2006 Stock Plan, 2005 Outside Directors' Stock Plan, and 2004 Stock Plan.

(2) This amount does not include restricted stock units and performance restricted stock units as there is no exercise price for such units.

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

The information required by this item is incorporated by reference to the information under the caption " *Certain Relationships and Related Transactions* " to be contained in the Proxy Statement.

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

The information required by this item is incorporated by reference to the information under the caption " *Principal Accounting Fees and Services* " to be contained in the Proxy Statement.

PART IV

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

(a) Documents filed as part of this report.

1. Financial Statements

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Report of Independent Registered Public Accounting Firm	F-1
Consolidated Balance Sheets at December 31, 2015 and 2014	F-2
Consolidated Statements of Operations for Each of the Years Ended December 31, 2015, 2014 and 2013	F-3
Consolidated Statements of Comprehensive Loss for Each of the Years Ended December 31, 2015, 2014 and 2013	F-4
Consolidated Statements of Cash Flows for Each of the Years Ended December 31, 2015, 2014 and 2013	F-5
Consolidated Statements of Stockholders' Equity (Deficit) for Each of the Years Ended December 31, 2015, 2014 and 2013	F-6
Notes to the Consolidated Financial Statements	F-7

2. List of all Financial Statement schedules.

The following financial statement schedule of Halozyme Therapeutics, Inc. is filed as part of this Annual Report on Form 10-K on page F-37 and should be read in conjunction with the consolidated financial statements of Halozyme Therapeutics, Inc.

Schedule II: Valuation and Qualifying Accounts

All other schedules are omitted because they are not applicable or the required information is shown in the Financial Statements or notes thereto.

3. List of Exhibits required by Item 601 of Regulation S-K. See part (b) below.

(b) Exhibits.

The exhibits listed in the accompanying "Exhibit Index" are incorporated herein by reference.

(c) Financial Statement Schedules. See Item 15(a) 2 above.

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.

Halozyme Therapeutics, Inc.,
a Delaware corporation

Date: February 29, 2016

By: /s/ Helen I. Torley, M.B. Ch.B., M.R.C.P.
Helen I. Torley, M.B. Ch.B., M.R.C.P.
President and Chief Executive Officer

POWER OF ATTORNEY

Know all persons by these presents, that each person whose signature appears below constitutes and appoints Helen I. Torley and Laurie D. Stelzer, and each of them, as his true and lawful attorneys-in-fact and agents, with full power of substitution and resubstitution, for him and in his name, place, and stead, in any and all capacities, to sign any and all amendments to this Annual Report, and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done in connection therewith, as fully to all intents and purposes as he might or could do in person, hereby ratifying and confirming that all said attorneys-in-fact and agents, or any of them or their or his substitute or substituted, may lawfully do or cause to be done by virtue thereof.

Pursuant to the requirements of the Securities Exchange Act of 1934, this Annual 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/ Helen I. Torley, M.B. Ch.B., M.R.C.P. Helen I. Torley, M.B. Ch.B., M.R.C.P.	President and Chief Executive Officer (Principal Executive Officer), Director	February 29, 2016
/s/ Laurie D. Stelzer Laurie D. Stelzer	Senior Vice President and Chief Financial Officer (Principal Financial and Accounting Officer)	February 29, 2016
/s/ Kathryn E. Falberg Kathryn E. Falberg	Chair of the Board of Directors	February 29, 2016
/s/ Jean-Pierre Bizzari Jean-Pierre Bizzari	Director	February 29, 2016
/s/ Jeffrey W. Henderson Jeffrey W. Henderson	Director	February 29, 2016
/s/ Kenneth J. Kelley Kenneth J. Kelley	Director	February 29, 2016
/s/ Randal J. Kirk Randal J. Kirk	Director	February 29, 2016
/s/ Connie L. Matsui Connie L. Matsui	Director	February 29, 2016
/s/ Matthew L. Posard Matthew L. Posard	Director	February 29, 2016

Report of Independent Registered Public Accounting Firm

The Board of Directors and Stockholders
Halozyme Therapeutics, Inc.

We have audited the accompanying consolidated balance sheets of Halozyme Therapeutics, Inc. as of December 31, 2015 and 2014, and the related consolidated statements of operations, comprehensive loss, cash flows, and stockholders' equity (deficit) for each of the three years in the period ended December 31, 2015. Our audits also included the financial statement schedule listed in the Index at Item 15(a). These financial statements and schedule are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements and schedule 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 Halozyme Therapeutics, Inc. at December 31, 2015 and 2014, and the consolidated results of its operations and its cash flows for each of the three years in the period ended December 31, 2015, in conformity with U.S. generally accepted accounting principles. Also, in our opinion, the related financial statement schedule, when considered in relation to the basic financial statements taken as a whole, presents fairly in all material respects the information set forth therein.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), Halozyme Therapeutics, Inc.'s internal control over financial reporting as of December 31, 2015, 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 February 29, 2016 expressed an unqualified opinion thereon.

/s/ Ernst & Young LLP

San Diego, California
February 29, 2016

HALOZYME THERAPEUTICS, INC.

CONSOLIDATED BALANCE SHEETS
(in thousands, except per share data)

	December 31, 2015	December 31, 2014
ASSETS		
Current assets:		
Cash and cash equivalents	$ 43,292	$ 61,389
Marketable securities, available-for-sale	65,047	74,234
Accounts receivable, net	32,410	9,149
Inventories	9,489	6,406
Prepaid expenses and other assets	21,534	10,143
Total current assets	171,772	161,321
Property and equipment, net	3,943	2,951
Prepaid expenses and other assets	5,574	1,205
Restricted cash	500	500
Total assets	$ 181,789	$ 165,977
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	$ 4,499	$ 3,003
Accrued expenses	26,792	13,961
Deferred revenue, current portion	9,304	7,367
Current portion of long-term debt, net	21,862	—
Total current liabilities	62,457	24,331
Deferred revenue, net of current portion	43,919	47,267
Long-term debt, net	27,971	49,860
Other long-term liabilities	4,443	3,167
Commitments and contingencies (Note 9)		
Stockholders' equity:		
Preferred stock — $0.001 par value; 20,000 shares authorized; no shares issued and outstanding	—	—
Common stock — $0.001 par value; 200,000 shares authorized; 128,152 and 125,721 shares issued and outstanding at December 31, 2015 and 2014, respectively	128	126
Additional paid-in capital	525,628	491,694
Accumulated other comprehensive loss	(99)	(41)
Accumulated deficit	(482,658)	(450,427)
Total stockholders' equity	42,999	41,352
Total liabilities and stockholders' equity	$ 181,789	$ 165,977

See accompanying notes to consolidated financial statements.

HALOZYME THERAPEUTICS, INC.

CONSOLIDATED STATEMENTS OF OPERATIONS
(in thousands, except per share data)

	Year Ended December 31,		
	2015	**2014**	**2013**
Revenues:			
Product sales, net	$ 46,082	$ 37,823	$ 24,439
Revenues under collaborative agreements	58,000	28,086	30,327
Royalties	30,975	9,425	33
Total revenues	135,057	75,334	54,799
Operating expenses:			
Cost of product sales	29,245	22,732	6,246
Research and development	93,236	79,696	96,640
Selling, general and administrative	40,028	35,942	32,347
Total operating expenses	162,509	138,370	135,233
Operating loss	(27,452)	(63,036)	(80,434)
Other income (expense):			
Investment and other income, net	422	242	229
Interest expense	(5,201)	(5,581)	(3,274)
Net loss	$ (32,231)	$ (68,375)	$ (83,479)
Basic and diluted net loss per share	$ (0.25)	$ (0.56)	$ (0.74)
Shares used in computing basic and diluted net loss per share	126,704	122,690	112,805

See accompanying notes to consolidated financial statements.

HALOZYME THERAPEUTICS, INC.

CONSOLIDATED STATEMENTS OF COMPREHENSIVE LOSS
(in thousands)

	Year Ended December 31,		
	2015	**2014**	**2013**
Net loss	$ (32,231)	$ (68,375)	$ (83,479)
Other comprehensive (loss) income:			
Unrealized (loss) gain on marketable securities	(58)	(58)	17
Total comprehensive loss	$ (32,289)	$ (68,433)	$ (83,462)

See accompanying notes to consolidated financial statements.

HALOZYME THERAPEUTICS, INC.
CONSOLIDATED STATEMENTS OF CASH FLOWS
(in thousands)

	Year Ended December 31,		
	2015	2014	2013
Operating activities:			
Net loss	$ (32,231)	$ (68,375)	$ (83,479)
Adjustments to reconcile net loss to net cash used in operating activities:			
Share-based compensation	20,838	15,274	9,538
Depreciation and amortization	1,677	1,762	1,227
Non-cash interest expense	1,243	2,025	156
Amortization of premiums on marketable securities, net	879	1,457	1,116
Loss on disposal of equipment	8	233	—
Changes in operating assets and liabilities:			
Accounts receivable, net	(23,261)	(52)	6,606
Inventories	(3,083)	(236)	(3,499)
Prepaid expenses and other assets	(15,774)	(265)	1,959
Restricted cash	—	—	(100)
Accounts payable and accrued expenses	13,866	(816)	7,888
Deferred revenue	(1,411)	1,490	9,297
Other liabilities	166	(15)	(48)
Net cash used in operating activities	(37,083)	(47,518)	(49,339)
Investing activities:			
Purchases of marketable securities	(71,482)	(88,884)	(48,947)
Proceeds from maturities of marketable securities	79,730	57,301	3,375
Purchases of property and equipment	(2,360)	(1,368)	(2,297)
Net cash provided by (used in) investing activities	5,888	(32,951)	(47,869)
Financing activities:			
Proceeds from issuance of common stock under equity incentive plans, net	13,098	6,788	5,079
Proceeds from issuance of common stock, net	—	107,713	—
Proceeds from issuance of long-term debt, net	—	—	19,985
Net cash provided by financing activities	13,098	114,501	25,064
Net (decrease) increase in cash and cash equivalents	(18,097)	34,032	(72,144)
Cash and cash equivalents at beginning of period	61,389	27,357	99,501
Cash and cash equivalents at end of period	$ 43,292	$ 61,389	$ 27,357
Supplemental disclosure of cash flow information:			
Interest paid	$ 3,775	$ 3,460	$ 3,099
Supplemental disclosure of non-cash investing and financing activities:			
Amounts accrued for purchases of property and equipment	$ 473	$ 156	$ 100
Capitalized property and liability associated with a build-to-suit lease arrangement	$ —	$ —	$ (1,450)

See accompanying notes to consolidated financial statements.

HALOZYME THERAPEUTICS, INC.

CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY (DEFICIT)
(in thousands)

	Common Stock		Additional Paid-In Capital	Accumulated Other Comprehensive Income (Loss)	Accumulated Deficit	Total Stockholders' Equity (Deficit)
	Shares	Amount				
BALANCE AT JANUARY 1, 2013	112,709	$ 113	$ 347,315	$ —	$ (298,573)	$ 48,855
Share-based compensation expense	—	—	9,538	—	—	9,538
Issuance of common stock pursuant to exercise of stock options and vesting of restricted stock units, net	1,363	1	5,078	—	—	5,079
Issuance of restricted stock awards	462	1	(1)	—	—	—
Other comprehensive income	—	—	—	17	—	17
Net loss	—	—	—	—	(83,479)	(83,479)
BALANCE AT DECEMBER 31, 2013	114,534	115	361,930	17	(382,052)	(19,990)
Share-based compensation expense	—	—	15,274	—	—	15,274
Issuance of common stock for cash, net	8,846	9	107,704	—	—	107,713
Issuance of common stock pursuant to exercise of stock options and vesting of restricted stock units, net	1,552	1	6,787	—	—	6,788
Issuance of restricted stock awards	789	1	(1)	—	—	—
Other comprehensive loss	—	—	—	(58)	—	(58)
Net loss	—	—	—	—	(68,375)	(68,375)
BALANCE AT DECEMBER 31, 2014	125,721	126	491,694	(41)	(450,427)	41,352
Share-based compensation expense	—	—	20,838	—	—	20,838
Issuance of common stock pursuant to exercise of stock options and vesting of restricted stock units and performance restricted stock units, net	2,056	2	13,096	—	—	13,098
Issuance of restricted stock awards	375	—	—	—	—	—
Other comprehensive loss	—	—	—	(58)	—	(58)
Net loss	—	—	—	—	(32,231)	(32,231)
BALANCE AT DECEMBER 31, 2015	128,152	$ 128	$ 525,628	$ (99)	$ (482,658)	$ 42,999

See accompanying notes to consolidated financial statements.

1. Organization and Business

Halozyme Therapeutics, Inc. is a biotechnology company focused on developing and commercializing novel oncology therapies. We are seeking to translate our unique knowledge of the tumor microenvironment to create therapies that have the potential to improve cancer patient survival. Our research primarily focuses on human enzymes that alter the extracellular matrix and tumor microenvironment. The extracellular matrix is a complex matrix of proteins and carbohydrates surrounding the cell that provides structural support in tissues and orchestrates many important biological activities, including cell migration, signaling and survival. Over many years, we have developed unique technology and scientific expertise enabling us to pursue this target-rich environment for the development of therapies.

Our proprietary enzymes are used to facilitate the delivery of injected drugs and fluids, potentially enhancing the efficacy and the convenience of other drugs or can be used to alter tissue structures for potential clinical benefit. We exploit our technology and expertise using a two pillar strategy that we believe enables us to manage risk and cost by: (1) developing our own proprietary products in therapeutic areas with significant unmet medical needs, with a focus on oncology, and (2) licensing our technology to biopharmaceutical companies to collaboratively develop products that combine our technology with the collaborators' proprietary compounds.

The majority of our approved product and product candidates are based on rHuPH20, our patented recombinant human hyaluronidase enzyme. rHuPH20 is the active ingredient in our first commercially approved product, *Hylenex* ® recombinant, and it works by temporarily breaking down hyaluronan (or HA), a naturally occurring complex carbohydrate that is a major component of the extracellular matrix in tissues throughout the body such as skin and cartilage. We believe this temporary degradation creates an opportunistic window for the improved subcutaneous delivery of injectable biologics, such as monoclonal antibodies and other large therapeutic molecules, as well as small molecules and fluids. We refer to the application of rHuPH20 to facilitate the delivery of other drugs or fluids as our ENHANZE ™ Technology. We license the Enhance Technology to form collaborations with biopharmaceutical companies that develop or market drugs requiring or benefiting from injection via the subcutaneous route of administration.

We currently have ENHANZE collaborations with F. Hoffmann-La Roche, Ltd. and Hoffmann-La Roche, Inc. (Roche), Baxalta US Inc. and Baxalta GmbH (Baxalta), Pfizer Inc. (Pfizer), Janssen Biotech, Inc. (Janssen), AbbVie, Inc. (AbbVie), and Eli Lilly and Company (Lilly). We receive royalties from two of these collaborations, including royalties from sales of one product approved in both the United States and outside the United States from the Baxalta collaboration and from sales of two products approved for marketing outside the United States from the Roche collaboration. Future potential revenues from the sales and/or royalties of our approved products, product candidates, and ENHANZE collaborations will depend on the ability of Halozyme and our collaborators to develop, manufacture, secure and maintain regulatory approvals for approved products and product candidates and commercialize product candidates.

Our proprietary development pipeline consists primarily of clinical stage product candidates in oncology. Our lead oncology program is PEGPH20 (PEGylated recombinant human hyaluronidase), a molecular entity we are developing for the systemic treatment of tumors that accumulate HA. When HA accumulates in a tumor, it can cause higher pressure in the tumor, reducing blood flow into the tumor and with that, reduced access of cancer therapies to the tumor. PEGPH20 works by temporarily degrading HA surrounding cancer cells resulting in reduced pressure and increased blood flow to the tumor thereby enabling increased amounts of anticancer treatments administered concomitantly gaining access to the tumor. We are currently in Phase 2 and Phase 3 clinical testing for PEGPH20 in stage IV PDA (Studies 109-202 and 109-301), in Phase 1b clinical testing in non-small cell lung cancer (Study 107-201) and in Phase 1b clinical testing in non-small cell lung cancer and gastric cancer (Study 107-101).

Except where specifically noted or the context otherwise requires, references to "Halozyme," "the Company," "we," "our," and "us" in these notes to consolidated financial statements refer to Halozyme Therapeutics, Inc. and its wholly owned subsidiary, Halozyme, Inc., and Halozyme, Inc.'s wholly owned subsidiaries, Halozyme Holdings Ltd. and Halozyme Royalty LLC.

2. Summary of Significant Accounting Policies

Basis of Presentation

The consolidated financial statements include the accounts of Halozyme Therapeutics, Inc. and our wholly owned subsidiary, Halozyme, Inc., and Halozyme, Inc.'s wholly owned subsidiaries, Halozyme Holdings Ltd. and Halozyme Royalty LLC. All intercompany accounts and transactions have been eliminated.

Use of Estimates

The preparation of consolidated financial statements in conformity with U.S. generally accepted accounting principles ("U.S. GAAP") requires management to make estimates and assumptions that affect the amounts reported in our consolidated financial statements and accompanying notes. On an ongoing basis, we evaluate our estimates and judgments, which are based on historical and anticipated results and trends and on various other assumptions that management believes to be reasonable under the circumstances. By their nature, estimates are subject to an inherent degree of uncertainty and, as such, actual results may differ from management's estimates.

Cash Equivalents and Marketable Securities

Cash equivalents consist of highly liquid investments, readily convertible to cash, that mature within ninety days or less from date of purchase. Our cash equivalents consist of money market funds.

Marketable securities are investments with original maturities of more than ninety days from the date of purchase that are specifically identified to fund current operations. Marketable securities are considered available-for-sale. These investments are classified as current assets, even though the stated maturity date may be one year or more beyond the current balance sheet date which reflects management's intention to use the proceeds from the sale of these investments to fund our operations, as necessary. Such available-for-sale investments are carried at fair value with unrealized gains and losses recorded in other comprehensive gain (loss) and included as a separate component of stockholders' equity. The cost of marketable securities is adjusted for amortization of premiums or accretion of discounts to maturity, and such amortization or accretion is included in investment and other income, net in the consolidated statements of operations. We use the specific identification method for calculating realized gains and losses on marketable securities sold. Realized gains and losses and declines in value judged to be other-than-temporary on marketable securities, if any, are included in investment and other income, net in the consolidated statements of operations.

Restricted Cash

Under the terms of the leases on our facilities, we are required to maintain letters of credit as security deposits during the terms of such leases. At December 31, 2015 and 2014 , restricted cash of $0.5 million was pledged as collateral for the letters of credit.

Fair Value of Financial Instruments

The authoritative guidance for fair value measurements establishes a three tier fair value hierarchy, which prioritizes the inputs used in measuring fair value. These tiers include: Level 1, defined as observable inputs such as quoted prices in active markets; Level 2, defined as inputs other than quoted prices in active markets that are either directly or indirectly observable; and Level 3, defined as unobservable inputs in which little or no market data exists, therefore requiring an entity to develop its own assumptions.

Our financial instruments include cash equivalents, available-for-sale marketable securities, accounts receivable, prepaid expenses and other assets, accounts payable, accrued expenses and long-term debt. Fair value estimates of these instruments are made at a specific point in time, based on relevant market information. These estimates may be subjective in nature and involve uncertainties and matters of significant judgment and therefore cannot be determined with precision. The carrying amount of cash equivalents, accounts receivable, prepaid expenses and other assets, accounts payable and accrued expenses are generally considered to be representative of their respective fair values because of the short-term nature of those instruments. Further, based on the borrowing rates currently available for loans with similar terms, we believe the fair value of long-term debt approximates its carrying value.

Available-for-sale marketable securities consist of corporate debt securities, commercial paper and certificates of deposit and were measured at fair value using Level 2 inputs. Level 2 financial instruments are valued using market prices on less active markets and proprietary pricing valuation models with observable inputs, including interest rates, yield curves, maturity dates, issue dates, settlement dates, reported trades, broker-dealer quotes, issue spreads, benchmark securities or other market related data. We obtain the fair value of Level 2 investments from our investment manager, who obtains these fair values from a third-party pricing service. We validate the fair values of Level 2 financial instruments provided by our investment manager by comparing these fair values to a third-party pricing source.

The following table summarizes, by major security type, our cash equivalents and marketable securities that are measured at fair value on a recurring basis and are categorized using the fair value hierarchy (in thousands):

	December 31, 2015			December 31, 2014		
	Level 1	Level 2	Total estimated fair value	Level 1	Level 2	Total estimated fair value
Cash equivalents:						
Money market funds	$ 38,595	$ —	$ 38,595	$ 42,685	$ —	$ 42,685
Available-for-sale marketable securities:						
Corporate debt securities	—	65,047	65,047	—	74,234	74,234
	$ 38,595	$ 65,047	$ 103,642	$ 42,685	$ 74,234	$ 116,919

There were no transfers between Level 1 and Level 2 of the fair value hierarchy for the years ended December 31, 2015 and 2014 . We have no instruments that are classified within Level 3 as of December 31, 2015 and 2014 .

Concentrations of Credit Risk, Sources of Supply and Significant Customers

We are subject to credit risk from our portfolio of cash equivalents and marketable securities. These investments were made in accordance with our investment policy which specifies the categories, allocations, and ratings of securities we may consider for investment. The primary objective of our investment activities is to preserve principal while at the same time maximizing the income we receive without significantly increasing risk. We maintain our cash and cash equivalent balances with one major commercial bank and marketable securities with another financial institution. Deposits held with the financial institutions exceed the amount of insurance provided on such deposits. We are exposed to credit risk in the event of a default by the financial institutions holding our cash, cash equivalents and marketable securities to the extent recorded on the balance sheet.

We are also subject to credit risk from our accounts receivable related to our product sales and revenues under our license and collaborative agreements. We have license and collaborative agreements with pharmaceutical companies under which we receive payments for license fees, milestone payments for specific achievements designated in the collaborative agreements, reimbursements of research and development services and supply of bulk formulation of rHuPH20. In addition, we sell *Hylenex* ® recombinant in the United States to a limited number of established wholesale distributors in the pharmaceutical industry. Credit is extended based on an evaluation of the customer's financial condition, and collateral is not required. Management monitors our exposure to accounts receivable by periodically evaluating the collectibility of the accounts receivable based on a variety of factors including the length of time the receivables are past due, the financial health of the customer and historical experience. Based upon the review of these factors, we recorded no allowance for doubtful accounts at December 31, 2015 and 2014 . Approximately 89% of the accounts receivable balance at December 31, 2015 represents amounts due from Roche and Lilly. Approximately 76% of the accounts receivable balance at December 31, 2014 represents amounts due from Roche and Pfizer.

The following table indicates the percentage of total revenues in excess of 10% with any single customer:

	Year Ended December 31,		
	2015	2014	2013
Roche	42%	57%	64%
Lilly	19%	—	—
AbbVie	17%	—	—
Janssen	1%	20%	—

We attribute revenues under collaborative agreements to the individual countries where the collaborator is headquartered. We attribute revenues from product sales to the individual countries to which the product is shipped. Worldwide revenues from external customers are summarized by geographic location in the following table (in thousands):

	Year Ended December 31,		
	2015	2014	2013
United States	$ 77,149	$ 31,397	$ 19,019
Switzerland	57,136	42,791	35,157
All other foreign	772	1,146	623
Total revenues	$ 135,057	$ 75,334	$ 54,799

For the years ended December 31, 2015, 2014 and 2013 , we had no foreign based operations. As of December 31, 2015 and 2014 , we had $0.3 million and $0.4 million , respectively, of research equipment in Germany.

We rely on two third-party manufacturers for the supply of bulk rHuPH20 for use in the manufacture of *Hylenex* recombinant and our other collaboration products and product candidates. Payments due to these suppliers represented 20% and 0% of the accounts payable balance at December 31, 2015 and 2014 , respectively. We also rely on a third-party manufacturer for the fill and finish of *Hylenex* recombinant product under a contract. Payments due to this supplier represented 4% and 6% of the accounts payable balance at December 31, 2015 and 2014 , respectively.

Accounts Receivable, Net

Accounts receivable is recorded at the invoiced amount and is non-interest bearing. Accounts receivable is recorded net of allowances for doubtful accounts, cash discounts for prompt payment, distribution fees and chargebacks. We recorded no allowance for doubtful accounts at December 31, 2015 and 2014 as the collectibility of accounts receivable was reasonably assured.

Inventories

Inventories are stated at lower of cost or market. Cost is determined on a first-in, first-out basis. Inventories are reviewed periodically for potential excess, dated or obsolete status. Management evaluates the carrying value of inventories on a regular basis, taking into account such factors as historical and anticipated future sales compared to quantities on hand, the price we expect to obtain for products in their respective markets compared with historical cost and the remaining shelf life of goods on hand.

Prior to receiving marketing approval from the U.S. Food and Drug Administration (“FDA”) or comparable regulatory agencies in foreign countries, costs related to purchases of bulk rHuPH20 and raw materials and the manufacturing of the product candidates are recorded as research and development expense. All direct manufacturing costs incurred after receiving marketing approval are capitalized as inventory. Inventories used in clinical trials are expensed at the time the inventories are packaged for the clinical trials.

As of December 31, 2015 and 2014 , inventories consisted of $1.4 million and $3.0 million of *Hylenex* recombinant inventory, respectively, and $8.1 million and $3.4 million of bulk rHuPH20, respectively, for use in the manufacture of Balxalta’s and Roche’s collaboration products.

Property and Equipment, Net

Property and equipment are recorded at cost, less accumulated depreciation and amortization. Equipment is depreciated using the straight-line method over their estimated useful lives of three years and leasehold improvements are amortized using the straight-line method over the estimated useful life of the asset or the lease term, whichever is shorter. Leased buildings under build-to-suit lease arrangements are capitalized and included in property and equipment when we are involved in the construction of the structural improvements or take construction risk prior to the commencement of the lease. Upon completion of the construction under the build-to-suit leases, we assess whether those arrangements qualify for sales recognition under the sale-leaseback accounting guidance. If we continue to be the deemed owner, the facilities would be accounted for as financing leases.

Impairment of Long-Lived Assets

We account for long-lived assets in accordance with authoritative guidance for impairment or disposal of long-lived assets. Long-lived assets are reviewed for events or changes in circumstances, which indicate that their carrying value may not be recoverable. For the year ended December 31, 2015 , there was no impairment of the value of long-lived assets. For the year ended December 31, 2014 , we recorded an impairment of $0.2 million relating to manufacturing equipment.

Deferred Rent

Rent expense is recorded on a straight-line basis over the initial term of the lease. The difference between rent expense accrued and amounts paid under lease agreements is recorded as deferred rent in the accompanying consolidated balance sheets.

Comprehensive Income (Loss)

Comprehensive income (loss) is defined as the change in equity during the period from transactions and other events and circumstances from non-owner sources.

Revenue Recognition

We generate revenues from product sales and payments received under collaborative agreements. Collaborative agreement payments may include nonrefundable fees at the inception of the agreements, license fees, milestone and event-based payments for specific achievements designated in the collaborative agreements, reimbursements of research and development services and supply of bulk rHuPH20, and/or royalties on sales of products resulting from collaborative arrangements.

We recognize revenues in accordance with the authoritative guidance for revenue recognition. We recognize revenue when all of the following criteria are met: (1) persuasive evidence of an arrangement exists; (2) delivery has occurred or services have been rendered; (3) the seller's price to the buyer is fixed or determinable; and (4) collectibility is reasonably assured.

Product Sales, Net

***Hylenex* Recombinant**

We sell *Hylenex* recombinant in the U.S. to wholesale pharmaceutical distributors, who sell the product to hospitals and other end-user customers. Sales to wholesalers provide for selling prices that are fixed on the date of sale, although we offer discounts to certain group purchasing organizations ("GPOs"), hospitals and government programs. The wholesalers take title to the product, bear the risk of loss of ownership and have economic substance to the inventory. Further, we have no significant obligations for future performance to generate pull-through sales.

We have developed sufficient historical experience and data to reasonably estimate future returns and chargebacks of *Hylenex* recombinant. As a result, we recognize *Hylenex* recombinant product sales and related cost of product sales at the time title transfers to the wholesalers.

Upon recognition of revenue from product sales of *Hylenex* recombinant, we record certain sales reserves and allowances as a reduction to gross revenue. These reserves and allowances include:

Product Returns . We allow the wholesalers to return product that is damaged or received in error. In addition, we accept unused product to be returned beginning six months prior to and ending twelve months following product

expiration. Our estimates for expected returns of expired products are based primarily on an ongoing analysis of historical return patterns.

- *Distribution Fees* . The distribution fees, based on contractually determined rates, arise from contractual agreements we have with certain wholesalers for distribution services they provide with respect to *Hylenex* recombinant. These fees are generally a fixed percentage of the price of the product purchased by the wholesalers.
- *Prompt Payment Discounts* . We offer cash discounts to certain wholesalers as an incentive to meet certain payment terms. We estimate prompt payment discounts based on contractual terms, historical utilization rates, as available, and our expectations regarding future utilization rates.
- *Other Discounts and Fees* . We provide discounts to end-user members of certain GPOs under collective purchasing contracts between us and the GPOs. We also provide discounts to certain hospitals, who are members of the GPOs, with which we do not have contracts. The end-user members purchase products from the wholesalers at a contracted discounted price, and the wholesalers then charge back to us the difference between the current retail price and the price the end-users paid for the product. We also incur GPO administrative service fees for these transactions. In addition, we provide predetermined discounts under certain government programs. Our estimate for these chargebacks and fees takes into consideration contractual terms, historical utilization rates, as available, and our expectations regarding future utilization rates.

Allowances for product returns and chargebacks are based on amounts owed or to be claimed on the related sales. We believe that our estimated product returns for *Hylenex* recombinant requires a high degree of judgment and is subject to change based on our experience and certain quantitative and qualitative factors. In order to develop a methodology to reliably estimate future returns and provide a basis for recognizing revenue on sales to wholesale distributors, we analyzed many factors, including, without limitation: (1) actual *Hylenex* recombinant product return history, taking into account product expiration dating at the time of shipment, (2) re-order activities of the wholesalers as well as their customers and (3) levels of inventory in the wholesale channel. We have monitored actual return history on an individual product lot basis since product launch. We consider the dating of product at the time of shipment into the distribution channel and changes in the estimated levels of inventory within the distribution channel to estimate our exposure to returned product. We also consider historical chargebacks activity and current contract prices to estimate our exposure to returned product. Based on such data, we believe we have the information needed to reasonably estimate product returns and chargebacks.

We recognize product sales allowances as a reduction of product sales in the same period the related revenue is recognized. Because of the shelf life of *Hylenex* recombinant and our lengthy return period, there may be a significant period of time between when the product is shipped and when we issue credits on returned product. If actual results differ from our estimates, we will be required to make adjustments to these allowances in the future, which could have an effect on product sales revenue and earnings in the period of adjustments.

Bulk rHuPH20

Subsequent to receiving marketing approval from the FDA or comparable regulatory agencies in foreign countries, sales of bulk rHuPH20 for use in collaboration commercial products are recognized as product sales when the materials have met all the specifications required for the customer's acceptance and title and risk of loss have transferred to the customer. Following the receipt of European marketing approvals of Roche's Herceptin SC product in August 2013 and MabThera ® SC product in March 2014 and Baxalta's HYQVIA product in May 2013, revenue from the sales of bulk rHuPH20 for these collaboration products has been recognized as product sales. For the years ended December 31, 2015 and 2014 , we recognized $22.8 million and $23.5 million in product sales of bulk rHuPH20 for Roche's collaboration products, respectively. For the years ended December 31, 2015 and 2014 , we recognized $6.4 million and zero in product sales of bulk rHuPH20 for Baxalta's collaboration product, respectively.

Revenues under Collaborative Agreements

We have license and collaboration agreements under which the collaborators obtained worldwide rights for the use of our proprietary rHuPH20 enzyme in the development and commercialization of the collaborators' biologic compounds identified as targets. The collaborative agreements may also contain other elements. Pursuant to the terms of these agreements, collaborators could be required to make various payments to us for each target, including nonrefundable upfront license fees, exclusivity fees,

payments based on achievement of specified milestones designated in the collaborative agreements, annual maintenance fees, reimbursements of research and development services, payments for supply of bulk rHuPH20 for the collaborator and/or royalties on sales of products resulting from collaborative agreements.

In order to account for the multiple-element arrangements, we identify the deliverables included within the agreement and evaluate which deliverables represent units of accounting. We then determine the appropriate method of revenue recognition for each unit based on the nature and timing of the delivery process. Analyzing the arrangement to identify deliverables requires the use of judgment, and each deliverable may be an obligation to deliver services, a right or license to use an asset, or another performance obligation. The deliverables under our collaborative agreements include (i) the license to our rHuPH20 technology, (ii) at the collaborator's request, research and development services which are reimbursed at contractually determined rates, and (iii) at the collaborator's request, supply of bulk rHuPH20 which is reimbursed at our cost plus a margin. A delivered item is considered a separate unit of accounting when the delivered item has value to the collaborator on a standalone basis based on the consideration of the relevant facts and circumstances for each arrangement. We base this determination on the collaborators' ability to use the delivered items on their own without us supplying undelivered items, which we determine taking into consideration factors such as the research capabilities of the collaborator, the availability of research expertise in this field in the general marketplace, and the ability to procure the supply of bulk rHuPH20 from the market place.

Arrangement consideration is allocated at the inception of the agreement to all identified units of accounting based on their relative selling price. The relative selling price for each deliverable is determined using vendor specific objective evidence ("VSOE") of selling price or third-party evidence of selling price if VSOE does not exist. If neither VSOE nor third-party evidence of selling price exists, we use our best estimate of the selling price for the deliverable. The amount of allocable arrangement consideration is limited to amounts that are not contingent upon the delivery of additional items or meeting other specified performance conditions. The consideration received is allocated among the separate units of accounting, and the applicable revenue recognition criteria are applied to each of the separate units. Changes in the allocation of the sales price between delivered and undelivered elements can impact revenue recognition but do not change the total revenue recognized under any agreement.

Nonrefundable upfront license fees are recognized upon delivery of the license if facts and circumstances dictate that the license has standalone value from the undelivered items, which generally include research and development services and the manufacture of bulk rHuPH20, the relative selling price allocation of the license is equal to or exceeds the upfront license fee, persuasive evidence of an arrangement exists, our price to the collaborator is fixed or determinable and collectibility is reasonably assured. Upfront license fees are deferred if facts and circumstances dictate that the license does not have standalone value. The determination of the length of the period over which to defer revenue is subject to judgment and estimation and can have an impact on the amount of revenue recognized in a given period.

When collaborators have rights to elect additional targets, the rights are assessed as to whether they represent deliverables at the inception of the arrangement. In assessing these contingent deliverables, we consider whether the right is a substantive option. We consider a right to be a substantive option if the election of the additional targets is not essential to the functionality of the other elements in the arrangement and if we are truly at risk of the right being exercised. If the right is determined to be a substantive option, we further consider whether the right is priced at a significant and incremental discount that should be accounted for as an element of the arrangement. If a right is determined to be a substantive option and is not priced at a significant and incremental discount, it is not treated as a deliverable in the arrangement and receives no allocation at the inception of the arrangement of the original arrangement consideration. The right is then accounted for when and if it is exercised.

Certain of our collaborative agreements provide for milestone payments upon achievement of development and regulatory events and/or specified sales volumes of commercialized products by the collaborator. We account for milestone payments in accordance with the provisions of ASU No. 2010-17, *Revenue Recognition - Milestone Method* ("Milestone Method of Accounting"). We recognize consideration that is contingent upon the achievement of a milestone in its entirety as revenue in the period in which the milestone is achieved only if the milestone is substantive in its entirety. A milestone is considered substantive when it meets all of the following criteria:

1. The consideration is commensurate with either the entity's performance to achieve the milestone or the enhancement of the value of the delivered item(s) as a result of a specific outcome resulting from the entity's performance to achieve the milestone;
2. The consideration relates solely to past performance; and
3. The consideration is reasonable relative to all of the deliverables and payment terms within the arrangement.

A milestone is defined as an event (i) that can only be achieved based in whole or in part on either the entity's performance or on the occurrence of a specific outcome resulting from the entity's performance, (ii) for which there is substantive uncertainty at the date the arrangement is entered into that the event will be achieved and (iii) that would result in additional payments being due to the vendor.

Reimbursements of research and development services are recognized as revenue during the period in which the services are performed as long as there is persuasive evidence of an arrangement, the fee is fixed or determinable and collection of the related receivable is reasonably assured. Revenue from the manufacture of bulk rHuPH20 is recognized when the materials have met all specifications required for the collaborator's acceptance and title and risk of loss have transferred to the collaborator. We do not directly control when any collaborator will request research and development services or supply of bulk rHuPH20; therefore, we cannot predict when we will recognize revenues in connection with research and development services and supply of bulk rHuPH20.

Since we receive royalty reports 60 days after quarter end, royalty revenue from sales of collaboration products by our collaborators will be recognized in the quarter following the quarter in which the corresponding sales occurred.

The collaborative agreements typically provide the collaborators the right to terminate such agreement in whole or on a product-by-product or target-by-target basis at any time upon 30 to 90 days prior written notice to us. There are no performance, cancellation, termination or refund provisions in any of our collaborative agreements that contain material financial consequences to us.

Refer to Note 4, *"Collaborative Agreements,"* for further discussion on our collaborative arrangements.

Cost of Product Sales

Cost of product sales consists primarily of raw materials, third-party manufacturing costs, fill and finish costs, freight costs, internal costs and manufacturing overhead associated with the production of *Hylenex* recombinant and bulk rHuPH20 for use in approved collaboration products. Cost of product sales also consists of the write-down of excess, dated and obsolete inventories and the write-off of any inventories that do not meet certain product specifications, if any.

Prior to European marketing approvals of Roche's collaboration products Herceptin SC in August 2013 and MabThera SC in March 2014 and Baxalta's collaboration product HYQVIA in May 2013, all costs related to the manufacturing of bulk rHuPH20 for these collaboration products were charged to research and development expenses in the periods such costs were incurred. Therefore, cost of product sales of these bulk rHuPH20 for the year ended December 31, 2013 was materially reduced due to the exclusion of the manufacturing costs that were charged to research and development expenses in the periods prior to receiving marketing approvals. For the year ended December 31, 2014, cost of product sales of bulk rHuPH20 excluded $1.0 million in manufacturing costs, of which $0.9 million and $0.1 million were charged to research and development expenses in the years ended December 31, 2013 and 2012, respectively. There was no bulk rHuPH20 excluded from cost of product sales for the year ended December 31, 2015.

Research and Development Expenses

Research and development expenses include salaries and benefits, facilities and other overhead expenses, external clinical trial expenses, research related manufacturing services, contract services and other outside expenses. Research and development expenses are charged to operations as incurred when these expenditures relate to our research and development efforts and have no alternative future uses. After receiving approval from the FDA or comparable regulatory agencies in foreign countries for a product, costs related to purchases and manufacturing of bulk rHuPH20 for such product are capitalized as inventory. The manufacturing costs of bulk rHuPH20 for the collaboration products, Herceptin SC, MabThera SC and HYQVIA, incurred after the receipt of marketing approvals are capitalized as inventory.

We are obligated to make upfront payments upon execution of certain research and development agreements. Advance payments, including nonrefundable amounts, for goods or services that will be used or rendered for future research and development activities are deferred. Such amounts are recognized as expense as the related goods are delivered or the related services are performed or such time when we do not expect the goods to be delivered or services to be performed.

Milestone payments that we make in connection with in-licensed technology for a particular research and development project that have no alternative future uses (in other research and development projects or otherwise) and therefore no separate economic value are expensed as research and development costs at the time the costs are incurred. We have no in-licensed technologies that have alternative future uses in research and development projects or otherwise.

Clinical Trial Expenses

Payments in connection with our clinical trials are often made under contracts with multiple contract research organizations that conduct and manage clinical trials on our behalf. The financial terms of these agreements are subject to negotiation and vary from contract to contract and may result in uneven payment flows. Generally, these agreements set forth the scope of work to be performed at a fixed fee, unit price or on a time and materials basis. Payments under these contracts depend on factors such as the successful enrollment or treatment of patients or the completion of other clinical trial milestones.

Expenses related to clinical trials are accrued based on our estimates and/or representations from service providers regarding work performed, including actual level of patient enrollment, completion of patient studies and progress of the clinical trials. Other incidental costs related to patient enrollment or treatment are accrued when reasonably certain. If the contracted amounts are modified (for instance, as a result of changes in the clinical trial protocol or scope of work to be performed), we modify our accruals accordingly on a prospective basis. Revisions in the scope of a contract are charged to expense in the period in which the facts that give rise to the revision become reasonably certain. Historically, we have had no changes in clinical trial expense accruals that had a material impact on our consolidated results of operations or financial position.

Share-Based Compensation

We record compensation expense associated with stock options, restricted stock awards ("RSAs"), restricted stock units ("RSUs"), and RSUs with performance conditions ("PRSUs") in accordance with the authoritative guidance for stock-based compensation. The cost of employee services received in exchange for an award of an equity instrument is measured at the grant date, based on the estimated fair value of the award, and is recognized as expense on a straight-line basis, net of estimated forfeitures, over the requisite service period of the award. Share-based compensation expense recognized during the period is based on the value of the portion of share-based payment awards that is ultimately expected to vest during the period. Share-based compensation expense for an award with a performance condition is recognized when the achievement of such performance condition is determined to be probable. If the outcome of such performance condition is not determined to be probable or is not met, no compensation expense is recognized and any previously recognized compensation expense is reversed. Share-based compensation expense recognition is based on awards ultimately expected to vest and is reduced for estimated forfeitures. The authoritative guidance requires forfeitures to be estimated at the time of grant and revised, if necessary, in subsequent periods if actual forfeitures differ from those estimates. Pre-vesting forfeitures were estimated to be approximately 10% for employees for the years ended December 31, 2015, 2014 and 2013 based on our historical experience for the years then ended.

Income Taxes

We provide for income taxes using the liability method. Under this method, deferred income tax assets and liabilities are determined based on the differences between the financial statement carrying amounts of existing assets and liabilities at each year end and their respective tax bases and are measured using enacted tax rates in effect for the year in which the differences are expected to affect taxable income. Deferred tax assets and other tax benefits are recorded when it is more likely than not that the position will be sustained upon audit. Valuation allowances have been established to reduce our net deferred tax assets to zero , as we believe that it is more likely than not that such assets will not be realized.

Net Loss Per Share

Basic net loss per common share is computed by dividing net loss for the period by the weighted average number of common shares outstanding during the period, without consideration for common stock equivalents. Outstanding stock options, unvested RSAs, unvested RSUs and unvested PRSUs are considered common stock equivalents and are only included in the calculation of diluted earnings per common share when net income is reported and their effect is dilutive. Because of our net loss, outstanding stock options, unvested RSAs, unvested RSUs and unvested PRSUs totaling approximately 9,780,593 , 8,405,903 and 8,070,141 were excluded from the calculation of diluted net loss per common share for the years ended December 31, 2015, 2014 and 2013 , respectively, because their effect was anti-dilutive. PRSUs for which the performance conditions were satisfied or probable of being satisfied were included in potentially dilutive securities at December 31, 2015 and 2014.

Segment Information

We operate our business in one segment, which includes all activities related to the research, development and commercialization of our proprietary enzymes. This segment also includes revenues and expenses related to (i) research and development and bulk rHuPH20 manufacturing activities conducted under our collaborative agreements with third parties and (ii) product sales of *Hylenex* recombinant. The chief operating decision-maker reviews the operating results on an aggregate basis and manages the operations as a single operating segment.

Adoption and Pending Adoption of Recent Accounting Pronouncements

In January 2016, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update No. 2016-01, *Financial Instruments - Overall (Subtopic 825-10) Recognition and Measurement of Financial Assets and Financial Liabilities* ("ASU 2016-01"). ASU 2016-01 supersedes the guidance to classify equity securities with readily determinable fair values into different categories (that is, trading or available-for-sale) and requires equity securities (including other ownership interests, such as partnerships, unincorporated joint ventures, and limited liability companies) to be measured at fair value with changes in the fair value recognized through net income. An entity's equity investments that are accounted for under the equity method of accounting or result in consolidation of an investee are not included within the scope of ASU 2016-01. ASU 2016-01 requires public business entities that are required to disclose fair value of financial instruments measured at amortized cost on the balance sheet to measure that fair value using the exit price notion consistent with Topic 820, Fair Value Measurement. ASU 2016-01 is effective for our interim and annual reporting beginning on January 1, 2018. Entities should apply the amendments by means of a cumulative-effect adjustment to the balance sheet as of the beginning of the fiscal year of adoption. The amendments related to equity securities without readily determinable fair values (including disclosure requirements) should be applied prospectively to equity investments that exist as of the date of adoption of ASU 2016-01. We currently do not hold equity securities and we are evaluating the effect that the updated standard will have on our consolidated financial statements and related disclosures.

In November 2015, the FASB issued Accounting Standards Update 2015-17, *Balance Sheet Classification of Deferred Taxes* ("ASU 2015-17"). ASU 2015-17 requires companies to classify all deferred tax assets and liabilities as non-current on the balance sheet instead of separating deferred taxes into current and non-current amounts. For public business entities, the guidance is effective for financial statements issued for annual periods beginning after December 15, 2016, and interim periods within those annual periods. Early adoption is permitted for all companies in any interim or annual period. The guidance may be adopted on either a prospective or retrospective basis. We have not yet selected a transition method and we are currently evaluating the effect that the updated standard will have on our consolidated financial statements and related disclosures.

In July 2015, the FASB issued Accounting Standards Update No. 2015-11, *Inventory (Topic 330): Simplifying the Measurement of Inventory* ("ASU 2015-11"). ASU 2015-11 requires that for entities that measure inventory using the first-in, first-out method, inventory should be measured at the lower of cost and net realizable value. Topic 330, Inventory, currently requires an entity to measure inventory at the lower of cost or market. Market could be replacement cost, net realizable value, or net realizable value less an approximately normal profit margin. Net realizable value is the estimated selling prices in the ordinary course of business, less reasonably predictable costs of completion, disposal, and transportation. ASU 2015-11 is effective for fiscal years beginning after December 15, 2016, and interim periods within those fiscal years. The amendments should be applied prospectively with earlier application permitted as of the beginning of an interim or annual reporting period. The adoption of ASU 2015-11 is not expected to have a material impact on our consolidated financial position or results of operations.

In April 2015, the FASB issued Accounting Standards Update No. 2015-03, *Interest - Imputation of Interest (Subtopic 835-30): Simplifying the Presentation of Debt Issuance Costs* ("ASU 2015-03"). ASU 2015-03 requires that debt issuance costs related to a recognized debt liability be presented in the balance sheet as a direct deduction from that debt liability, consistent with the presentation of a debt discount. The recognition and measurement guidance for debt issuance costs is not affected by ASU 2015-03. ASU 2015-03 is effective for fiscal years beginning after December 15, 2015, and interim periods within those fiscal years. Early application is permitted. The adoption of ASU 2015-03 is not expected to have a material impact on our consolidated financial position or results of operations.

In August 2014, the FASB issued Accounting Standards Update No. 2014-15, *Presentation of Financial Statements — Going Concern* ("ASU 2014-15"). The provisions of ASU 2014-15 provide that in connection with preparing financial statements for each annual and interim reporting period, an entity's management should evaluate whether there are conditions or events, considered in the aggregate, that raise substantial doubt about the entity's ability to continue as a going concern within one year after the date that the financial statements are issued (or within one year after the date that the financial statements are available to be issued when applicable). ASU 2014-15 is effective for the annual reporting period ending after December 15, 2016, and for annual and interim periods thereafter. Early adoption is permitted. The adoption of ASU 2014-15 is not expected to have a material impact on our consolidated financial position or results of operations.

In May 2014, the FASB issued Accounting Standards Update No. 2014-09, *Revenue from Contracts with Customers* ("ASU 2014-09"). ASU 2014-09 will eliminate transaction-specific and industry-specific revenue recognition guidance under current U.S. GAAP and replace it with a principle-based approach for determining revenue recognition. ASU 2014-09 will require that companies recognize revenue based on the value of transferred goods or services as they occur in the contract. ASU 2014-09 also will require additional disclosure about the nature, amount, timing and uncertainty of revenue and cash flows arising from customer contracts, including significant judgments and changes in judgments and assets recognized from costs incurred to obtain or fulfill a contract. ASU 2014-09 is effective for our interim and annual reporting beginning on January 1, 2018. Entities can transition to the standard either retrospectively or as a cumulative-effect adjustment as of the date of adoption. We have not yet selected a transition method and we are currently evaluating the effect that the updated standard will have on our consolidated financial statements and related disclosures.

3. Marketable Securities

Available-for-sale marketable securities consisted of the following (in thousands):

Description	December 31, 2015			
	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Estimated Fair Value
Corporate debt securities	$ 65,146	$ —	$ (99)	$ 65,047

Description	December 31, 2014			
	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Estimated Fair Value
Corporate debt securities	$ 74,275	$ 2	$ (43)	$ 74,234

As of December 31, 2015 , $59.0 million of our available-for-sale marketable securities were scheduled to mature within the next twelve months. There were $79.7 million of available-for-sale securities that matured during the year ended December 31, 2015 . There were no realized gains or losses for the years ended December 31, 2015, 2014 and 2013 . As of December 31, 2015 , all available-for-sale marketable securities were in a gross unrealized loss position, all of which had been in such position for less than twelve months. Based on our review of these marketable securities, we believe we had no other-than-temporary impairments on these securities as of December 31, 2015 because we do not intend to sell these securities and it is not more-likely-than-not that we will be required to sell these securities before the recovery of their amortized cost basis.

4. Collaborative Agreements

Roche Collaboration

In December 2006, we and Roche entered into a collaboration and license agreement, under which Roche obtained a worldwide, exclusive license to develop and commercialize product combinations of rHuPH20 and up to thirteen Roche target compounds (the "Roche Collaboration"). As of December 31, 2015 , Roche has elected a total of five targets, two of which are exclusive, and retains the option to develop and commercialize rHuPH20 with three additional targets. In August 2013, Roche received European marketing approval for its collaboration product, Herceptin SC, for the treatment of patients with HER2-positive breast cancer and launched Herceptin SC in the European Union ("EU") in September 2013.

In March 2014, Roche received European marketing approval for its collaboration product, MabThera SC, for the treatment of patients with common forms of non-Hodgkin lymphoma ("NHL"). In June 2014, Roche launched MabThera SC in the EU which triggered a $5.0 million sales-based payment to us for the achievement of the first commercial sale pursuant to the terms of the Roche Collaboration.

Roche assumes all development, manufacturing, clinical, regulatory, sales and marketing costs under the Roche Collaboration, while we are responsible for the supply of bulk rHuPH20. We are entitled to receive reimbursements for providing research and development services and supplying bulk rHuPH20 to Roche at its request.

Under the terms of the Roche Collaboration, Roche pays us a royalty on each product commercialized under the agreement consisting of a mid-single digit percent of the net sales of such product. Unless terminated earlier in accordance with its terms, the Roche Collaboration continues in effect until the expiration of Roche's obligation to pay royalties. Roche has the obligation to pay royalties to us with respect to each product commercialized in each country, during the period equal to the longer of: (a) the duration of any valid claim of our patents covering rHuPH20 or other specified patents developed under the Roche Collaboration which valid claim covers the product in such country or (b) ten years following the date of the first commercial sale of such product in such country.

As of December 31, 2015 , we have received $79.0 million from Roche, excluding royalties and reimbursements for providing research and development services and supplying bulk rHuPH20. The amounts received consisted of a $20.0 million upfront license fee payment for the application of rHuPH20 to the initial three Roche exclusive targets, $23.0 million in connection with Roche's election of two additional exclusive targets and annual license maintenance fees for the right to designate the remaining targets as exclusive targets, $13.0 million in clinical development milestone payments, $8.0 million in regulatory milestone payments and $15.0 million in sales-based payments. Due to our continuing involvement obligations (for example, support activities associated with rHuPH20), revenues from the upfront payment, exclusive designation fees, annual license maintenance fees and sales-based payments were deferred and are being amortized over the remaining term of the Roche Collaboration.

For the years ended December 31, 2015, 2014 and 2013 , we recognized approximately $4.5 million , $8.1 million , and $4.6 million , respectively, of Roche deferred revenues as revenues under collaborative agreements. In addition, for the years ended December 31, 2015, 2014 and 2013 , we recognized approximately zero , $2.0 million and $1.3 million , respectively, of deferred bulk rHuPH20 sales revenue as product sales revenue. Total Roche deferred revenues was approximately $43.5 million and $42.7 million as of December 31, 2015 and 2014, respectively. There were no revenues recognized related to milestone payments under this collaboration for the years ended December 31, 2015, 2014 and 2013 .

Baxalta Collaboration

In September 2007, we and Baxalta entered into a collaboration and license agreement, under which Baxalta obtained a worldwide, exclusive license to develop and commercialize HYQVIA, a combination of Baxalta's current product GAMMAGARD LIQUID ™ and our patented rHuPH20 enzyme (the "Baxalta Collaboration"). In May 2013, the European Commission granted Baxalta marketing authorization in all EU Member States for the use of HYQVIA (solution for subcutaneous use), a combination of GAMMAGARD LIQUID and rHuPH20 in dual vial units, as replacement therapy for adult patients with primary and secondary immunodeficiencies. Baxalta launched HYQVIA in the EU in July 2013. In September 2014, the FDA approved HYQVIA for treatment of adult patients with primary immunodeficiency. In October 2014, Baxalta announced the launch and first shipments of HYQVIA in the U.S.

The Baxalta Collaboration is applicable to both kit and formulation combinations. Baxalta assumes all development, manufacturing, clinical, regulatory, sales and marketing costs under the Baxalta Collaboration, while we are responsible for the supply of bulk rHuPH20. We perform research and development activities and supply bulk rHuPH20 at the request of Baxalta, and are reimbursed by Baxalta under the terms of the Baxalta Collaboration. In addition, Baxalta has certain product development and commercialization obligations in major markets identified in the Baxalta Collaboration.

Unless terminated earlier in accordance with its terms, the Baxalta Collaboration continues in effect until the expiration of Baxalta's obligation to pay royalties to us. Baxalta has the obligation to pay royalties, with respect to each product commercialized in each country, during the period equal to the longer of: (a) the duration of any valid claim of our patents covering rHuPH20 or other specified patents developed under the Baxalta Collaboration which valid claim covers the product in such country or (b) ten years following the date of the first commercial sale of such product in such country.

As of December 31, 2015 , we have received $17.0 million under the Baxalta Collaboration, excluding royalties and reimbursements for providing research and development services and supplying bulk rHuPH20. The amounts received consisted of a $10.0 million upfront license fee payment, a $3.0 million regulatory milestone payment and a $4.0 million sales-based payment. Baxalta pays us a royalty on HYQVIA consisting of a mid-single digit percent of the net sales of such product. Due to our continuing involvement obligations (for example, support activities associated with rHuPH20 enzyme), the upfront license fee and sales-based payments were deferred and are being recognized over the term of the Baxalta Collaboration.

For the years ended December 31, 2015, 2014 and 2013, we recognized approximately $0.8 million , $0.8 million , and $0.6 million , respectively, of Baxalta deferred revenues as revenues under collaborative agreements. In addition, for the year ended December 31, 2015, we recognized approximately $1.7 million of deferred bulk rHuPH20 sales revenue as product sales revenue, with no such revenues recognized in the years ended December 31, 2014 and 2013. Total Baxalta deferred revenues was approximately $9.0 million and $10.9 million as of December 31, 2015 and 2014, respectively. There were no revenues recognized related to milestone payments under this collaboration for the years ended December 31, 2015, 2014 and 2013.

Other Collaborations

In December 2015, we and Eli Lilly and Company ("Lilly") entered into a collaboration and license agreement, under which Lilly has the worldwide license to develop and commercialize products combining our patented rHuPH20 enzyme with Lilly proprietary biologics directed at up to five targets (the "Lilly Collaboration"). Targets, once selected, will be on an exclusive, global basis. As of December 31, 2015, we have recognized $25.0 million as revenue for the license fee of one specified exclusive target and one specified semi-exclusive target. Lilly has the right to elect up to three additional targets for additional fees. The upfront license payment may be followed by event-based payments subject to Lilly's achievement of specified development, regulatory and sales-based milestones. In addition, Lilly will pay tiered royalties if products under the collaboration are commercialized. Unless terminated earlier in accordance with its terms, the Lilly Collaboration continues in effect until the later of: (i) expiration of the last to expire of the valid claims of our patents covering rHuPH20 or other specified patents developed under the collaboration which valid claim covers a product developed under the collaboration, and (ii) expiration of the last to expire royalty term for a product developed under the collaboration. The royalty term of a product developed under the Lilly Collaboration, with respect to each country, consists of the period equal to the longer of: (a) the duration of any valid claim of our patents covering rHuPH20 or other specified patents developed under the collaboration which valid claim covers the product in such country or (b) ten years following the date of the first commercial sale of such product in such country. Lilly may terminate the agreement prior to expiration for any reason in its entirety or on a target-by-target basis upon 90 days prior written notice to us. Upon any such termination, the license granted to Lilly (in total or with respect to the terminated target, as applicable) will terminate provided, however, that in the event of expiration of the agreement, the licenses granted will become perpetual, non-exclusive and fully paid.

In June 2015, we and AbbVie, Inc. ("AbbVie") entered into a collaboration and license agreement, under which AbbVie has the worldwide license to develop and commercialize products combining our patented rHuPH20 enzyme with AbbVie proprietary biologics directed at up to nine targets (the "AbbVie Collaboration"). Targets, once selected, will be on an exclusive, global basis. As of December 31, 2015 , we have received a $23.0 million payment for the license fee of one specified exclusive target, TNF alpha. AbbVie has announced plans to develop rHuPH20 with adalimumab (HUMIRA ®) which may allow reduced number of induction injections and deliver additional performance benefits. AbbVie has the right to elect up to eight additional targets for additional fees. The upfront license payment may be followed by event-based payments subject to AbbVie's achievement of specified development, regulatory and sales-based milestones. In addition, AbbVie will pay tiered royalties if products under the collaboration are commercialized. Unless terminated earlier in accordance with its terms, the AbbVie Collaboration continues in effect until the later of: (i) expiration of the last to expire of the valid claims of our patents covering rHuPH20 or other specified patents developed under the collaboration which valid claim covers a product developed under the collaboration, and (ii) expiration of the last to expire royalty term for a product developed under the collaboration. The royalty term of a product developed under the AbbVie Collaboration, with respect to each country, consists of the period equal to the longer of: (a) the duration of any valid claim of our patents covering rHuPH20 or other specified patents developed under the collaboration which valid claim covers the product in such country or (b) ten years following the date of the first commercial sale of such product in such country. AbbVie may terminate the agreement prior to expiration for any reason in its entirety or on a target-by-target basis upon 90 days prior written notice to us. Upon any such termination, the license granted to AbbVie (in total or with respect to the terminated target, as applicable) will terminate provided, however, that in the event of expiration of the agreement, the licenses granted will become perpetual, non-exclusive and fully paid.

In December 2014, we and Janssen entered into a collaboration and license agreement, under which Janssen has the worldwide license to develop and commercialize products combining our patented rHuPH20 enzyme with Janssen proprietary biologics directed at up to five targets (the "Janssen Collaboration"). Targets, once selected, will be on an exclusive, global basis. As of December 31, 2015 , we have received a $15.0 million payment for the license fee of one specified exclusive target, CD38. Janssen has the right to elect four additional targets in the future upon payment of additional fees. Unless terminated earlier in accordance with its terms, the Janssen Collaboration continues in effect until the later of (i) expiration of the last to expire of the valid claims of our patents covering rHuPH20 or other specified patents developed under the collaboration which valid claim covers a product developed under the collaboration, and (ii) expiration of the last to expire royalty term for a product developed under the collaboration. The royalty term of a product developed under the Janssen Collaboration, with respect to each country, consists of the period equal to the longer of: (a) the duration of any valid claim of our patents covering rHuPH20 or other specified patents developed under the collaboration which valid claim covers the product in such country or (b) ten years following the date of the first commercial sale of such product in such country. Janssen may terminate the agreement prior to expiration for any reason in its entirety or on a target-by-target basis upon 90 days prior written notice to us. Upon any such termination, the license granted to Janssen (in total or with respect to the terminated target, as applicable) will terminate provided, however, that in the event of expiration of the agreement, the licenses granted will become perpetual, non-exclusive and fully paid.

In December 2012, we and Pfizer entered into a collaboration and license agreement, under which Pfizer has the worldwide license to develop and commercialize products combining our patented rHuPH20 enzyme with Pfizer proprietary biologics directed at up to six targets (the "Pfizer Collaboration"). Targets may be selected on an exclusive or non-exclusive basis. As of December 31, 2015 , we have received $11.0 million in upfront and license fee payments for the licenses to four specified exclusive targets. One of the targets is proprotein convertase subtilisin/kexin type 9, also known as PCSK9. Pfizer is also developing rivipansel directed to another target under the collaboration to treat vaso-occlusive crisis in individuals with sickle cell disease. Pfizer has the right to elect two additional targets in the future upon payment of additional fees. Unless terminated earlier in accordance with its terms, the Pfizer Collaboration continues in effect until the later of (i) expiration of the last to expire of the valid claims of our patents covering rHuPH20 or other specified patents developed under the collaboration which valid claim covers a product developed under the collaboration, and (ii) expiration of the last to expire royalty term for a product developed under the collaboration. The royalty term of a product developed under the Pfizer Collaboration, with respect to each country, consists of the period equal to the longer of: (a) the duration of any valid claim of our patents covering rHuPH20 or other specified patents developed under the collaboration which valid claim covers the product in such country or (b) ten years following the date of the first commercial sale of such product in such country. Pfizer may terminate the agreement prior to expiration for any reason in its entirety or on a target-by-target basis upon 30 days prior written notice to us. Upon any such termination, the license granted to Pfizer (in total or with respect to the terminated target, as applicable) will terminate, provided, however, that in the event of expiration of the agreement, the licenses granted will become perpetual, non-exclusive and fully paid.

At the inception of the Pfizer, Janssen, AbbVie and Lilly arrangements, we identified the deliverables in each arrangement to include the license, research and development services and supply of bulk rHuPH20. We have determined that the license, research and development services and supply of bulk rHuPH20 individually represent separate units of accounting, because each deliverable has standalone value. We determined that the rights to elect additional targets in the future upon the payment of additional license fees are substantive options that are not priced at a significant and incremental discount. Therefore, we determined for each collaboration that the rights to elect additional targets are not deliverables at the inception of the arrangement. The estimated selling prices for the units of accounting we identified were determined based on market conditions, the terms of comparable collaborative arrangements for similar technology in the pharmaceutical and biotech industry and entity-specific factors such as the terms of our previous collaborative agreements, our pricing practices and pricing objectives. The arrangement consideration was allocated to the deliverables based on the relative selling price method and the nature of the research and development services to be performed for the collaborator.

The amount allocable to the delivered unit or units of accounting is limited to the amount that is not contingent upon the delivery of additional items or meeting other specified performance conditions (non-contingent amount). As such, we excluded from the allocable arrangement consideration the event-based payments, milestone payments, annual exclusivity fees and royalties regardless of the probability of receipt. Based on the results of our analysis, we allocated the $11.0 million license fees from Pfizer, the $15.0 million upfront license fee from Janssen, the $23.0 million upfront license fee from AbbVie and the $25.0 million upfront license fee from Lilly to the license fee deliverable under each of the arrangements. We determined that the upfront payments were

earned upon the granting of the worldwide, exclusive right to our technology to the collaborators in these arrangements. As a result, we recognized the $11.0 million license fees under the Pfizer Collaboration, the $15.0 million upfront license fee under the Janssen Collaboration, the $23.0 million upfront license fee under the AbbVie Collaboration and the $25.0 million upfront license fee under the Lilly Collaboration as revenues under collaborative agreements in the period when such license fees were earned. Revenues recognized related to event-based payments or milestone payments under these collaborations were $1.0 million , $0 and $0 for the years ended December 31, 2015, 2014 and 2013 .

The collaborators are each solely responsible for the development, manufacturing and marketing of any products resulting from their respective collaborations. We are entitled to receive payments for research and development services and supply of bulk rHuPH20 to these collaborators if requested by such collaborator. We recognize amounts allocated to research and development services as revenues under collaborative agreements as the related services are performed. We recognize amounts allocated to the sales of bulk rHuPH20 as revenues under collaborative agreements when such bulk rHuPH20 has met all required specifications by the collaborators and the related title and risk of loss and damages have passed to the collaborators. We cannot predict the timing of delivery of research and development services and bulk rHuPH20 as they are at the collaborators' requests.

In May 2011 and June 2011, we entered into collaboration and license agreements with ViroPharma Incorporated and Intrexon Corporation, respectively. These collaboration agreements were terminated effective May 2014 .

Pursuant to the terms of our collaboration agreements with Roche and Pfizer, certain future payments meet the definition of a milestone in accordance with the Milestone Method of Accounting. We are entitled to receive additional milestone payments for the successful development of the elected targets in the aggregate of up to approximately $54.0 million upon achievement of specified clinical development milestone events and up to approximately $12.0 million upon achievement of specified regulatory milestone events in connection with specified regulatory filings and receipt of marketing approvals.

5. Certain Balance Sheet Items

Accounts receivable, net consisted of the following (in thousands):

	December 31, 2015	December 31, 2014
Accounts receivable from revenues under collaborative agreements	$ 25,939	$ 1,266
Accounts receivable from product sales to collaborators	4,996	6,361
Accounts receivable from other product sales	2,442	2,133
Total accounts receivable	33,377	9,760
Allowance for distribution fees and discounts	(967)	(611)
Total accounts receivable, net	$ 32,410	$ 9,149

Inventories consisted of the following (in thousands):

	December 31, 2015	December 31, 2014
Raw materials	$ 677	$ 553
Work-in-process	8,481	5,207
Finished goods	331	646
Total inventories	$ 9,489	$ 6,406

Prepaid expenses and other assets consisted of the following (in thousands):

	December 31, 2015	December 31, 2014
Prepaid manufacturing expenses	$ 16,155	$ 6,339
Prepaid research and development expenses	9,225	2,380
Other prepaid expenses	1,198	1,094
Other assets	530	1,535
Total prepaid expenses and other assets	27,108	11,348
Less long-term portion	5,574	1,205
Total prepaid expenses and other assets, current	$ 21,534	$ 10,143

Property and equipment, net consisted of the following (in thousands):

	December 31, 2015	December 31, 2014
Research equipment	$ 9,666	$ 8,474
Computer and office equipment	2,570	2,178
Leasehold improvements	2,025	1,518
Subtotal	14,261	12,170
Accumulated depreciation and amortization	(10,318)	(9,219)
Property and equipment, net	$ 3,943	$ 2,951

Depreciation and amortization expense was approximately $1.7 million , $1.8 million and $1.2 million for the years ended December 31, 2015, 2014 and 2013 , respectively.

Accrued expenses consisted of the following (in thousands):

	December 31, 2015	December 31, 2014
Accrued outsourced research and development expenses	$ 8,617	$ 4,383
Accrued compensation and payroll taxes	8,636	5,923
Accrued outsourced manufacturing expenses	6,205	2,112
Other accrued expenses	4,118	2,023
Total accrued expenses	27,576	14,441
Less long-term accrued outsourced research and development expenses	784	480
Total accrued expenses, current	$ 26,792	$ 13,961

Long-term accrued outsourced research and development is included in other long-term liabilities in the consolidated balance sheets.

Deferred revenue consisted of the following (in thousands):

	December 31, 2015	December 31, 2014
Collaborative agreements	$ 53,223	$ 53,479
Product sales	—	1,155
Total deferred revenue	53,223	54,634
Less current portion	9,304	7,367
Deferred revenue, net of current portion	$ 43,919	$ 47,267

6. Long-Term Debt, Net

In December 2013, we entered into an Amended and Restated Loan and Security Agreement (the "Loan Agreement") with Oxford Finance LLC ("Oxford") and Silicon Valley Bank ("SVB") (collectively, the "Lenders"), amending and restating in its entirety our original loan agreement with the Lenders, dated December 2012. The Loan Agreement provided for an additional $20 million principal amount of new term loan, bringing the total term loan balance to $50 million . The proceeds are to be used for working capital and general business requirements. The amended term loan facility matures on January 1, 2018 .

In January 2015, we entered into the second amendment to the Loan Agreement with the Lenders, amending and restating the loan repayment schedules of the Loan Agreement. The amended and restated term loan repayment schedule provides for interest only payments through January 2016 , followed by consecutive equal monthly payments of principal and interest in arrears starting in February 2016 and continuing through the previously established maturity date of January 2018. Consistent with the original loan, the Loan Agreement provides for a 7.55% interest rate on the term loan and a final interest payment equal to 8.5% of the original principal amount, or $4.25 million , which is due when the term loan becomes due or upon the prepayment of the facility. We have the option to prepay the outstanding balance of the term loan in full, subject to a prepayment fee of 1% .

In December 2015, we entered into a consent, release and third amendment to the Loan Agreement with the Lenders, in which the Lenders consent to (i) the formation of Halozyme Royalty LLC ("Halozyme Royalty") as a wholly-owned Subsidiary of Halozyme, (ii) the release of liens and the sale of certain rights to receive royalty payments to Halozyme Royalty, and (iii) enter into a Credit Agreement with BioPharma Credit Investments IV Sub, LP., ("BioPharma"), as collateral agent and lender, and the other lenders party, whereby Halozyme Royalty will incur indebtedness from and grant liens on the royalty payments to BioPharma. This amendment allowed us to enter into a royalty-backed debt agreement. Refer to Note 15, *"Subsequent Event"* , for further information on our royalty-backed debt agreement.

In connection with the term loan, the debt offering costs have been recorded as a debt discount in our condensed consolidated balance sheets which, together with the final payment and fixed interest rate payments, are being amortized and recorded as interest expense throughout the life of the term loan using the effective interest rate method.

The amended term loan is secured by substantially all of the assets of the Company and our subsidiary, Halozyme, Inc., except that the collateral does not include any equity interests in Halozyme, Inc., any of our intellectual property (including all licensing, collaboration and similar agreements relating thereto), and certain other excluded assets. The Loan Agreement contains customary representations, warranties and covenants by us, which covenants limit our ability to convey, sell, lease, transfer, assign or otherwise dispose of certain of our assets; engage in any business other than the businesses currently engaged in by us or reasonably related thereto; liquidate or dissolve; make certain management changes; undergo certain change of control events; create, incur, assume, or be liable with respect to certain indebtedness; grant certain liens; pay dividends and make certain other restricted payments; make certain investments; make payments on any subordinated debt; and enter into transactions with any of our affiliates outside of the ordinary course of business or permit our subsidiaries to do the same. In addition, subject to certain exceptions, we are required to maintain with SVB our primary deposit accounts, securities accounts and commodities, and to do the same for our subsidiary, Halozyme, Inc.

The Loan Agreement also contains customary indemnification obligations and customary events of default, including, among other things, our failure to fulfill certain of our obligations under the Loan Agreement and the occurrence of a material adverse change which is defined as a material adverse change in our business, operations, or condition (financial or otherwise), a material impairment of the prospect of repayment of any portion of the loan, or a material impairment in the perfection or priority of lender's lien in the collateral or in the value of such collateral. In the event of default by us under the Loan Agreement, the Lenders would be entitled to exercise their remedies thereunder, including the right to accelerate the debt, upon which we may be required to repay all amounts then outstanding under the Loan Agreement, which could harm our financial condition.

As of December 31, 2015 , we were in compliance with all material covenants under the Loan Agreement and there was no material adverse change in our business, operations or financial condition.

Future maturities and interest payments under the term loan as of December 31, 2015 , are as follows (in thousands):

2016	$	25,077
2017		27,013
2018		6,501
2019		—
2020		—
Total minimum payments		58,591
Less amount representing interest		(8,591)
Gross balance of long-term debt		50,000
Less unamortized debt discount		(167)
Present value of long-term debt		49,833
Less current portion of long-term debt		(21,862)
Long-term debt, less current portion and unamortized debt discount	$	27,971

Interest expense, including amortization of debt discount, related to the long-term debt for the years ended December 31, 2015, 2014 and 2013 was approximately $5.2 million , $5.6 million and $3.3 million , respectively. Accrued interest, which is included in accrued expenses and other long-term liabilities, was $3.2 million and $2.0 million as of December 31, 2015 and December 31, 2014 , respectively.

7. Stockholders' Equity

During 2015 , we issued an aggregate of 1,926,368 shares of common stock, in connection with the exercises of stock options for cash in the aggregate amount of approximately $14.4 million . In addition, we issued 375,019 shares of common stock, net of RSAs canceled, in connection with the grants of RSAs. We issued 82,069 shares of common stock upon vesting of RSUs. The RSU holders surrendered 52,019 RSUs to pay for minimum withholding taxes totaling approximately $0.7 million . We issued 47,454 shares of common stock upon vesting of PRSUs. The PRSU holders surrendered 35,926 PRSUs to pay for minimum withholding taxes totaling approximately $0.6 million .

During 2014 , we issued an aggregate of 1,432,206 shares of common stock in connection with the exercises of stock options for cash in the aggregate amount of approximately $7.8 million . In addition, we issued 789,345 shares of common stock, net of RSAs canceled, in connection with the grants of RSAs and 120,043 shares of common stock upon vesting of certain RSUs. The RSU holders surrendered 74,325 RSUs to pay for minimum withholding taxes totaling approximately $1.0 million .

In February 2014, we completed an underwritten public offering and issued 8,846,153 shares of common stock, including 1,153,846 shares sold pursuant to the full exercise of an over-allotment option granted to the underwriter. All of the shares were offered at a public offering price of $13.00 per share, generating approximately $107.7 million in net proceeds.

8. Equity Incentive Plans

We currently grant stock options, restricted stock awards and restricted stock units under the Amended and Restated 2011 Stock Plan ("2011 Stock Plan"), which provides for the grant of up to 19.5 million shares of common stock (subject to certain limitations as described in the Amended and Restated 2011 Stock Plan) to selected employees, consultants and non-employee members of our Board of Directors ("Outside Directors") as stock options, stock appreciation rights, restricted stock awards, restricted stock unit awards and performance awards. The 2011 Stock Plan was approved by the stockholders. Awards are subject to terms and conditions established by the Compensation Committee of our Board of Directors. During the year ended December 31, 2015 , we granted share-based awards under the 2011 Stock Plan. At December 31, 2015 , 8,969,113 shares were subject to outstanding awards and 7,440,487 shares were available for future grants of share-based awards. At the present time, management intends to issue new common shares upon the exercise of stock options, issuance of restricted stock awards and settlement of restricted stock unit awards and performance awards.

Total share-based compensation expense related to share-based awards was comprised of the following (in thousands):

	Year Ended December 31,		
	2015	2014	2013
Research and development	$ 9,795	$ 7,939	$ 4,476
Selling, general and administrative	11,043	7,335	5,062
Share-based compensation expense	$ 20,838	$ 15,274	$ 9,538

Share-based compensation expense by type of share-based award (in thousands):

	Year Ended December 31,		
	2015	2014	2013
Stock options	$ 11,145	$ 7,884	$ 5,499
RSAs, RSUs and PRSUs	9,693	7,390	4,039
	$ 20,838	$ 15,274	$ 9,538

Total unrecognized estimated compensation expense by type of award and the weighted average remaining requisite service period over which such expense is expected to be recognized (in thousands, unless otherwise noted):

	December 31, 2015	
	Unrecognized Expense	Remaining Weighted Average Recognition Period (years)
Stock options	$ 31,058	3.0
RSAs	$ 5,531	2.3
RSUs	$ 4,795	2.5
PRSUs	$ 79	1.1

Cash flows resulting from tax deductions in excess of the cumulative compensation cost recognized for options exercised (excess tax benefits) are classified as cash inflows provided by financing activities and cash outflows used in operating activities. Due to our net loss position, no tax benefits have been recognized in the consolidated statements of cash flows.

Stock Options. Options granted under the Plans must have an exercise price equal to at least 100% of the fair market value of our common stock on the date of grant. The options will generally have a maximum contractual term of ten years and vest at the rate of one-fourth of the shares on the first anniversary of the date of grant and 1/48 of the shares monthly thereafter. Certain option awards provide for accelerated vesting if there is a change in control (as defined in the Plans).

A summary of our stock option award activity as of and for the years ended December 31, 2015, 2014 and 2013 is as follows:

	Shares Underlying Stock Options	Weighted Average Exercise Price per Share	Weighted Average Remaining Contractual Term (years)	Aggregate Intrinsic Value
Outstanding at January 1, 2013	6,379,867	$6.59		
Granted	1,806,392	$7.14		
Exercised	(1,270,362)	$4.34		
Canceled/forfeited	(214,982)	$8.18		
Outstanding at December 31, 2013	6,700,915	$7.11		
Granted	2,271,143	$13.02		
Exercised	(1,432,206)	$5.43		
Canceled/forfeited	(1,185,960)	$9.39		
Outstanding at December 31, 2014	6,353,892	$9.18		
Granted	3,973,604	$16.26		
Exercised	(1,926,368)	$7.49		
Canceled/forfeited	(407,936)	$10.64		
Outstanding at December 31, 2015	7,993,192	$13.03	7.8	$38.9 million
Vested and expected to vest at December 31, 2015	7,313,178	$12.77	7.7	$37.1 million
Exercisable at December 31, 2015	2,839,265	$9.15	5.9	$23.2 million

The weighted average grant date fair values of options granted during the years ended December 31, 2015, 2014 and 2013 were $9.60 per share, $8.13 per share and $4.40 per share, respectively. The fair value of options vested during the years ended December 31, 2015, 2014 and 2013 was approximately $6.2 million , $4.8 million and $3.9 million , respectively. The total intrinsic value of options exercised during the years ended December 31, 2015, 2014 and 2013 was approximately $16.2 million , $8.1 million and $8.3 million , respectively. Cash received from stock option exercises for the years ended December 31, 2015, 2014 and 2013 was approximately $14.4 million , $7.8 million and $5.5 million , respectively.

The fair value of each option award is estimated on the date of grant using the Black-Scholes-Merton option pricing model ("Black-Scholes model") that uses the assumptions noted in the following table. Expected volatility is based on historical volatility of our common stock. The expected term of options granted is based on analyses of historical employee termination rates and option exercises. The risk-free interest rate is based on the U.S. Treasury yield for a period consistent with the expected term of the option in effect at the time of the grant. The dividend yield assumption is based on the expectation of no future dividend payments by us. Assumptions used in the Black-Scholes model were as follows:

	Year Ended December 31,		
	2015	2014	2013
Expected volatility	66.2-67.4%	66.6-71.8%	70.1-72.5%
Average expected term (in years)	5.6	5.7	5.7
Risk-free interest rate	1.34-1.92%	1.73-2.04%	0.86-2.00%
Expected dividend yield	0%	0%	0%

Restricted Stock Awards **.** RSAs are grants that entitle the holder to acquire shares of our common stock at zero or a fixed price, which is typically nominal. The shares covered by a RSA cannot be sold, pledged, or otherwise disposed of until the award vests and any unvested shares may be reacquired by us for the original purchase price following the awardee's termination of service. The RSAs will generally vest at the rate of one-fourth of the shares on each anniversary of the date of grant. Annual grants of RSAs to Outside Directors typically vest in full the first day the awardee may trade our stock in compliance with our insider trading policy following the date immediately preceding the first annual meeting of stockholders following the grant date.

The following table summarizes our RSA activity during the years ended December 31, 2015, 2014 and 2013 :

	Number of Shares	Weighted Average Grant Date Fair Value
Unvested at January 1, 2013	382,320	$10.21
Granted	476,096	$6.88
Vested	(211,178)	$8.78
Forfeited	(14,367)	$8.17
Unvested at December 31, 2013	632,871	$8.23
Granted	1,055,122	$11.15
Vested	(263,765)	$8.33
Forfeited	(265,777)	$10.86
Unvested at December 31, 2014	1,158,451	$10.26
Granted	515,695	$15.00
Vested	(721,990)	$10.11
Forfeited	(140,676)	$11.84
Unvested at December 31, 2015	811,480	$13.13

The estimated fair value of the RSAs was based on the market value of our common stock on the date of grant. The total grant date fair value of RSAs vested during the years ended December 31, 2015, 2014 and 2013 was approximately $7.3 million , $2.2 million and $1.9 million , respectively. The total intrinsic value of RSAs vested during the years ended December 31. 2015, 2014, 2013, was approximately $13.9 million , $3.0 million and $1.5 million , respectively.

Restricted Stock Units . A RSU is a promise by us to issue a share of our common stock upon vesting of the unit. The RSUs will generally vest at the rate of one-fourth of the shares on each anniversary of the date of grant.

The following table summarizes our RSU activity during the years ended December 31, 2015, 2014 and 2013 :

	Number of Shares	Weighted Average Grant Date Fair Value	Weighted Average Remaining Contractual Term (yrs)	Aggregate Intrinsic Value
Unvested at January 1, 2013	682,146	$10.61		
Granted	323,700	$6.69		
Vested	(154,124)	$10.41		
Forfeited	(115,367)	$9.76		
Outstanding at December 31, 2013	736,355	$9.06		
Granted	305,535	$13.71		
Vested	(194,368)	$9.12		
Forfeited	(385,200)	$8.84		
Outstanding at December 31, 2014	462,322	$11.12		
Granted	422,492	$14.75		
Vested	(134,088)	$10.93		
Forfeited	(84,512)	$10.86		
Outstanding at December 31, 2015	666,214	$13.49	2.5	$11.5 million

The estimated fair value of the RSUs was based on the market value of our common stock on the date of grant. The total grant date fair value of RSUs vested during the years ended December 31, 2015, 2014 and 2013 was approximately $1.5 million , $1.8 million and $1.6 million , respectively. The total intrinsic value of RSUs vested during the years ended December 31, 2015, 2014 and 2013 was approximately $1.8 million , $2.6 million and $1.1 million , respectively.

Performance Restricted Stock Units . A PRSU is a promise by us to issue a share of our common stock upon achievement of a specific performance condition.

The following table summarizes our PRSU activity during the years ended December 31, 2015 and 2014 :

	Number of Shares	Weighted Average Grant Date Fair Value	Weighted Average Remaining Contractual Term (yrs)	Aggregate Intrinsic Value
Outstanding at January 1, 2014	—	$ —		
Granted	540,742	$ 8.91		
Vested	—	—		
Forfeited	(109,504)	$ 8.91		
Outstanding at December 31, 2014	431,238	$ 8.91		
Granted	118,209	$ 11.19		
Vested	(83,380)	$ 9.48		
Forfeited	(156,360)	$ 9.21		
Outstanding at December 31, 2015	309,707	$ 9.48	1.1	$ 5.4 million

The estimated fair value of the PRSUs was based on the market value of our common stock on the date of grant. The total grant date fair value and intrinsic value of PRSUs vested during the year ended December 31, 2015 was approximately $0.8 million and $1.4 million , respectively.

9. Commitments and Contingencies

Operating Leases

Our administrative offices and research facilities are located in San Diego, California. We lease an aggregate of approximately 76,000 square feet of office and research space in four buildings. The leases commenced in June 2011 and November 2013 and continue through January 2018 . The leases are subject to approximately 2.5% to 3.0% annual increases throughout the terms of the leases. We also pay a pro rata share of operating costs, insurance costs, utilities and real property taxes. We received incentives under the leases, including tenant improvement allowances and reduced or free rent, for which the unamortized deferred rent balances associated with these incentives was $0.8 million and $1.0 million as of December 31, 2015 and 2014, respectively.

In November 2015, we opened a satellite office in South San Francisco, California. We lease approximately 10,000 square feet of office space. The lease commenced in November 2015 and continues through January 2021 . The lease is subject to approximately 3.0% annual increases throughout the term of the lease. We also pay a pro rata share of operating costs, insurance costs, utilities and real property taxes. We received incentives under the lease, including tenant improvement allowances and reduced or free rent, for which the unamortized deferred rent balances associated with these incentives was $0.4 million as of December 31, 2015.

Additionally, we lease certain office equipment under operating leases. Total rent expense was approximately $1.9 million , $1.9 million and $1.7 million for the years ended December 31, 2015, 2014 and 2013 , respectively.

Approximate annual future minimum operating lease payments as of December 31, 2015 are as follows (in thousands):

Year:	Operating Leases
2016	$ 2,539
2017	2,606
2018	507
2019	413
2020	426
Thereafter	36
Total minimum lease payments	$ 6,527

Other Commitments

In order to scale up the production of bulk rHuPH20 and to identify another manufacturer that would help meet anticipated production obligations arising from our proprietary programs and our collaborations, we entered into a Technology Transfer Agreement and a Clinical Supply Agreement with Cook Pharmica LLC ("Cook"). The technology transfer was completed in 2008. In 2009, multiple batches of bulk rHuPH20 were produced to support planned future clinical studies.

In March 2010, we entered into a Commercial Supply Agreement with Cook (the "Cook Commercial Supply Agreement"). Under the terms of the Cook Commercial Supply Agreement, Cook will manufacture certain batches of bulk rHuPH20 that will be used for commercial supply of certain products and product candidates. Under the terms of the Cook Commercial Supply Agreement, we are committed to certain minimum annual purchases of bulk rHuPH20 equal to four quarters of forecasted supply. At December 31, 2015 , we had a $5.7 million minimum purchase obligation in connection with the Cook Commercial Supply Agreement.

In March 2010, we entered into a second Commercial Supply Agreement with Avid (the "Avid Commercial Supply Agreement"). Under the terms of the Avid Commercial Supply Agreement, we are committed to certain minimum annual purchases of bulk rHuPH20 equal to three quarters of forecasted supply. In addition, Avid has the right to manufacture and supply a certain percentage of bulk rHuPH20 that will be used in the collaboration products. At December 31, 2015 , we had a $30.2 million minimum purchase obligation in connection with this agreement.

In June 2011, we entered into a services agreement with another third party manufacturer for the technology transfer and manufacture of *Hylenex* recombinant. At December 31, 2015 , we had a $0.9 million minimum purchase obligation in connection with this agreement.

Contingencies

We have entered into an in-licensing agreement with a research organization, which is cancelable at our option with 90 days written notice. Under the terms of this agreement, we have received license to know-how and technology claimed, in certain patents or patent applications. We are required to pay fees, milestones and/or royalties on future sales of products employing the technology or falling under claims of a patent, and some of the agreements require minimum royalty payments. We continually reassess the value of the license agreement. If the in-licensed and research candidate is successfully developed, we may be required to pay milestone payments of approximately $9.3 million over the life of this agreement in addition to royalties on sales of the affected products. One of the milestone payments of $1.3 million is due upon the first dosing of a patient in our Phase 3 study of PEGPH20, which is expected to occur at the end of the first quarter of 2016. Due to the uncertainties of the development process, the timing and probability of the remaining milestone and royalty payments cannot be accurately estimated.

Legal Contingencies

From time to time, we may be involved in disputes, including litigation, relating to claims arising out of operations in the normal course of our business. Any of these claims could subject us to costly legal expenses and, while we generally believe that we have adequate insurance to cover many different types of liabilities, our insurance carriers may deny coverage or our policy limits may be inadequate to fully satisfy any damage awards or settlements. If this were to happen, the payment of any such awards could have a material adverse effect on our consolidated results of operations and financial position. Additionally, any such claims, whether or not successful, could damage our reputation and business. We currently are not 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 our consolidated results of operations or financial position.

10. Income Taxes

Significant components of our net deferred tax assets at December 31, 2015 and 2014 are shown below (in thousands). A valuation allowance of $182.5 million and $179.0 million has been established to offset the net deferred tax assets as of December 31, 2015 and 2014 , respectively, as realization of such assets is uncertain.

	December 31,	
	2015	2014
Deferred tax assets:		
Net operating loss carryforwards	$ 104,505	$ 120,707
Deferred revenue	16,344	18,034
Research and development credits	54,846	34,146
Share-based compensation	6,286	5,381
Other, net	906	891
	182,887	179,159
Valuation allowance for deferred tax assets	(182,507)	(178,965)
Deferred tax assets, net of valuation	380	194
Deferred tax liabilities:		
Depreciation	(380)	(194)
Net deferred tax liabilities	(380)	(194)
Net deferred tax assets	$ —	$ —

The provision for income taxes on earnings subject to income taxes differs from the statutory federal income tax rate due to the following (in thousands):

	December 31,		
	2015	2014	2013
Federal income tax at 34%	$ (10,804)	$ (23,247)	$ (28,383)
State income tax, net of federal benefit	5,526	(1,761)	(1,745)
Increase in valuation allowance	3,897	16,998	33,525
Foreign income subject to tax at other than federal statutory rate	14,945	12,747	—
Tax effect on non-deductible expenses and other	6,042	540	5,219
Research and development credits	(19,606)	(5,277)	(8,616)
	$ —	$ —	$ —

At December 31, 2015 , we had federal and California tax net operating loss carryforwards of approximately $320.0 million and $329.0 million , respectively. Included in these amounts are federal and California net operating losses of approximately $49.1 million and $34.2 million , respectively, attributable to stock option, RSA, RSU, and PRSU deductions for which the tax benefit will be credited to equity when realized. The federal tax net operating loss carryforwards will begin to expire in 2018 , unless previously utilized. The California tax net operating loss carryforwards will expire in 2016 , 2017 and 2028 and beyond in the amounts of $13.1 million , $10.4 million and $302.0 million , respectively.

At December 31, 2015 , we also had federal and California research and development tax credit carryforwards of approximately $28.0 million and $15.1 million , respectively. The federal research and development tax credits will begin to expire in 2024 unless previously utilized. The California research and development tax credits will carryforward indefinitely until utilized. Additionally, we had Orphan Drug Credit carryforwards of $16.9 million which will begin to expire in 2024 .

Pursuant to Internal Revenue Code Section 382, the annual use of the net operating loss carryforwards and research and development tax credits could be limited by any greater than 50% ownership change during any three year testing period. As a result of any such ownership change, portions of our net operating loss carryforwards and research and development tax credits are subject to annual limitations. We completed an updated Section 382 analysis regarding the limitation of the net operating losses and research and development credits as of June 30, 2014. Based upon the analysis, we determined that ownership changes occurred in prior years. However, the annual limitations on net operating loss and research and development tax credit carryforwards will not have a material impact on the future utilization of such carryforwards.

At December 31, 2015 , our unrecognized income tax benefits and uncertain tax positions were $4.9 million and would not, if recognized, affect the effective tax rate. We had no such unrecognized income tax benefits or uncertain tax positions at December 31, 2014. Interest and/or penalties related to uncertain income tax positions are recognized by us as a component of income tax expense. For the years ended December 31, 2015, 2014 and 2013 , we recognized no interest or penalties.

We do not provide for U.S. income taxes on the undistributed earnings of our foreign subsidiary as it is our intention to utilize those earnings in the foreign operations for an indefinite period of time. At December 31, 2015 and 2014 , there were no undistributed earnings in the foreign subsidiary.

We are subject to taxation in the U.S. and in various state and foreign jurisdictions. Our tax years for 1998 and forward are subject to examination by the U.S. and California tax authorities due to the carryforward of unutilized net operating losses and research and development credits.

11. Employee Savings Plan

We have an employee savings plan pursuant to Section 401(k) of the Internal Revenue Code. All employees are eligible to participate, provided they meet the requirements of the plan. We are not required to make matching contributions under the plan. However, we voluntarily contributed to the plan approximately $0.7 million , $0.7 million and $0.6 million for the years ended December 31, 2015, 2014 and 2013 , respectively.

12. Related Party Transactions

In June 2011, we and Intrexon entered into the Intrexon Collaboration, under which Intrexon obtained a worldwide exclusive license for the use of rHuPH20 enzyme in the development of a subcutaneous injectable formulation of Intrexon's recombinant human alpha 1-antitrypsin (rHuA1AT). The Intrexon Collaboration was terminated in May 2014 . Intrexon's chief executive officer and chairman of its board of directors, Randal J. Kirk, is also a member of our Board of Directors. The collaborative arrangement with Intrexon was reviewed and approved by our Board of Directors in accordance with our related party transaction policy. For the years ended December 31, 2015 and 2014 , we recognized zero in revenue under collaborative agreements pursuant to the terms of the Intrexon Collaboration. In December 2013, we recognized $1.0 million in revenue under collaborative agreements pursuant to the terms of the Intrexon Collaboration.

13. Restructuring Expense

In November 2014, we completed a corporate reorganization to focus our resources on advancing our PEGPH20 oncology proprietary program and ENHANZE collaborations. This reorganization resulted in a reduction in the workforce of approximately 13% , primarily in research and development.

We recorded approximately $1.2 million of severance pay and benefits expense in connection with the reorganization, of which $1.1 million and $0.1 million was included in research and development expense and selling, general and administrative expense, respectively, in the consolidated statement of operations for the year ended December 31, 2014. No other restructuring charges were incurred. We made cash payments of $0.7 million related to the restructuring expense for the year ended December 31, 2014. As of December 31, 2014, the restructuring liability was approximately $0.5 million and was included in current accrued expenses. The restructuring liability was paid in full during the three months ended March 31, 2015 .

14. Summary of Unaudited Quarterly Financial Information

The following is a summary of our unaudited quarterly results for the years ended December 31, 2015 and 2014 (in thousands):

	Quarter Ended			
2015 (Unaudited):	**March 31,**	**June 30,**	**September 30,**	**December 31,**
Total revenues [1] [2]	$ 18,666	$ 43,384	$ 20,780	$ 52,227
Gross profit on product sales	$ 3,366	$ 4,198	$ 4,121	$ 5,152
Total operating expenses	$ 32,577	$ 39,153	$ 44,017	$ 46,762
Net income (loss)	$ (15,108)	$ 3,019	$ (24,460)	$ 4,318
Net income (loss) per share:				
Basic	$ (0.12)	$ 0.02	$ (0.19)	$ 0.03
Diluted	$ (0.12)	$ 0.02	$ (0.19)	$ 0.03
Shares used in computing net income (loss) per share:				
Basic	125,299	126,144	126,921	127,197
Diluted	125,299	134,507	126,921	129,248

	Quarter Ended			
2014 (Unaudited):	**March 31,**	**June 30,**	**September 30,**	**December 31,**
Total revenues [3]	$ 11,966	$ 18,385	$ 14,606	$ 30,377
Gross profit on product sales	$ 3,048	$ 3,570	$ 4,476	$ 3,997
Total operating expenses	$ 37,185	$ 33,325	$ 33,632	$ 34,228
Net loss	$ (26,548)	$ (16,273)	$ (20,280)	$ (5,274)
Net loss per share, basic and diluted	$ (0.22)	$ (0.13)	$ (0.16)	$ (0.04)
Shares used in computing basic and diluted net loss per share	118,943	123,710	124,041	124,272

(1) Revenues for the quarter ended June 30, 2015 included $23.0 million in revenue under collaborative agreements from the AbbVie Collaboration.

(2) Revenues for the quarter ended December 31, 2015 included $25.0 million in revenue under collaborative agreements from the Lilly Collaboration.

(3) Revenues for the quarter ended December 31, 2014 included $15.0 million in revenue under collaborative agreements from the Janssen Collaboration.

15. Subsequent Event

In January 2016, through our subsidiary Halozyme Royalty, we received a $150 million loan (the "Royalty-backed Loan") pursuant to a credit agreement (the "Credit Agreement") with BioPharma Credit Investments IV Sub, LP and Athyrium Opportunities II Acquisition LP (the "Royalty-backed Lenders"). Under the terms of the Credit Agreement, Halozyme Therapeutics, Inc. transfered to Halozyme Royalty the right to receive certain royalty payments from the commercial sales of Herceptin SC, MabThera SC and HYQVIA. The royalty payments from the collaboration agreements will be used to repay the principal and interest on the loan (the "Royalty Payments"). The loan bears interest at a per annum rate of 8.75% plus the three-month LIBOR rate . The three-month LIBOR rate is subject to a floor of 0.7% and a cap of 1.5% .

Quarterly Royalty Payments from Baxalta and Roche will first be applied to pay (i) escrow fees payable by Halozyme, (ii) certain expenses incurred by the Royalty-backed Lenders in connection with the Credit Agreement and related transaction documents, including enforcement of their rights under the Credit Agreement and (iii) expenses incurred by Halozyme enforcing the right to indemnification under the collaboration and license agreements with Roche and Baxalta ("License Agreements"). The Credit Agreement provides that none of the remaining Royalty Payments are required to be applied to the Royalty-backed Loan prior to January 1, 2017, 50% of the remaining Royalty Payments are required to be applied to the Royalty-backed Loan between January 1, 2017 and January 1, 2018 and thereafter all remaining Royalty Payments must be applied to the Royalty-backed Loan. Additionally, the amounts available to repay the Royalty-backed Loan are subject to caps of $13.75 million per quarter in 2017, $18.75 million per quarter in 2018, $21.25 million per quarter in 2019 and $22.5 million per quarter in 2020 and thereafter. Amounts available to repay the Royalty-backed Loan will be applied first, to pay interest and second, to repay principal on the Royalty-backed Loan. Any accrued interest that is not paid on any applicable quarterly payment date will be capitalized and added to the principal balance of the Royalty-backed Loan. Halozyme Royalty will be entitled to receive and distribute to Halozyme any Royalty Payments that are not required to be applied to the Royalty-backed Loan or which are in excess of the foregoing caps.

The final maturity date of the Royalty-backed Loan will be the earlier of (i) the date when principal and interest is paid in full, (ii) the termination of Halozyme Royalty's right to receive royalties under the License Agreements, and (iii) December 31, 2050 . Under the terms of the Credit Agreement, at any time after January 1, 2019, Halozyme Royalty may, subject to certain limitations, prepay the outstanding principal of the Royalty-backed Loan in whole or in part, at a price equal to 105% of the outstanding principal on the Royalty-backed Loan, plus accrued but unpaid interest. The Royalty-backed Loan constitutes an obligation of Halozyme Royalty, and is non-recourse to Halozyme.

Halozyme Therapeutics, Inc.

Schedule II

Valuation and Qualifying Accounts
(in thousands)

	Balance at Beginning of Period	Additions	Deductions	Balance at End of Period
For the year ended December 31, 2015				
Accounts receivable allowances [1]	$ 611	$ 4,150	$ (3,794)	$ 967
For the year ended December 31, 2014				
Accounts receivable allowances [1]	$ 610	$ 4,520	$ (4,519)	$ 611
For the year ended December 31, 2013				
Accounts receivable allowances [1]	$ 178	$ 2,979	$ (2,547)	$ 610

(1) Allowances are for chargebacks, prompt payment discounts and distribution fees related to *Hylenex* recombinant product sales.

Exhibit Index

Exhibit Number	Exhibit Title	Filed Herewith	Incorporated by Reference		
			Form	File No.	Date Filed
3.1	Composite Certification of Incorporation		10-Q	001-32335	8/7/2013
3.2	Certificate of Designation, Preferences and Rights of the terms of the Series A Preferred Stock		8-K	001-32335	11/20/2007
3.3	Bylaws, as amended		8-K	001-32335	12/12/2011
4.1	Amended Rights Agreement between Corporate Stock Transfer, as rights agent, and Registrant, dated November 12, 2007		10-K	001-32335	3/14/2008
10.1	License Agreement between University of Connecticut and Registrant, dated November 15, 2002		SB-2	333-114776	4/23/2004
10.2	First Amendment to the License Agreement between University of Connecticut and Registrant, dated January 9, 2006		8-K	001-32335	1/12/2006
10.3#	Halozyme Therapeutics, Inc. 2005 Outside Directors' Stock Plan		8-K	001-32335	7/6/2005
10.4#	Form of Stock Option Agreement (2005 Outside Directors' Stock Plan)		10-Q	001-32335	8/8/2006
10.5#	Form of Restricted Stock Agreement (2005 Outside Directors' Stock Plan)		10-Q	001-32335	8/8/2006
10.6#	Halozyme Therapeutics, Inc. 2006 Stock Plan		8-K	001-32335	3/24/2006
10.7#	Form of Stock Option Agreement (2006 Stock Plan)		10-Q	001-32335	8/8/2006
10.8#	Form of Restricted Stock Agreement (2006 Stock Plan)		10-Q	001-32335	8/8/2006
10.9#	Halozyme Therapeutics, Inc. 2008 Stock Plan		8-K	001-32335	3/19/2008
10.10#	Form of Stock Option Agreement (2008 Stock Plan)		10-Q	001-32335	8/7/2009
10.11#	Form of Restricted Stock Agreement (2008 Stock Plan)		10-Q	001-32335	8/7/2009
10.12#	Halozyme Therapeutics, Inc. 2008 Outside Directors' Stock Plan		8-K	001-32335	3/19/2008
10.13#	Form of Restricted Stock Agreement (2008 Outside Directors' Stock Plan)		10-Q	001-32335	8/7/2009

Exhibit Number	Exhibit Title	Filed Herewith	Incorporated by Reference		
			Form	File No.	Date Filed
10.14#	Halozyme Therapeutics, Inc. 2011 Stock Plan (as amended through May 6, 2015)		10-Q	001-32335	8/10/2015
10.15#	Form of Stock Option Agreement (2011 Stock Plan)		8-K	001-32335	5/6/2011
10.16#	Form of Stock Option Agreement for Executive Officers (2011 Stock Plan)		8-K	001-32335	5/6/2011
10.17#	Form of Restricted Stock Units Agreement for Officers (2011 Stock Plan)		10-Q	001-32335	8/10/2015
10.18#	Form of Restricted Stock Award Agreement for Officers (2011 Stock Plan)		10-Q	001-32335	8/10/2015
10.19#	Form of Restricted Stock Units Agreement (2011 Stock Plan)		8-K	001-32335	5/6/2011
10.20#	Form of Restricted Stock Award Agreement (2011 Stock Plan)		8-K	001-32335	5/6/2011
10.21#	Form of Stock Option Agreement (2011 Stock Plan -grants made on or after 11/4/2015)		10-Q	001-32335	11/9/2015
10.22#	Form of Restricted Stock Units Agreement (2011 Stock Plan - grants made on or after 11/4/2015)		10-Q	001-32335	11/9/2015
10.23#	Form of Restricted Stock Award Agreement (2011 Stock Plan - grants made on or after 11/4/2015)		10-Q	001-32335	11/9/2015
10.24#	Form of Indemnity Agreement for Directors and Executive Officers		8-K	001-32335	12/20/2007
10.25#	Severance Policy		10-Q	001-32335	5/9/2008
10.26#	Form of Amended and Restated Change In Control Agreement with Officer		10-K	001-32335	11/9/2015
10.27	Lease (11404 and 11408 Sorrento Valley Road)		8-K	001-32335	6/16/2011
10.28	Amended and Restated Lease (11388 Sorrento Valley Road), effective as of June 10, 2011		8-K	001-32335	6/16/2011
10.29	Lease (11436 Sorrento Valley Road), effective as of April 2013		10-K	001-32335	2/28/2013
10.30	First modification to Lease (11436 Sorrento Valley Road)		10-Q	001-32335	5/8/2013
10.31	Amended and Restated Loan and Security Agreement, dated December 27, 2013		10-K	001-32335	2/28/2014
10.32	Consent and First Amendment to Amended and Restated Loan and Security Agreement, dated June 10, 2014		10-Q	001-32335	8/11/2014
10.33	Second Amendment to Amended and Restated Loan and Security Agreement, dated January 23, 2015		10-K	001-32335	3/2/2015

Exhibit Number	Exhibit Title	Filed Herewith	Incorporated by Reference		
			Form	File No.	Date Filed
10.34	Consent, Release and Third Amendment to Amended and Restated Loan and Security Agreement, dated December 28, 2015	X			
10.35*	Credit Agreement, dated December 30, 2015	X			
21.1	Subsidiaries of Registrant	X			
23.1	Consent of Independent Registered Public Accounting Firm	X			
31.1	Certification of Chief Executive Officer pursuant to Rule 13a-14(a) and 15d-14(a) of the Securities Exchange Act of 1934, as amended	X			
31.2	Certification of Chief Financial Officer pursuant to Rule 13a-14(a) and 15d-14(a) of the Securities Exchange Act of 1934, as amended	X			
32	Certification of Chief Executive Officer and Chief Financial Officer pursuant to 18 U.S.C. 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002	X			
101.INS	XBRL Instance Document	X			
101.SCH	XBRL Taxonomy Extension Schema	X			
101.CAL	XBRL Taxonomy Extension Calculation Linkbase	X			
101.DEF	XBRL Taxonomy Extension Definition Linkbase	X			
101.LAB	XBRL Taxonomy Extension Label Linkbase	X			
101.PRE	XBRL Taxonomy Presentation Linkbase	X			

* Confidential treatment has been granted (or requested) for certain portions of this exhibit. These portions have been omitted from this agreement and have been filed separately with the Securities and Exchange Commission.

\# Indicates management contract or compensatory plan or arrangement.

EXHIBIT 10.34

CONSENT, RELEASE AND THIRD AMENDMENT
TO
AMENDED AND RESTATED LOAN AND SECURITY AGREEMENT

THIS CONSENT, RELEASE AND THIRD AMENDMENT to Amended and Restated Loan and Security Agreement (this " **Amendment** ") is entered into as of December 28, 2015, by and among **OXFORD FINANCE LLC** (" **Oxford** ") as collateral agent (in such capacity, the " **Collateral Agent** ") and a lender (in such capacity, a " **Lender** ") and **SILICON VALLEY BANK** as lender (in such capacity, a " **Lender** " and collectively with Oxford, the " **Lenders** "), and **HALOZYME THERAPEUTICS, INC.** , a Delaware corporation (" **Parent** "), and **HALOZYME, INC.** , a California corporation (" **Halozyme** " and together with Parent, individually and collectively, jointly and severally, " **Borrower** ").

RECITALS

A. Collateral Agent, Lenders and Borrower have entered into that certain Amended and Restated Loan and Security Agreement dated as of December 27, 2013 (as the same has been and may from time to time further be amended, modified, supplemented or restated, collectively, the " **Loan Agreement** "). Lenders have extended credit to Borrower for the purposes permitted in the Loan Agreement.

B. (i) Halozyme desires to form Halozyme Royalty LLC (" **LLC** "), as a wholly-owned Subsidiary of Halozyme, (ii) Halozyme intends to sell to LLC certain rights to receive royalty payments (the " **Applicable Assets** ") pursuant to that certain Purchase and Sale Agreement in substantially the form attached hereto as Schedule 1 (the " **Purchase Agreement** "), and (iii) Halozyme and LLC intend to enter into that certain Credit Agreement (the " **BCI Credit Agreement** ") with BioPharma Credit Investments IV Sub, LP as collateral agent and lender (" **BCI** "), and the other lenders party thereto from time to time, whereby LLC will incur Indebtedness from and grant liens on the Applicable Assets to BCI.

C. Borrower has requested that Collateral Agent and Lenders (i) consent to the formation of LLC, the Investment in LLC consisting solely of the initial capitalization of LLC and Halozyme's ownership of the equity securities of LLC, the sale of the Applicable Assets by Halozyme to LLC, and the transactions contemplated by the Purchase Agreement, (ii) release Collateral Agent's Lien on the Applicable Assets, (iii) amend the Loan Agreement to permit the Indebtedness and Liens under the BCI Credit Agreement and permit Halozyme and LLC to enter into the BCI Credit Agreement, the Purchase Agreement, the Escrow Agreement and the other agreements contemplated thereby (the actions described in clauses (i), (ii) and (iii) being referred to herein as the " **Permitted Transactions** "), and (iv) make certain other revisions to the Loan Agreement as more fully set forth herein.

D. Collateral Agent and Lenders have agreed to so consent to the transactions set forth above and to amend certain provisions of the Loan Agreement, but only to the extent, in accordance with the terms, subject to the conditions and in reliance upon the representations and warranties set forth below.

AGREEMENT

NOW, THEREFORE, in consideration of the foregoing recitals and other good and valuable consideration, the receipt and adequacy of which is hereby acknowledged, and intending to be legally bound, the parties hereto agree as follows:

1. Definitions. Capitalized terms used but not defined in this Amendment shall have the meanings given to them in the Loan Agreement.

2. Consent. Subject to the terms of Section 10 below, Collateral Agent and Lenders hereby consent to the Permitted Transactions, waive any non-compliance with the terms of the Loan Agreement as a result of the

consummation of the Permitted Transactions and agree that the same shall not constitute an "Event of Default" under the Loan Agreement.

3. Release . Subject to the terms of Section 9 below and effective only upon the consummation of the sale of the Applicable Assets in accordance with the Purchase Agreement, Collateral Agent hereby releases any security interest it has in the Applicable Assets without delivery of any instrument or any further action by any party; provided, however, that nothing in this Amendment shall constitute a release of any security interest Collateral Agent has in any consideration or other proceeds of the Applicable Assets which are payable to or received by Borrower in connection with the sale of the Applicable Assets, whether now owned or hereafter acquired. At the request and sole expense of Borrower at any time after the effectiveness of the foregoing release, Collateral Agent shall execute and deliver to Borrower such documents as Borrower may reasonably request to evidence the release of the Applicable Assets. At the request and sole expense of Borrower at any time after the effectiveness of the foregoing release, Collateral Agent shall file, or cause to be filed, a UCC amendment to exclude the Applicable Assets to evidence the release of Collateral Agent's Lien thereon.

4. Reaffirmation . Except to the extent the Applicable Assets are released pursuant to Section 3 above, Borrower hereby reaffirms its grant to Collateral Agent of a security interest in the Collateral.

5. Amendments to Loan Agreement .

5.1 Section 6.2 (**Financial Statements, Reports, Certificates**). The following new clause (ix) is hereby added to Section 6.2(a):

(ix) notice of any default or breach under the BCI Credit Agreement or of any claim or enforcement action against Halozyme thereunder, in each case, within one (1) Business Day of the occurrence thereof.

5.2 Section 6.6 (**Operating Accounts**). The following new clause (d) is hereby added to Section 6.6:

(d) Notwithstanding the foregoing, LLC shall not be required to comply with this Section 6.6.

5.3 Section 6.12 (Creation/Acquisition of Subsidiaries) . The following is hereby added at the end of Section 6.12:

Notwithstanding the foregoing, LLC shall not become a co-Borrower hereunder or guarantee the Obligations of Borrower under the Loan Documents and shall not grant any Liens on any of its assets in favor of Collateral Agent or Lenders.

5.4 Section 6.14 (**Distributions by LLC to Halozyme**). The following new Section 6.14 is hereby added to Section 6 of the Loan Agreement:

6.14 Distributions by LLC to Halozyme . Subject to the terms and conditions set forth in the BCI Credit Agreement (as delivered to Collateral Agent on or about the Third Amendment Date) and the Escrow Agreement (as defined in the BCI Credit Agreement and as delivered to Collateral Agent on or about the Third Amendment Date), Borrower shall cause LLC to distribute to Halozyme all assets of LLC except (a) any assets required to be held by LLC in accordance with the BCI Credit Agreement (as delivered to Collateral Agent on or about the Third Amendment Date) and (b) any assets in an aggregate amount not to exceed Five Hundred Thousand Dollars ($500,000) which are required to be held by LLC to maintain adequate capital in light of its contemplated business purpose, transactions and liabilities, and Borrower shall take such actions as may be permitted under the BCI Credit Agreement (as delivered to Collateral Agent on or about the Third Amendment Date) and the Escrow Agreement (as delivered to Collateral Agent on or about the Third Amendment Date) to cause such distributions to be made promptly as such assets become available for distribution.

5.5 Section 7.7 (**Distributions; Investments**). The following is hereby added to the end of Section 7.7(a):

, provided that LLC may pay dividends and make distributions to Halozyme

5.6 Section 7.8 (**Transactions with Affiliates**). Section 7.8 is hereby amended by deleting clause (b) in its entirety and replacing it with the following:

(b) Investments permitted pursuant to clauses (d), (h) and (n) of the definition of Permitted Investments,

5.7 Section 7.13 (**Voluntary Prepayments of BCI Indebtedness**). The following new Section 7.13 is hereby added to Section 7 of the Loan Agreement:

7.13 Voluntary Prepayments of BCI Indebtedness; Amendments to BCI Credit Agreement . (a) Make or allow any Subsidiary to make any voluntary prepayment of the BCI Indebtedness; or (b) execute any amendment, agreement or other document which has the effect of (i) increasing the rate of interest with respect to the BCI Indebtedness, (ii) accelerating the payment of the principal, interest or any other portion of the BCI Indebtedness, (iii) increasing the aggregate principal amount of the BCI Indebtedness, (iv) imposing additional obligations upon Halozyme under the BCI Credit Agreement or otherwise in connection with the BCI Indebtedness, and (v) modifying or otherwise altering the distributions by LLC to Halozyme required under Section 6.14.

5.8 Section 7.14 (**LLC Assets**). The following new Section 7.14 is hereby added to Section 7 of the Loan Agreement:

7.14 LLC Assets . Permit LLC to hold any assets except (a) any assets required to be held by LLC under the BCI Credit Agreement (as delivered to Collateral Agent on or about the Third Amendment Date) and (b) any assets in an aggregate amount not to exceed Five Hundred Thousand Dollars ($500,000) which are required to be held by LLC to maintain adequate capital in light of its contemplated business purpose, transactions and liabilities.

5.9 Section 8.2 (**Covenant Default**). Section 8.2(a) is hereby amended by adding "or 6.14 (Distributions by LLC to Halozyme)" immediately after the reference to "6.13 (Further Assurances)" therein.

5.10 Section 8.13 (**BCI Credit Agreement**). The following new Section 8.13 is hereby added to Section 8 of the Loan Agreement:

8.13 BCI Credit Agreement . (a) A default or breach occurs under the BCI Credit Agreement resulting in a right by any third party thereunder, whether or not exercised, to accelerate the maturity of the BCI Indebtedness; or (b) any claim or enforcement action is brought against Halozyme under the BCI Credit Agreement;

5.11 Section 13.1 (Definitions) . The following terms and their respective definitions hereby are added to Section 13.1 in their appropriate alphabetical order:

" **BCI Credit Agreement** " means that certain Credit Agreement dated on or about the Third Amendment Date by and among LLC, Halozyme, BioPharma Credit Investments IV Sub, LP. and Athyrium Opportunities II Acquisition LP, as amended, restated or otherwise modified from time to time in accordance with the terms of this Agreement.

" **BCI Indebtedness** " means Indebtedness incurred by LLC pursuant to the BCI Credit Agreement.

" **LLC** " means Halozyme Royalty LLC, a Delaware limited liability company and wholly-owned Subsidiary of Halozyme.

" **Third Amendment Date** " is December 28, 2015.

5.12 Section 13.1 (Definitions) . The following new clause (p) is hereby added to the definition of "Permitted Indebtedness":

(p) (i) the BCI Indebtedness in an aggregate principal amount not to exceed One Hundred Fifty Million Dollars ($150,000,000), plus any interest that shall be "paid-in-kind" by being capitalized and added to such outstanding principal amount pursuant to the BCI Credit Agreement (as delivered to Collateral Agent on or about the Third Amendment Date); and (ii) Contingent Obligations consisting of inchoate indemnity obligations owed by Halozyme under the BCI Credit Agreement (as delivered to Collateral Agent on or about the Third Amendment Date).

5.13 Section 13.1 (Definitions) . The following new clause (n) is hereby added to the definition of "Permitted Investments":

(n) Investments of Halozyme in LLC consisting solely of the intial capitalization of LLC and Halozyme's ownership of the equity securities of LLC.

5.14 Section 13.1 (Definitions) . The following new clause (m) is hereby added to the definition of "Permitted Liens":

(m) Liens granted by LLC securing the BCI Indebtedness.

5.15 Exhibit A . The following new sentence is hereby added to the Description of Collateral in Exhibit A:

Notwithstanding the foregoing, the Collateral shall not include any assets transferred by Halozyme, Inc. to Halozyme Royalty LLC pursuant to that certain Purchase and Sale Agreement dated on or about January 15, 2016, provided, however, that the Collateral shall include any consideration or other proceeds of such assets which are payable to or received by Borrower in connection with such transfer, whether now owned or hereafter acquired.

6. Limitation of Amendments.

6.1 The consent, release and amendments set forth in Sections 2, 3 and 5, above, are effective for the purposes set forth herein and shall be limited precisely as written and shall not be deemed to (a) be a consent to any amendment, waiver or modification of any other term or condition of any Loan Document, or (b) otherwise prejudice any right or remedy which Collateral Agent or any Lender may now have or may have in the future under or in connection with any Loan Document.

6.2 This Amendment shall be construed in connection with and as part of the Loan Documents and all terms, conditions, representations, warranties, covenants and agreements set forth in the Loan Documents, except as herein amended, are hereby ratified and confirmed and shall remain in full force and effect.

7. Representations and Warranties. To induce Collateral Agent and Lenders to enter into this Amendment, Borrower hereby represents and warrants to Collateral Agent and Lenders as follows:

7.1 Immediately after giving effect to this Amendment (a) the representations and warranties contained in the Loan Documents (as such may be modified by the updated Perfection Certificate delivered to Collateral Agent to reflect the Permitted Transactions, which updated Perfection Certificate shall be delivered to Collateral Agent within ten (10) Business Days of the date of this Amendment) are true, accurate and complete in all material respects

as of the date hereof (except to the extent such representations and warranties relate to an earlier date, in which case they are true and correct in all material respects as of such date), and (b), no Event of Default has occurred and is continuing;

7.2 Borrower has the power and authority to execute and deliver this Amendment and to perform its obligations under the Loan Agreement, as amended by this Amendment;

7.3 The organizational documents of Borrower most recently delivered to Collateral Agent and Lenders are true, accurate and complete and have not been amended, supplemented or restated and are and continue to be in full force and effect;

7.4 The execution and delivery by Borrower of this Amendment and the performance by Borrower of its obligations under the Loan Agreement, as amended by this Amendment, have been duly authorized;

7.5 The execution and delivery by Borrower of this Amendment and the performance by Borrower of its obligations under the Loan Agreement, as amended by this Amendment, do not and will not contravene (a) any material Requirement of Law binding on or affecting Borrower, (b) any material agreement by which Borrower is bound in a manner that constitutes an event of default thereunder, (c) any order, judgment or decree of any court or other governmental or public body or authority, or subdivision thereof, binding on Borrower, or (d) the organizational documents of Borrower;

7.6 The execution and delivery by Borrower of this Amendment and the performance by Borrower of its obligations under the Loan Agreement, as amended by this Amendment, do not require any order, consent, approval, license, authorization or validation of, or filing, recording or registration with, or exemption by any governmental or public body or authority, or subdivision thereof, binding on Borrower, except as already has been obtained or made or is being obtained pursuant to Section 6.1(b) of the Loan Agreement; and

7.7 This Amendment has been duly executed and delivered by Borrower and is the binding obligation of Borrower, enforceable against Borrower in accordance with its terms, except as such enforceability may be limited by bankruptcy, insolvency, reorganization, liquidation, moratorium or other similar laws of general application and equitable principles relating to or affecting creditors' rights.

8. Counterparts. This Amendment may be executed in any number of counterparts and all of such counterparts taken together shall be deemed to constitute one and the same instrument. Delivery of an executed counterpart of this Amendment by facsimile or electronic mail shall be equally as effective as delivery of an original executed counterpart of this Amendment.

9. Covenants. Borrower shall, (a) within three (3) Business Days of the formation of LLC, deliver to Collateral Agent (i) all Operating Documents of LLC and a good standing certificate of LLC certified by the Secretary of State (or equivalent agency) of LLC's jurisdiction of organization or formation, (ii) certified copies, dated as of date no earlier than thirty (30) days prior to the date hereof, of financing statement searches for LLC, as Collateral Agent may request, and (iii) any original certificates representing the Shares of LLC issued to Halozyme together with appropriate instruments of transfer as Collateral Agent may request, (b) within three (3) Business Days of the consummation of the sale of the Applicable Assets, deliver to Collateral Agent (i) fully executed copies of the Purchase Agreement, the BCI Credit Agreement, the Escrow Agreement, and all documents related thereto, and (ii) evidence satisfactory to Bank in its sole discretion that Halozyme has received the proceeds from the sale of the Applicable Assets in the form and amounts set forth in the Purchase Agreement, and (c) within three (3) Business Days of the consummation of the Permitted Transactions pay all of Lenders' Expenses through such date.

10. Effectiveness. This Amendment shall be deemed effective upon the due execution and delivery to Collateral Agent and Lenders of this Amendment.

[***Balance of Page Intentionally Left Blank*** **]**

IN WITNESS WHEREOF, the parties hereto have caused this Amendment to be duly executed and delivered as of the date first written above.

COLLATERAL AGENT:

OXFORD FINANCE LLC

By: /s/ Timothy A. Lex
Name: Timothy A. Lex
Title: Chief Operating Officer and Executive Vice President

LENDERS:

OXFORD FINANCE LLC

By: /s/ Timothy A. Lex
Name: Timothy A. Lex
Title: Chief Operating Officer and Executive Vice President

SILICON VALLEY BANK

By: /s/ Anthony Flores
Name: Anthony Flores
Title: Vice President

BORROWER:

HALOZYME THERAPEUTICS, INC.

By: /s/ Laurie Stelzer
Name: Laurie Stelzer
Title: Chief Financial Officer

HALOZYME, INC.

By: /s/ Laurie Stelzer
Name: Laurie Stelzer
Title: Chief Financial Officer

SCHEDULE 1

PURCHASE AGREEMENT

[See attached.]

EXHIBIT 10.35

CREDIT AGREEMENT

Dated as of December , 2015

among

HALOZYME ROYALTY LLC,

as Borrower,

HALOZYME, INC.,

BIOPHARMA CREDIT INVESTMENTS IV SUB, LP,
as Collateral Agent and a Lender,

and

ATHYRIUM OPPORTUNITIES II ACQUISITION LP,
as a Lender

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CREDIT AGREEMENT

Dated as of December 30, 2015

Halozyme Royalty LLC, a Delaware limited liability company, as Borrower, BioPharma Credit Investments IV Sub, LP, a Cayman Islands exempted limited partnership, as Collateral Agent, Halozyme, Inc., a California corporation and the lenders party hereto from time to time, agree as follows (with certain terms used herein being defined in Article I):

ARTICLE I INTERPRETATION

Section 1.01 Defined Terms . For the purposes of this Agreement:

" Account" means an "account" as defined in Article 9 of the Code.

" Additiona l Consideration " has the meaning set forth in Section 2.11 .

" Adjusted Post-Closing Royalty A mounts" means, with respect to any Interest Period, the Post-Closing Royalty Amounts paid by Licensees during such Interest Period, minus the sum of:

(i) the amount of any Escrow Agent Fees paid by Halozyme prior to or during such Interest Period in accordance with the terms of the Escrow Agreement and not previously reimbursed; (ii) the amount of any Borrower Expenses then due and payable by the Borrower and not previously paid or reimbursed; and (iii) the amount of any Indemnity Collection Costs actually incurred by Halozyme prior to or during such Interest Period and not previously reimbursed.

" Af fi liate" means, with respect to a Person, any other Person that, directly or indirectly through one or more intermediaries, controls, or is controlled by, or is under common control with, such first Person; unless otherwise specified, "Affiliate" means an Affiliate of the Borrower and shall include Halozyme. "Control" shall be presumed where, directly or indirectly, such first Person owns more than 10% of the common stock or voting ownership interest of any other Person.

" Af filiate Agreeme nt" has the meaning set forth in Section 5.1 8.

" Agreem e nt" means this Agreement, including all schedules, annexes and exhibits hereto.

" Agreem ent D ate" means the date as of which this Agreement is dated.

" Applicable L aw" means, anything in Section 10.07 to the contrary notwithstanding, (a) all applicable common law and principles of equity and (b) all applicable provisions of all (i) constitutions, statutes, rules, regulations and orders of governmental bodies, (ii) Governmental Approvals and Governmental Registrations and (iii) orders, decisions, judgments and decrees.

" Applicab le P ercentage" means fifty percent (50%).

" A vailable Amo unt" has the meaning set forth in Section 2 .04.

" A vid B ioServices" means Avid BioServices, Inc., a Delaware corporation.

"Baxalta" means Baxalta US Inc. and Baxalta GmbH.

"Baxalta Consent and Direction" means the Consent and Acknowledgement of Payment Direction, to be dated on or prior to the Closing Date, in form and substance satisfactory to the Lenders.

"Baxalta License Agreement" means the Enhanze™ Technology License and Collaboration Agreement (Biologic), dated as of September 7, 2007, by Halozyme and Baxalta (as successor-in-interest to Baxter Healthcare Corporation and Baxter Healthcare S.A.) and any amendments, restatements, supplements or other modifications thereto.

"Baxalta License Termination Date" means the date on which the Borrower's right to receive royalties under Section 4.3 of the Baxalta License Agreement and other Post-Closing Royalty Amounts under Section 4.6.1 or 9.1 of the Baxalta License Agreement has terminated in its entirety.

"Baxalta Product" means each "Kit Product" and "Co-formulation Product", as such terms are defined in the Baxalta License Agreement.

"Baxalta Side Letters" means (a) that certain letter agreement, dated March 3, 2015, between Baxter International Inc. (on behalf of its direct and indirect subsidiaries) and Halozyme and (b) that certain letter agreement dated November 30, 2015 between Baxalta and Halozyme.

"Bill of Sale" means that certain Bill of Sale, to be dated as of the Closing Date (or such earlier date that the parties to the Purchase Agreement shall agree), executed by Halozyme and delivered to Borrower pursuant to the Purchase Agreement.

"Borrower" means Halozyme Royalty LLC, a Delaware limited liability company.

"Borrower Expenses" has the meaning set forth in Section 10.14(a).

"Business Day" means any day other than a Saturday, Sunday or other day on which banks in New York, New York or London, England are authorized to close.

"Calculations" has the meaning set forth in Section 6.03(a).

"Change in Control" means a transaction in which any "person" or "group" (within the meaning of Section 13(d) and 14(d)(2) of the Securities Exchange Act of 1934) is or becomes the "beneficial owner" (as defined in Rule 13d-3 under the Securities Exchange Act of 1934), directly or indirectly, of a sufficient number of shares/equity interests of all classes of stock/equity then outstanding of Borrower or Halozyme or the Parent, as applicable, ordinarily entitled to vote in the election of directors, empowering such "person" or "group" to elect a majority of the board of directors of Borrower, Halozyme or Parent, as applicable, who did not have such power before such transaction. A direct or indirect sale of all or substantially all of the assets of Parent, Halozyme or Borrower, as applicable, that relates to the Collateral shall be deemed a Change in Control.

"Chattel Paper" means "chattel paper" as defined in Article 9 of the Code, including "electronic chattel paper" or "tangible chattel paper", as each such term is defined in Article 9 of the Code.

"Closing Date" " means the date on which the Loan is advanced by the Lenders, which date shall be fifteen (15) Business Days after the later of (a) the Agreement Date and (b) the date on which each of the conditions set forth in Article III have been satisfied in full.

"Code" means the Uniform Commercial Code from time to time in effect in the State of New York; provided, however, that if by reason of mandatory provisions of law, the perfection or the effect of perfection or non-perfection of the security interests granted hereunder in any item or portion of the Collateral is governed by the Uniform Commercial Code of a jurisdiction other than New York, "Code" means the Uniform Commercial Code as in effect in such other jurisdiction for purposes of provisions hereof relating to such perfection or effect of perfection or non-perfection.

"Collaboration Supported Biologic Patent Rights" has the meaning ascribed to such term in the Baxalta License Agreement.

"Collaboration Supported PH20 Patent Rights" has the meaning ascribed to such term in the Baxalta License Agreement.

"Collateral" has the meaning set forth in Section 8.01.

"Collateral Agent" means BioPharma Credit Investments IV Sub, LP, in its capacity as Collateral Agent, as appointed under Section 9.01 hereof, and its successors and permitted assigns in such capacity.

"Commencement Notice" has the meaning set forth in Section 6.01(a).

"Commercial Tort Claims" means all "commercial tort claims" as defined in Article 9 of the Code.

"Commitment Amount" means $150,000,000.

"Competitor" means any Person which, to the knowledge of a Lender based on representations from the applicable pledgee and assignee in accordance with Section 10.06, (a) conducts scientific research or engages in development activities with respect to diagnostic or therapeutic products in the biotechnology or pharmaceutical industries, (b) manufactures, promotes, markets, distributes or sells any diagnostic or therapeutic products in the biotechnology or pharmaceutical industries, or (c) controls, is controlled by or is under common control with any Person that conducts any of the activities in the foregoing clauses (a) or (b).

"Contract" means any (a) agreement and (b) certificate of incorporation, charter, limited liability company agreement, limited partnership agreement or by-law.

"Default" means any condition or event that constitutes an Event of Default or that with the giving of notice or lapse of time or both would, unless cured or waived, become an Event of Default.

"Deposit Accounts" means all "deposit accounts" as defined in Article 9 of the Code.

"Documents" means all "documents" as defined in Article 9 of the Code.

"Dollars" and the sign "$" means the lawful currency of the United States of America.

"EMA" means the European Medicines Agency, and any successor agency(ies) or authority having substantially the same function.

"Enacted", as applied to a Regulatory Change, means the date such Regulatory Change first becomes effective or is implemented or first required or expected to be complied with, whether the same is the result of an enactment by a government or any agency or political subdivision thereof, a determination of a court or regulatory authority, a request or directive of a regulatory authority, or otherwise.

"Equipment" means all "equipment" as such term is defined in Article 9 of the Code.

"Equity Interests" means, with respect to any Person, shares of capital stock of (or other ownership or profit interests in) such Person, warrants, options or other rights for the purchase or other acquisition from such Person of shares of capital stock of (or other ownership or profit interests in) such Person, whether preferred or common and whether voting or nonvoting, and equity securities convertible into or exchangeable for shares of capital stock of (or other ownership or profit interests in) such Person or warrants, rights or options for the purchase or other acquisition from such Person of such shares (or other such interests), and other ownership or profit interests in such Person (including, without limitation, partnership, member or trust units or interests therein), whether voting or nonvoting, and whether or not such shares, warrants, options, rights or other interests are authorized or otherwise existing on any date of determination.

"Escrow Account" has the meaning ascribed to such term in the Escrow Agreement.

"Escrow Agent" means The Bank of New York Mellon (or such other bank approved by the Lenders), in its capacity as the escrow agent under the Escrow Agreement, and any successor in such capacity.

"Escrow Agent Fees" has the meaning ascribed to such term in the Escrow Agreement.

"Escrow Agreement" means that certain Escrow Agreement, to be dated as of the Closing Date (or such earlier date that the parties thereto shall agree), by and among the Borrower, Halozyme, the Collateral Agent and the Escrow Agent.

"Event of Default" means any of the events specified in Section 7.01.

"Event of Default Notice" has the meaning set forth in Section 6.04.

"Excluded Taxes" means any of the following Taxes imposed on or with respect to a Lender or required to be withheld or deducted from a payment to or for the benefit of a Lender, (a) Taxes imposed on or measured by net income (however denominated), franchise Taxes, and branch profits Taxes, in each case, (i) imposed as a result of such Lender being organized under the laws of, or having its principal office or, in the case of any Lender, its applicable lending office located in, the jurisdiction imposing such Tax (or any political subdivision thereof) or (ii) that are Taxes imposed as a result of a present or former connection between such Lender and the jurisdiction imposing such Tax (other than connections arising from such Lender having executed, delivered, become a party to, performed its obligations under, received payments under, received or perfected a security interest under, engaged in any other transaction pursuant to or enforced any Loan Document, or sold or assigned an interest in the Loan or any Loan Document), (b) U.S. federal withholding Taxes imposed on amounts payable to or for the account of a Lender with respect to an applicable interest in the Loan pursuant to a law in effect on the date on which (i) such Lender acquires such interest in the Loan or (ii) such Lender changes its lending office, except in each case to the extent that, pursuant to Section 2.09(c), amounts with respect to such Taxes were payable either to such Lender's assignor immediately before such Lender became a party hereto or to such Lender immediately before it changed its lending office, (c) Taxes attributable to such Lender's failure to comply with Section 2.09(d) and (d) any U.S. federal withholding Tax imposed under FATCA.

"FATCA" means Sections 1471 through 1474 of the IRS Code, as of the date of this Agreement (or any amended or successor version that is substantively comparable and not materially more onerous to comply with), any current or future regulations or official interpretations thereof and any agreement entered into pursuant to Section 1471(b)(1) of the IRS Code or intergovernmental agreement (or legislation, regulations or administrative guidance thereunder) for the implementation of the same.

"FDA" means the United States Food and Drug Administration, and any successor agency(ies) or authority having substantially the same function.

"Fixtures" means all "fixtures" as defined in Article 9 of the Code.

"General Intangibles" means all "general intangibles" as such term is defined in Article 9 of the Code.

"Generally Accepted Accounting Principles" means United States generally accepted accounting principles as in effect from time to time.

"Goods" (a) means all "goods" as defined in Article 9 of the Code and (b) includes all Inventory and Equipment (in each case, regardless of whether characterized as goods under the Code).

"Governmental Approval" means any authority, consent, approval, license (or the like) or exemption (or the like) of any Governmental Authority.

"Governmental Authority" means any government, court, regulatory or administrative agency or commission or other governmental authority, agency or instrumentality, whether foreign, federal, state or local (domestic or foreign).

"Governmental Registration" means any registration or filing (or the like) with, or report or notice (or the like) to, any Governmental Authority.

"Guaranty" of or by any Person shall mean any obligation, contingent or otherwise, of such Person guaranteeing or having the economic effect of guaranteeing any Indebtedness or other obligation of any other Person (the "primary obligor") in any manner, whether directly or indirectly, and including any obligation of such Person, direct or indirect, (a) to purchase or pay (or advance or supply funds for the purchase or payment of) such Indebtedness or other obligation or to purchase (or to advance or supply funds for the purchase of) any security for the payment of such Indebtedness or other obligation, (b) to purchase or lease property, securities or services for the purpose of assuring the owner of such Indebtedness or other obligation of the payment of such Indebtedness or other obligation or (c) to maintain working capital, equity capital or any other financial statement condition or liquidity of the primary obligor so as to enable the primary obligor to pay such Indebtedness or other obligation; provided, however, that the term "Guarantee" shall not include endorsements for collection or deposit in the ordinary course of business. The word "Guarantee" when used as a verb has the correlative meaning.

"Halozyme" means Halozyme, Inc., a California corporation.

"Halozyme Technology" means the "Licensed IP Rights", as such term is defined in the License Agreements.

"Indebtedness" of any Person means without duplication (a) any obligation of such Person for borrowed money, (b) any obligation of such Person evidenced by a bond, debenture, note or other similar instrument, (c) any obligation of such Person to pay the deferred purchase price of property or services, except a trade account payable that arises in the ordinary course of business, (d) any obligation of such Person as lessee under a capital lease, (e) any Mandatorily Redeemable Stock of such Person, (f) any obligation of such Person to purchase securities or other property that arises out of or in connection with the sale of the same or substantially similar securities or property, (g) any non-contingent obligation of such Person to reimburse any other Person in respect of amounts paid under a letter of credit or other Guaranty issued by such other Person, (h) any Indebtedness of others secured by a Lien on any asset of such Person and (i) any Indebtedness of others Guaranteed by such Person.

"Indemnified Tax" means any Tax, other than an Excluded Tax, imposed on or with respect to any payments made by or on account of any obligation of any Loan Party under any Loan Document.

"Indemnitee" has the meaning set forth in Section 10.14(b).

"Indemnity Collection Costs" has the meaning set forth in Section 6.02(c).

"Independent Director" has the meaning ascribed to such term in the LLC Agreement.

"Information" means data, certificates, reports, statements (including financial statements), documents and other information.

"Instruments" means all "instruments" as defined in Article 9 of the Code.

"Intellectual Property" means (a) trademarks; (b) patents; (c) trade secrets; (d) copyrights; (e) domain names; and (f) any equivalent rights to any of the foregoing anywhere in the world.

"Intellectual Property Licenses" means any copyright licenses, patent licenses, trademark licenses and trade secret licenses.

"Interest Period" means, with respect to the Loan, the period: (a) commencing on (and including) the Closing Date (in the case of the initial Interest Period applicable to the Loan) or the last day of the prior Interest Period (in the case of each subsequent Interest Period applicable to the Loan) and (b) ending on each Quarterly Payment Date.

"Interest Rate" means, as of any Interest Rate Determination Date, the per annum interest rate equal to the LIBOR Rate as of such date plus 8.75%.

"Interest Rate Determination Date" means the commencement date of each Interest Period as set forth in clause (a) of the definition thereof.

"Inventory" means all "inventory" as defined in Article 9 of the Code.

"Investment Property" means (a) all "investment property" as such term is defined in Article 9 of the Code and (b) whether or not constituting "investment property" as so defined, all Equity Interests and other Securities.

"IRS Code" means the U.S. Internal Revenue Code of 1986, as amended, reformed or otherwise modified from time to time, or any corresponding provision of a successor law thereto.

"Joint Disbursement Instruction" has the meaning set forth in Section 6.03(b).

"Lender" means each Person signatory hereto as a "Lender" and its registered successors and assigns.

"Letter of Credit" means "letter of credit" as defined in Article 9 of the Code.

"Letter of Credit Right" means "letter-of-credit right" as defined in Article 9 of the Code.

"Liability" of any Person means (in each case, whether with full or limited recourse) any indebtedness, liability, obligation, covenant or duty of or binding upon, or any term or condition to be observed by or binding upon, such Person or any of its assets, of any kind, nature or description, direct or indirect, absolute or contingent, due or not due, contractual or tortious, liquidated or unliquidated, whether arising under contract, Applicable Law, or otherwise,

whether now existing or hereafter arising, and whether for the payment of money or the performance or non-performance of any act.

"LIBOR Rate" means, as of any Interest Rate Determination Date, the rate per annum equal to (a) the rate of interest appearing on Reuters Screen LIBOR01 Page (or any successor page) for three-month Dollar deposits or (b) if no such rate is available, the rate of interest determined by the Collateral Agent to be the rate or the arithmetic mean of rates at which Dollar deposits in immediately available funds are offered to first-tier banks in the London interbank Eurodollar market, in each case under clause (a) or (b) above at approximately 11:00 a.m., London time, on such Interest Rate Determination Date for a period of three months; provided, however, that, for purposes of calculating the Interest Rate, the LIBOR Rate shall at all times have a floor of 0.70% and a cap of 1.50%.

"License Agreements" means, collectively, the Baxalta License Agreement and the Roche License Agreement.

"Licensed Patent Rights" has the meaning ascribed to such term in the Baxalta License Agreements or the Roche License Agreement, as the context dictates.

"Licensee" means each of Baxalta and Roche.

"Licensee Payment Date" means, with respect to any calendar quarter, the date that is the sixtieth (60th) day after the end of such calendar quarter.

"License Termination Date" means the date on which both the Baxalta License Termination Date and the Roche License Termination Date shall have occurred.

"Lien" means, with respect to any property or asset (or any income or profits therefrom) of any Person (in each case whether the same is consensual or nonconsensual or arises by contract, operation of law, legal process or otherwise) (a) any mortgage, lien, pledge, attachment, levy or other security interest of any kind thereupon or in respect thereof or (b) any other arrangement, express or implied, under which the same is transferred, sequestered or otherwise identified so as to subject the same to, or make the same available for, the payment or performance of any Liability in priority to the payment of the ordinary, unsecured Liabilities of such Person. For the purposes of this Agreement, a Person shall be deemed to own subject to a Lien any asset that it has acquired or holds subject to the interest of a vendor or lessor under any conditional sale agreement, capital lease or other title retention agreement relating to such asset.

"LLC Agreement" means the Limited Liability Company Agreement of the Borrower effective as of December 30, 2015, in form and substance satisfactory to the Lenders, and any duly authorized amendments or restatements thereto.

"Loan" means the term loans advanced by the Lenders pursuant to Section 2.01 in an original aggregate principal amount of $150,000,000.00.

"Loan Document Related Claim" means any claim or dispute (whether arising under Applicable Law, under contract or otherwise) in any way arising out of, related to, or connected with, the Loan Documents, the relationships established thereunder or any actions or conduct thereunder or with respect thereto, whether such claim or dispute arises or is asserted before or after the Agreement Date or before or after the Repayment Date.

"Loan Document Representation and Warranty" means any "Representation and Warranty" as defined in any Loan Document and any other representation or warranty made or deemed made under any Loan Document.

"Loan Documents" means (a) this Agreement, the Notes and the Escrow Agreement and (b) any other agreement, document or instrument, now or in the future, between the Borrower or any other Loan Party and the Collateral Agent or the Lenders in connection with this Agreement, including without limitation, the Roche Consent and Direction and the Baxalta Consent and Direction.

"Loan Party" means each of the Borrower and Halozyme.

"Mandatorily Redeemable Stock" means, with respect to any Person, any share of such Person's capital stock to the extent that it is (a) redeemable, payable or required to be purchased or otherwise retired or extinguished, or convertible into any Indebtedness or other Liability of such Person, (i) at a fixed or determinable date, whether by operation of a sinking fund or otherwise, (ii) at the option of any Person other than such Person or (iii) upon the occurrence of a condition not solely within the control of such Person, such as a redemption required to be made out of future earnings or (b) convertible into any share(s) of such Person's capital stock described in clause (a) above.

"Material Adverse Effect" means any: (a) materially adverse effect on the binding nature, validity or enforceability of any Loan Document as an obligation of any Loan Party that is a party thereto; (b) materially adverse effect on the binding nature, validity or enforceability of the Baxalta License Agreement as an obligation of Baxalta or Halozyme; (c) materially adverse effect on the binding nature, validity or enforceability of the Roche License Agreement as an obligation of Roche or Halozyme; (d) materially adverse effect on any of the Collateral (except to the extent such effect results directly from net sales or the prospects for future net sales of Product); (e) materially adverse effect on the binding nature, validity or enforceability of the Escrow Agreement as an obligation of the Escrow Agent; (f) materially adverse effect on the binding nature, validity or enforceability of the Purchase Agreement as an obligation of Halozyme; (g) material adverse change in any of the rights or remedies of the Collateral Agent or the Lenders under any Loan Document, or the ability of the Borrower to perform the Secured Obligations; (h) material adverse change in any of the rights or remedies of Borrower under the Purchase Agreement; (i) failure to pay when due any material amount or other material default by either Baxalta or Halozyme under the Baxalta License Agreement, or any material delay, elimination or material diminution of the amounts paid or payable by Baxalta under Sections 4.3, 4.6.1 or 9.1 of the Baxalta License Agreement with respect to any Post-Closing Royalty Amounts, but only to the extent caused by or resulting from any actual breach or default by Halozyme of any of its obligations under the Baxalta License Agreement; or (j) failure to pay when due any material amount or other material default by either Roche or Halozyme under the Roche License Agreement, or any material delay, elimination or material diminution of the amounts paid or payable by Roche under Sections 4.3, 4.6.6 or 9.1 of the Roche License Agreement with respect to any Post-Closing Royalty Amounts, but only to the extent caused by or resulting from any actual breach or default by Halozyme of any of its obligations under the Roche License Agreement.

"Maturity Date" means the earliest of: (a) the date on which payments made pursuant to Section 2.04 hereof have resulted in payment in full of all outstanding principal (including principal consisting of capitalized interest on the Loan) of and interest accrued on the Loan; (b) the License Termination Date; and (c) December 31, 2050.

"Maximum Permissible Rate" means, with respect to interest payable on any amount, the rate of interest on such amount that, if exceeded, could, under Applicable Law, result in (a) civil or criminal penalties being imposed on the payee or (b) the payee's being unable to enforce payment of (or, if collected, to retain) all or any part of such amount or the interest payable thereon.

"Money" means "money" as defined in the Code.

"Note" means the Borrower's secured promissory notes, each substantially in the form of Exhibit B hereto.

"Non-U.S. Lender" means a Lender that is not a U.S. Lender.

"OFAC" means the U.S. Department of the Treasury's Office of Foreign Assets Control and any successor thereto.

"Parent" means Halozyme Therapeutics, Inc., a Delaware corporation.

"Parent Disbursement Instruction" has the meaning set forth in Section 6.03(c).

"PATRIOT Act" means the Uniting and Strengthening America by Providing Appropriate Tools Required to Intercept and Obstruct Terrorism (USA PATRIOT Act of 2001) and any successor statute.

"Payment Report" has the meaning set forth in Section 5.04(a).

"Permitted Liens" means (i) the Liens and rights of Set-off in favor of the Escrow Agent under the Escrow Agreement, (ii) the rights of Set-off of the Escrow Agent, as depositary, with respect to the Escrow Account and the Residual Account, and (iii) the Liens in favor of the Collateral Agent or the Lenders created hereby or otherwise existing under or in connection with the Loan Documents.

"Person" means any individual, sole proprietorship, corporation, partnership, trust, unincorporated organization, mutual company, joint stock company, estate, union, employee organization, government or any agency or political subdivision thereof.

"PIK Payment" has the meaning set forth in Section 2.03(b).

"Pledged Royalty Rights" means (a) all of the Borrower's right, title and interest in and to the Post-Closing Royalty Amounts, including all amounts credited or transferred to the Escrow Account pursuant to the Escrow Agreement, (b) all of the Borrower's rights under the Escrow Agreement, (c) all of the Borrower's right, title and interest in, to and under the Purchase Agreement and (d) all Proceeds in respect of any of the foregoing.

"Post-Closing Royalty Amounts" means: (a) any and all royalty payments specified in Section 4.3 of the Baxalta License Agreement paid or payable pursuant thereto after the effective date of the Purchase Agreement (including late payments thereof, if any); (b) any and all royalty payments specified in Section 4.3 of the Roche License Agreement paid or payable pursuant thereto after the effective date of the Purchase Agreement (including late payments thereof, if any); (c) any and all amounts paid or payable pursuant to Section 4.6.1 of the Baxalta License Agreement after the effective date of the Purchase Agreement with respect to the underpayment of any royalties payable under Section 4.3 of the Baxalta License Agreement (excluding the out- of-pocket costs of the auditing party in connection with any such audit that are payable by Baxalta, if any); (d) any and all amounts paid or payable pursuant to Section 4.6.6 of the Roche License Agreement after the effective date of the Purchase Agreement with respect to the underpayment of any royalties payable under Section 4.3 of the Roche License Agreement (excluding the out-of-pocket costs of the auditing party in connection with any such audit that are payable by Roche, if any); (e) any and all indemnity payments paid or payable pursuant to Section 9.1 of the Baxalta License Agreement with respect to Liabilities (as defined in the Baxalta License Agreement) suffered by Borrower after the effective date of the Purchase Agreement with respect to any amounts payable under Sections 4.3 or 4.6.1 of the Baxalta License Agreement; and (f) any and all indemnity payments paid or payable pursuant to Section 9.1 of the Roche License Agreement with respect to Liabilities (as defined in the Roche License Agreement) suffered by Borrower after the effective date of the Purchase Agreement with respect to any amounts payable under Sections 4.3 or 4.6.6 of the Roche License Agreement.

"Prepayment Premium" means, with respect to any prepayment of the Loan by the Borrower pursuant to this Agreement, an amount equal to the product of the amount of such prepayment (including all principal and any interest that has been capitalized and added thereto in accordance with Section 2.03(b)), multiplied by 0.05.

"Proceeds" means all "proceeds" (as such term is defined in Article 9 of the Code) of Collateral.

"Product" means, collectively, Baxalta Product and Roche Product.

"Purchase Agreement" means that certain Asset Purchase Agreement, to be dated as of the Closing Date (or such earlier date that the parties thereto shall agree), by and between Halozyme and the Borrower, and the related Bill of Sale, each in form and substance satisfactory to the Lenders, and any amendments or restatements thereto.

"Quarterly Cap" means: (a) with respect to the amount of any Adjusted Post-Closing Royalty Amounts paid under the License Agreements during any calendar quarter occurring in the calendar year ending December 31, 2017 (regardless of when earned or accrued) attributable to any royalty payments described in clauses (a) and (b) of the term "Post-Closing Royalty Amounts", $13,750,000.00; (b) with respect to the amount of any Adjusted Post-Closing Royalty Amounts paid under the License Agreements during any calendar quarter occurring in the calendar year ending December 31, 2018 (regardless of when earned or accrued) attributable to any royalty payments described in clauses (a) and (b) of the term "Post-Closing Royalty Amounts", $18,750,000.00; (c) with respect to the amount of any Adjusted Post-Closing Royalty Amounts paid under the License Agreements during any calendar quarter occurring in the calendar year ending December 31, 2019 (regardless of when earned or accrued) attributable to any royalty payments described in clauses (a) and (b) of the term "Post-Closing Royalty Amounts", $21,250,000.00, and (d) with respect to the amount of any Adjusted Post-Closing Royalty Amounts paid under the License Agreements during any calendar quarter occurring on or after January 1, 2020 (regardless of when earned or accrued) attributable to any royalty payments described in clauses (a) and (b) of the term "Post-Closing Royalty Amounts", $22,500,000.00.

"Quarterly Payment Date" means, with respect to each calendar quarter, the date that is fifteen (15) days after the Licensee Payment Date with respect to such calendar quarter.

"Recipient" means any Lender and any other recipient (including on a pass-through basis for U.S. federal income tax purposes) of any payment to be made by or on account of any obligation of any Loan Party under any Loan Document.

"Register" has the meaning set forth in Section 2.07(a).

"Regulatory Change" means any Applicable Law, interpretation, directive, determination, request or guideline (whether or not having the force of law), or any change therein or in the administration or enforcement thereof, that is Enacted after the Agreement Date, including any such that imposes, increases or modifies any Tax, reserve requirement, insurance charge, special deposit requirement, assessment or capital adequacy requirement.

"Related Parties" means, with respect to any Person, such Person's Affiliates and the partners, directors, officers, employees, agents, trustees, administrators, managers, advisors, sub- advisors and representatives of such Person and of such Person's Affiliates.

"Required Lenders" means Lenders representing greater than the Applicable Percentage of the outstanding principal amount of the Loan evidenced by the Notes.

"Repayment Date" means the later of (a) the termination of this Agreement and (b) the payment in full of the Secured Obligations.

"Representation and Warranty" means any representation or warranty made pursuant to or under (a) Article IV or any other provision of this Agreement or (b) any amendment to, or waiver of rights under, this Agreement.

"Residual Account" has the meaning ascribed to such term in the Escrow Agreement.

"Residual Amount" means, with respect to any Interest Period, an amount, if greater than zero, equal to the Adjusted Post-Closing Royalty Amounts paid during such Interest Period into the Escrow Account pursuant to the Escrow Agreement less the Quarterly Cap, if any, applicable to the Adjusted Post-Closing Royalty Amounts earned or accrued during the calendar quarter to which such Quarterly Cap, if any, applies and paid during such Interest Period.

"Responsible Officer of the Borrower" means the manager, or any senior or other responsible officer, of the Borrower.

"Restricted Payment" means any payment with respect to or on account of any of the Borrower's Equity Interests, including any dividend or other distribution on, any payment of interest on or principal of, and any payment on account of any purchase, redemption, retirement, exchange, defeasance or conversion of, or on account of any claim relating to or arising out of the offer, sale or purchase of, any such Equity Interests. For the purposes of this definition, a "payment" shall include the transfer of any asset or the incurrence of any Indebtedness or other Liability (the amount of any such payment to be the fair market value of such asset or the amount of such obligation, respectively) but shall not include the issuance of any capital stock of the Borrower other than Mandatorily Redeemable Stock.

"Roche" means F. Hoffmann-La Roche Ltd., a Swiss corporation, and Hoffmann-La Roche Inc., a New Jersey corporation, individually or collectively as the context dictates.

"Roche Consent and Direction" means the Consent and Acknowledgement of Payment Direction, to be dated on or prior to the Closing Date, in form and substance satisfactory to the Lenders.

"Roche License Agreement" means the License and Collaboration Agreement, dated as of December 5, 2006, by Halozyme and Roche and any amendments, restatements, supplements or other modifications thereto.

"Roche License Termination Date" means the date on which the Borrower's right to receive royalties under Section 4.3 of the Roche License Agreement and other Post-Closing Royalty Amounts under Section 4.6.6 or 9.1 of the Roche License Agreement has terminated in its entirety.

"Roche Product" means each "Kit Product" and "Coformulation Product", as such terms are defined in the Roche License Agreement.

"Roche Side Letters" means (a) that certain letter agreement, dated June 14, 2010, between Halozyme and Roche and (b) that certain letter, dated September 3, 2015, from Halozyme to Roche.

"Royalty Rights" has the meaning set forth in Section 4.11.

"Sanctioned Country" means a country subject to a sanctions program identified on the list maintained by OFAC and available at http://www.treas.gov/offices/enforcement/ofac/programs/, or as otherwise published from time to time.

"Sanction ed P erson" means (i) a Person named on the list of Specially Designated Nationals or Blocked Persons maintained by OFAC available at http://www.treas.gov/offices/enforcement/ofac/sdn/index.shtml , or as otherwise published from time to time, or (ii)(A) an agency of the government of a Sanctioned Country, (B) an organization controlled by a Sanctioned Country or (C) a Person resident in a Sanctioned Country, to the extent subject to a sanctions program administered by OFAC.

"Sanction (s)" means any sanction administered or enforced by the United States Government (including, without limitation, OFAC), the United Nations Security Council, the European Union, Her Majesty's Treasury ("HMT") or other relevant sanctions authority.

"Secured O bligations" means all obligations of the Borrower under this Agreement, the Notes and any of the other Loan Documents, in each case whether direct or indirect (including those acquired by assignment), absolute or contingent, primary or secondary, due or to become due, now existing or hereafter arising and however acquired, including, subject to Sections 2.03 and 2.04 hereof, the obligation to pay the principal (including principal consisting of capitalized interest on the Loan) of and all interest (including to the extent permitted by law, all post-petition interest), charges, expenses, fees, attorneys' fees and any other sums payable (including Additional Consideration and any applicable Prepayment Premium) by the Borrower to the Collateral Agent or the Lenders under this Agreement, the Notes or any of the other Loan Documents.

"Secured Par ties" means, collectively, the Lenders and the Collateral Agent.

"Securities A ccount" means all "securities accounts" as defined in Article 8 of the Code.

"Security" means "security" as defined in Article 8 of the Code.

"Set-of f " means any set-off, offset, rescission, claim, counterclaim, defense, reduction or deduction of any kind. Without limiting the generality of the foregoing, the term "Set-off" shall include the right of Baxalta (or its Affiliates), Roche (or its Affiliates) or other applicable licensee to pay less than the otherwise required amount of the Post-Closing Royalty Amount for any reason, including in connection with (a) a breach by Halozyme of either License Agreement, (b) any rights to reimbursement of any costs or expenses of Baxalta (or its Affiliates), Roche (or its Affiliates) or such other licensee under either License Agreement or (c) any amounts paid or payable pursuant to any indemnification rights or other obligations of Halozyme under either License Agreement.

"Single Purpose E ntity" means, as such term applies to the Borrower, a Person that (i) does not engage at any time in any business or business activity other than any business or business activity consisting of (or reasonably incidental to) the performance of its obligations or the exercise of its rights under or in connection with the Transaction Documents and the Loan Documents, (ii) owns no assets other than those required for or reasonably related to the conduct of any such business or business activity, including its books and records, deposit accounts maintained pursuant to the Escrow Agreement, cash and the Collateral, (iii) maintains its own separate books and records and its own accounts, in each case which are separate and apart from the books and records and accounts of any other Person; provided, that the Borrower's financial statements may be included in the consolidated financial statements of Halozyme and/or its parent company, (iv) holds itself out as being a Person, separate and apart from any other Person, except that the Borrower is a disregarded entity for U.S. federal tax purposes, (v) does not commingle its assets or properties with those of any other Person, (vi) conducts its own business in its own name, (vii) prepares and maintains separate financial statements, (viii) pays its own liabilities out of its own funds except as permitted under the Loan Documents, (ix) observes all limited liability company formalities, (x) maintains an arm's-length relationship with Halozyme and its other Affiliates, (xi) pays the salaries of its own employees, if any, and does so with its own funds, (xii) does not

Guarantee or otherwise obligate itself with respect to the Indebtedness or other Liabilities of any other Person or hold out its credit as being available to satisfy the Indebtedness or other Liabilities of any other Person, (xiii) does not acquire Indebtedness, Equity Interests or other securities of its member, (xiv) allocates fairly and reasonably any overhead for any shared office space, (xv) uses separate stationery, invoices, and checks, if any, (xvi) does not pledge its assets or properties for the benefit of any other Person or make any loans or advances to any other Person, (xvii) does and will correct any known misunderstanding regarding its separate identity, and (xviii) maintains adequate capital in light of its contemplated business operations (to the extent there exists sufficient cash flow from the Collateral available to Borrower to do so after the payment of its obligations under this Agreement and this clause shall not require Halozyme to make additional capital contributions to Borrower).

"Subsidiary" means with respect to any Person (i) any corporation of which the outstanding capital stock having at least a majority of votes entitled to be cast in the election of directors (or, if there are no such voting interests, 50% or more of the equity interests) under ordinary circumstances is at the time owned, directly or indirectly, by such Person or by another Subsidiary of such Person or (ii) any other Person of which at least a majority voting interest (or, if there are no such voting interests, 50% or more of the Equity Interests) under ordinary circumstances is at the time owned, directly or indirectly, by such Person or by another Subsidiary of such Person.

"Tax" means all present or future taxes, levies, imposts, duties, deductions, withholdings (including backup withholding), assessments, fees or other charges imposed by any Governmental Authority, including any interest, additions to tax or penalties applicable thereto.

"Trading with the Enemy Act" means the Trading with the Enemy Act, as amended, and each of the foreign assets control regulations of the United States Treasury Department (31 CFR, Subtitle B, Chapter V, as amended) and any other enabling legislation or executive order relating thereto.

"Transaction Documents" means the Baxalta License Agreement, the Roche License Agreement, the Baxalta Side Letters, the Roche Side Letters, the Purchase Agreement, the Baxalta Consent and Direction and the Roche Consent and Direction.

"United States" and "U.S." mean the United States of America.

"U.S. Lender" means a Lender that is a United States person, as such term is defined under Section 7701(a)(30) of the IRS Code.

Section 1.02 Other Interpretative Provisions. For the purposes hereof and as used herein, except as otherwise specified, (a) references to any Person include its successors and assigns and, in the case of any governmental authority, any Person succeeding to its functions and capacities; (b) references to any Applicable Law include amendments, supplements and successors thereto; (c) references to any Loan Document or Contract include amendments, supplements and waivers thereto (and, in the case of instruments, instruments issued in substitution therefor); (d) references to specific sections, articles, annexes, schedules and exhibits are to this Agreement; (e) words importing gender include the other gender; (f) the singular includes the plural and the plural includes the singular; (g) the words "including", "include" and "includes" shall be deemed followed by the words "without limitation"; (h) each authorization herein shall be deemed irrevocable and coupled with an interest; (i) all accounting terms shall be interpreted, and all determinations relating thereto shall be made, in accordance with Generally Accepted Accounting Principles; (j) captions and headings are for ease of reference only and shall not affect the construction hereof; (k) references to any time of day shall be to New York time; (l) the words "knowledge of the Borrower," "of which the

Borrower is aware", "knowledge of Halozyme", "of which Halozyme is aware" and similar phrases shall be deemed to constitute references to the knowledge of the Borrower and Halozyme; and (m) the word "or" is not exclusive.

ARTICLE II

CREDIT FACILITY

Section 2.01 Loan.

Subject to the terms and conditions hereof (including Section 3.01(a)), the Lenders, severally and not jointly, agree to make, on the Closing Date, the Loan to the Borrower in an aggregate original principal amount of $150,000,000.00, which such original principal amount shall be allocated among the Lenders in accordance with Exhibit A hereto.

Section 2.02 Manner of Borrowing.

The Lenders shall disburse the Loan on the Closing Date no later than 12:00 PM on such date in Dollars in funds immediately available to the Borrower (in accordance with the allocations set forth in Exhibit A hereto) by wire transfer to an account of the Borrower in the United States as shall have been specified in a prior written notice to the Lenders.

Section 2.03 Interest.

(a) Interest. The Loan shall bear interest on the outstanding principal amount thereof (including principal consisting of capitalized interest on the Loan) during each Interest Period at a rate per annum equal to the Interest Rate as determined on the Interest Rate Determination Date falling on the commencement of the applicable Interest Period. The Collateral Agent shall give notice to the Borrower and the Lenders of the Interest Rate on each Interest Rate Determination Date.

(b) Payment. Interest in respect of the Loan shall be payable in cash in Dollars quarterly in arrears on each Quarterly Payment Date and on (i) the Maturity Date and (ii) any other date on which the Loan or any portion thereof shall be due (whether by reason of notice of prepayment or acceleration or otherwise), but only to the extent then accrued on the amount then so due; provided, however, that if on any Quarterly Payment Date the Available Amount available for the payment of accrued and unpaid interest in respect of the Loan as determined pursuant to Section 2.04 is insufficient to make such interest payment in full in cash on any such Quarterly Payment Date, the amount of any such shortfall shall instead be "paid-in- kind" by being capitalized and added to the outstanding principal balance of the Loan on such Quarterly Payment Date (such that the same shortfall amount will no longer constitute accrued and unpaid interest but instead will be part of the principal of the Loan for all purposes), (each, a "PIK Payment"). Unless the context otherwise requires, for all purposes hereof, references to "principal amount" of the Loan shall refer to the face amount of the Loan and shall include any increase in the principal amount of the outstanding Loan as a result of a PIK Payment.

(c) Computation of Interest. Interest shall be computed on the basis of a year of 360 days and the actual number of days elapsed. Interest for any period, including any Interest Period, shall be calculated from and including the first day thereof to but excluding the last day thereof.

(d) Maximum Interest R ate. Nothing contained in the Loan Documents shall require the Borrower at any time to pay interest at a rate exceeding the Maximum Permissible Rate. If interest payable by the Borrower on any date would exceed the maximum amount permitted by the Maximum Permissible Rate, such interest payment shall automatically be reduced to such maximum permitted amount, and interest for any subsequent period, to the extent less than the maximum amount permitted for such period by the Maximum Permissible Rate, shall be increased by the unpaid amount of such reduction. Any interest actually received for any period in excess of such maximum amount permitted for such period shall be deemed to have been applied as a prepayment of the Loan (but without any prepayment penalty).

Section 2.04 Repayme nt. The Loan shall be due and payable in quarterly installments on each Quarterly Payment Date, in an amount equal to (such amount being referred to as the " A vailable Amo unt"): (a) for each Interest Period occurring prior to January 1, 2017, $0, (b) for each Interest Period occurring on or after January 1, 2017 and ending prior to January 1, 2018, the lesser of (i) fifty percent (50%) of the Adjusted Post-Closing Royalty Amounts paid under the License Agreements during such Interest Period and (ii) the Quarterly Cap applicable to the Adjusted Post-Closing Royalty Amounts paid under the License Agreements during the calendar quarter to which such Quarterly Cap applies (regardless of when earned or accrued) and received during such Interest Period; and (c) for each Interest Period ending on or after January 1, 2018, the lesser of (i) one hundred percent (100%) of the Adjusted Post-Closing Royalty Amounts paid under the License Agreements during such calendar quarter and (ii) the Quarterly Cap applicable to the Adjusted Post-Closing Royalty Amounts paid under the License Agreements during the calendar quarter to which such Quarterly Cap applies (regardless of when earned or accrued) and received during such Interest Period; l ess, in each case, the portion of the Available Amount applied to interest as hereinafter provided in this Section 2 .04. The Available Amount shall be applied on each such Quarterly Payment Date as follows: (i) first, to the payment of any unpaid and uncapitalized interest accrued during prior Interest Periods, if any, (ii) second, to the payment of interest accrued during the current Interest Period, and (iii) third, to the payment of the outstanding principal amount of Loan. The outstanding principal amount of the Loan (including principal consisting of capitalized interest on the Loan) shall mature and shall be due and payable on the Maturity Date (together with all accrued and unpaid interest thereon), p rovided, h owever, in the event any such principal or interest remains outstanding on the Maturity Date following the occurrence of the License Termination Date, the Borrower's obligation to repay such principal and interest shall be limited to the Available Amount.

For the avoidance of doubt, the Lenders and the Borrower confirm that the failure of the Borrower to repay the Loan on the Maturity Date, or any other date, resulting from the failure of Baxalta to make payments under the Baxalta License Agreement or from the failure of Roche to make payments under the Roche License Agreement, for any reason other than a breach or default by Halozyme of any of its obligations under the Baxalta License Agreement or the Roche License Agreement, respectively, shall not constitute a breach of Section 2.03(b) or this Section 2.4 or constitute an Event of Default under Section 7 .01(a).

Section 2.05 Voluntary Prepaymen ts. At any time after January 1, 2019, the Borrower may prepay the outstanding principal amount of the Loan in whole or in part in increments of no less than $25,000,000 upon at least three (3) Business Days' prior written notice to the Lenders (which notice may be by telephone, if confirmed in writing immediately thereafter, facsimile, e- mail or other written communication). All prepayments by the Borrower pursuant to this Section 2.05 shall be accompanied by accrued and unpaid interest on the principal amount to be prepaid to the date of payment in full, which unpaid interest, for the avoidance of doubt, shall not include any such interest that has already been capitalized and added to the then-outstanding principal amount of the Loan in accordance with Section

2.03(b). Any prepayments of the Loan by the Borrower pursuant to this Section 2.05 shall, in each case, be accompanied by payment of the applicable Prepayment Premium.

Section 2.06 Mandatory Prepayment for Change in Control. Upon a Change in Control, Borrower shall prepay the outstanding amounts of the Loan in full, without any notice from or other action by Lenders, no later than ten (10) Business Days after the consummation of such Change in Control. Prepayment by the Borrower pursuant to this Section 2.06 shall be accompanied by accrued and unpaid interest on the principal amount to be prepaid to the date of payment in full, which unpaid interest, for the avoidance of doubt, shall not include any such interest that has already been capitalized and added to the then-outstanding principal amount of the Loan in accordance with Section 2.03(b). The prepayment of the Loan by the Borrower pursuant to this Section 2.06 shall be accompanied by payment of the applicable Prepayment Premium. From and after the Closing Date, Borrower shall promptly, and in any event no later than two (2) Business Days prior to the consummation thereof, notify the Collateral Agent and the Lenders in writing in accordance with Section 10.01 of the occurrence of a Change in Control, which notice shall include reasonable detail as to the nature and other circumstances of such Change in Control.

Section 2.07 Register.

(a) The Collateral Agent shall establish and maintain at its address referred to in Section 10.01 (i) a record of ownership (the "Register") in which the Collateral Agent shall register by book entry the interests (including any rights to receive payment of principal and interest hereunder) of each Lender in each Note, and any assignment of any such interest and (ii) accounts in the Register in accordance with its usual practice in which it shall record (A) the names, addresses and bank account details of the Lenders (and any change thereto pursuant to this Agreement), (B) the principal amounts (and stated interest) owing to each Lender and (C) any other payment received by the Lenders pursuant to the Loan Documents.

(b) Notwithstanding anything to the contrary contained in this Agreement, (i) each Note is a registered obligation, (ii) the right, title and interest of the Lenders and their assignees in and to the Notes or any portion thereof shall be transferable only upon notation of such transfer in the Register and (iii) no assignment thereof therein shall be effective until recorded therein. This Section 2.07 and Sections 10.06 and 10.13 shall be construed so that each Note is at all times maintained in "registered form" within the meaning of Sections 163(f), 871(h)(2) and 881(c)(2) of the IRS Code and Section 5f.103-1(c) of the United States Treasury Regulations.

(c) The entries in the Register shall be conclusive absent manifest error, and the Borrower, the Collateral Agent and the Lenders shall treat each Person whose name is recorded in the Register as a Lender (and as the owner of the amounts owing to it under the Notes as reflected in the Register) for all purposes of this Agreement. Information contained in the Register with respect to any Lender shall be available for access by such Lender at any reasonable time and from time to time upon reasonable prior notice.

Section 2.08 Evidence of Indebtedness. The Loan and the Borrower's obligation to repay the Loan with interest in accordance with the terms of this Agreement shall be evidenced by this Agreement, the Register, and one or more Notes. The terms of this Agreement shall be incorporated by reference into the Notes as if set forth therein and, in the event of any conflict between the terms of this Agreement and the Notes, the terms of this Agreement shall control.

Section 2.09 Payments by the Borrower.

(a) Time, Place and M anner. Any and all payments and other amounts due under the Loan Documents shall be made to the applicable Lender's bank account as designated by such Lender in writing by notice from time to time to the Borrower. A payment to be made in cash hereunder shall not be deemed to have been made on any day unless such payment has been received by the applicable Lender, at the required place of payment, in Dollars in funds immediately available to such Lender at such place, no later than 12:00 p.m. (noon) on such day.

(b) No R eductions. All payments due to Lenders under the Loan Documents shall be made by Borrower without any reduction or deduction for any Set-off, recoupment, counterclaim or similar amount, except as required by Applicable Law.

(c) Withholding Taxes; Indemni fication. Borrower and each Lender intend that under current Applicable Law, no deduction or withholding for any Tax is required with respect to any payments due to a Recipient under the Loan Documents, provided that such Recipient has complied with the applicable requirements of Section 2 .09(d). All payments due to each Lender under the Loan Documents shall be made by Borrower without any deduction or withholding for any Tax. If any Applicable Law (as determined in the good faith discretion of the Borrower) requires the deduction or withholding of any Tax from any such payment, then the Borrower shall be entitled to make such deduction or withholding and shall timely pay the full amount deducted or withheld to the relevant Governmental Authority in accordance with Applicable Law and, if such Tax is an Indemnified Tax, then the sum payable by the Borrower to each applicable Lender shall be increased as necessary so that after such deduction or withholding has been made (including such deductions and withholdings applicable to additional sums payable under this Section 2 .09(c)) the recipient Lender receives an amount equal to the sum that it would have received had no such deduction or withholding been made. The Borrower shall indemnify each Recipient, within five (5) days after request therefor, for the full amount of any Indemnified Taxes (including Indemnified Taxes imposed or asserted on or attributable to amounts payable under this Section 2 .09(c)) payable or paid by such Recipient or required to be withheld or deducted from a payment to such Recipient and any reasonable expenses arising therefrom or with respect thereto, whether or not such Indemnified Taxes were correctly or legally imposed or asserted by the relevant Governmental Authority. A certificate as to the amount of such payment or liability delivered to the Borrower by a Recipient shall be conclusive absent manifest error.

(d) Status of L enders.

(i) Any Lender that is entitled to an exemption from or reduction of withholding Tax with respect to payments made under any Loan Document shall deliver to the Borrower, at the time or times reasonably requested by the Borrower, such properly completed and executed documentation reasonably requested by the Borrower as will permit such payments to be made without withholding or at a reduced rate of withholding. In addition, any Lender, if reasonably requested by the Borrower, shall deliver such other documentation prescribed by applicable law or reasonably requested by the Borrower as will enable the Borrower to determine whether or not such Lender is subject to backup withholding or information reporting requirements.

(ii) Without limiting the generality of the foregoing,

(A) a U.S. Lender shall deliver to the Borrower on or prior to the Closing Date or later date on which such Lender becomes a Lender under this Agreement (and from time to time thereafter upon the reasonable request of the Borrower), executed originals of IRS Form W-9 certifying that such Lender is exempt from U.S. federal backup withholding Tax;

(B) a Non-U.S. Lender shall, to the extent legally entitled to do so, deliver to the Borrower (in such number of copies as shall be requested by the Borrower) on or prior to the Closing Date or later date on which such Lender becomes a Lender under this Agreement (and from time to time thereafter upon the reasonable request of the Borrower), whichever of the following is applicable:

(1) in the case of a Non-U.S. Lender claiming the benefits of an income Tax treaty to which the United States is a party (x) with respect to payments of interest under any Loan Document, executed originals of IRS Form W-8BEN-E establishing an exemption from U.S. federal withholding Tax pursuant to the "interest" article of such Tax treaty and (y) with respect to any other applicable payments under any Loan Document, IRS Form W-8BEN-E establishing an exemption from U.S. federal withholding Tax pursuant to the "business profits" or "other income" article of such Tax treaty, and establishing compliance with FATCA;

(2) executed originals of IRS Form W-8ECI;

(3) in the case of a Non-U.S. Lender claiming the benefits of the exemption for portfolio interest under Section 881(c) of the IRS Code, (x) a certificate to the effect that such Non-U.S. Lender is not a "bank" within the meaning of Section 881(c)(3)(A) of the IRS Code, a "10 percent shareholder" of the Borrower within the meaning of Section 881(c)(3)(B) of the IRS Code, or a "controlled foreign corporation" described in Section 881(c)(3)(C) of the IRS Code and (y) executed originals of IRS Form W-8BEN-E, and establishing compliance with FATCA; or

(4) to the extent a Non-U.S. Lender is not the beneficial owner, executed originals of IRS Form W-8IMY, accompanied by any certifications or documents required by Section 2.09(d)(i) or (ii) with respect to the beneficial owner, and establishing compliance with FATCA.

(iii) any Non-U.S. Lender shall deliver, to the extent legally entitled to do so, to the Borrower (in such number of copies as shall be requested by the Borrower) on or prior to the Closing Date or later date on which such Lender becomes a Lender under this Agreement (and from time to time thereafter upon the reasonable request of the Borrower), executed originals of any other form prescribed by applicable law as a basis for claiming exemption from U.S. federal withholding Tax, duly completed; and

(iv) each Lender agrees that if any form or certification it previously delivered expires or becomes obsolete or inaccurate in any respect, it shall update such form or certification or promptly notify the Borrower in writing of its legal inability to do so.

(e) Treatment of Certain Refunds. If any party determines, in its sole discretion exercised in good faith, that it has received a refund of any Taxes as to which it has been indemnified pursuant to this Section 2.09 (including by the payment of additional amounts pursuant to this Section 2 .09), it shall pay to the indemnifying party an amount equal to such refund (but only to the extent of indemnity payments made under this Section with respect to the Taxes giving rise to such refund), net of all out-of-pocket expenses (including Taxes) of such indemnified party and without interest (other than any interest paid by the relevant Governmental Authority with respect to such refund). Such indemnifying party, upon the request of such indemnified party, shall repay to such indemnified party the amount paid over pursuant to this paragraph (h) (plus any penalties, interest or other charges imposed by the relevant Governmental Authority) in the event that such indemnified party is required to repay such refund to such Governmental Authority. Notwithstanding anything to the contrary in this paragraph (e), in no event

will the indemnified party be required to pay any amount to an indemnifying party pursuant to this paragraph (e) the payment of which would place the indemnified party in a less favorable net after-Tax position than the indemnified party would have been in if the Tax subject to indemnification and giving rise to such refund had not been deducted, withheld or otherwise imposed and the indemnification payments or additional amounts with respect to such Tax had never been paid. This paragraph shall not be construed to require any indemnified party to make available its Tax returns (or any other information relating to its Taxes that it deems confidential) to the indemnifying party or any other Person.

(f) Extension of Payment Dates. Whenever any payment to the Lenders under the Loan Documents would otherwise be due (except by reason of acceleration) on a day that is not a Business Day, such payment shall instead be due on the next succeeding Business Day. If the date any payment under the Loan Documents is due is extended (whether by operation of any Loan Document, Applicable Law or otherwise), such payment shall bear interest for such extended time at the Interest Rate applicable hereunder.

(g) Prepayment Premium. Any prepayments of the Loan by the Borrower (i) after January 1, 2019 pursuant to Section 2.05, (ii) as a result of a Change in Control pursuant to Section 2.06, (iii) as a result of the acceleration of the Maturity Date pursuant to Section 7.02(a) or (iv) as a result of any other circumstance where the Borrower violates its obligations under this Agreement to avoid payment of such Prepayment Premium, shall, in any such case, be accompanied by payment of the applicable Prepayment Premium.

Section 2.10 Changes In Law. If at any time any Lender determines that any Regulatory Change Enacted after the Agreement Date makes it unlawful or impossible for such Lender to maintain the Loan, such Lender shall promptly notify the Borrower of any circumstance that would make the provisions of this Section 2.10 applicable and each of such Lender, Borrower and Halozyme agree, if legally possible and commercially practicable under the circumstances, to promptly negotiate in good faith such amendments or other modifications to the Loan, this Agreement or any of the other Loan Documents to which it is a party, as the case may be, so that it is no longer unlawful or impossible for such Lender to maintain the Loan. Each Lender agrees to pay (within five (5) days after the receipt of written notice from Borrower and Halozyme) all out-of-pocket costs and expenses of Borrower and Halozyme (including, without limitation, the reasonable and documented fees and expenses of Borrower's and Halozyme's legal counsel) reasonably incurred by Borrower and Halozyme in connection with any such negotiations, amendments or modifications involving such Lender.

Section 2.11 Additional Consideration. As additional consideration for the making of the Loan, Borrower shall pay to each Lender on the Closing Date an amount equal to one percent (1.00%) of the original principal amount of the Loan allocated to such Lender in accordance with Exhibit A hereto (the "Additional Consideration").

Section 2.12 Pro Rata Treatment.

(a) All payments on account of principal of or interest of the Loan, fees or any other Secured Obligations owing to or for the account of any one or more Lenders shall be apportioned ratably among such Lenders in proportion to the amounts of such principal, interest, fees or other Secured Obligations owed to them respectively.

(b) If any Lender shall, by exercising any right of Set-off (including in accordance with Section 7.02(c)) or counterclaim or otherwise, obtain payment in respect of any principal of or interest on the Loan or other Secured Obligations hereunder resulting in such Lender's receiving payment of a proportion of the aggregate amount of the Loan and accrued interest thereon or other such Secured Obligations greater than its pro rata share thereof as

provided herein, then the Lender receiving such greater proportion shall (i) notify the other Lenders of such fact and (ii) purchase (for cash at face value) participations in the Loan and such other Secured Obligations of the other Lenders, or make such other adjustments as shall be equitable, so that the benefit of all such payments shall be shared by the Lenders ratably in accordance with the aggregate amount of principal of and accrued interest on the Loan and other amounts owing them; provided that (A) if any such participations are purchased and all or any portion of the payment giving rise thereto is recovered, then such participations shall be rescinded and the purchase price restored to the extent of such recovery, without interest, and (B) the provisions of this Section 2.12(b) shall not be construed to apply to (x) any payment made by the Borrower pursuant to and in accordance with the express terms of this Agreement or (y) any payment obtained by a Lender as consideration for the assignment of or sale of a participation in any of its portion of the Loan evidenced by its Note to any assignee or participant, other than to the Borrower or its Affiliates (as to which the provisions of this Section 2.12(b) shall apply). The Borrower consents to the foregoing and agrees, to the extent it may effectively do so under Applicable Law, that any Lender acquiring a participation pursuant to the foregoing arrangements may exercise against the Borrower rights of Set-off and counterclaim with respect to such participation as fully as if such Lender were a direct creditor of the Borrower in the amount of such participation. If under any applicable bankruptcy, insolvency or similar law, any Lender receives a secured claim in lieu of a Set-off to which this Section 2.12(b) applies, then such Lender shall, to the extent practicable, exercise its rights in respect of such secured claim in a manner consistent with the rights of the Lenders entitled under this Section 2.12(b) to share in the benefits of any recovery on such secured claim.

Section 2.13 A HYDO. Notwithstanding anything in this Agreement to the contrary, commencing with the first "accrual period" (as defined under Treasury Regulation Section 1.1272-1(b)(1)(ii)) ending after the fifth anniversary of the Agreement Date, and each accrual period thereafter, the Borrower shall, in respect of the Loan, pay in cash, on or before the end of such accrual period, both the stated interest due and payable as set forth in Section 2.03 and any accrued and unpaid "original issue discount" (determined in accordance with Treasury Regulation Sections 1.1273-1 and 1.1272-1 and taking into account, for the avoidance of doubt, the Additional Consideration) with respect to the Loan if, but only to the extent that, the aggregate amount of such original issue discount that has accrued and has not been paid in cash from the Agreement Date through the end of such accrual period (treating any payments made pursuant to this Article II as a payment of interest and original issue discount to the full extent required under Treasury Regulation Sections 1.446-2(e)(l) and 1.1275-2(a)) exceeds the product of the "issue price" (as defined in Treasury Regulation Section 1.1273-2(a)(1)) of the Loan and the "yield to maturity" (determined in accordance with Treasury Regulation Section 1.1272-1(b) and taking into account, for the avoidance of doubt, the Additional Consideration) on the Loan.

ARTICLE III CONDITIONS TO LOAN

Section 3.01 Conditions to Loan.

(a) The obligation of the Lenders to make the Loan is subject to the determination by the Lenders, in their sole and absolute discretion, that each of the following conditions has been fulfilled prior to the making of the Loan:

(i) the Lenders shall have received duly executed copies of this Agreement and each of the other Loan Documents and such other certificates, documents, instruments and agreements as the Lenders shall reasonably request in connection with the transactions contemplated by this Agreement and the other Loan Documents;

(ii) the Lenders shall have received from each Loan Party each of the items referred to in clauses (x) and (y) below:

(x) a copy of the certificate of formation, limited liability company agreement, certificate of incorporation, by-laws or other constituent or governing documents, including all amendments thereto, of such Loan Party, (A) if applicable in such jurisdiction, certified as of a recent date by the Secretary of State (or other similar official) of the jurisdiction of its organization, and a certificate as to the good standing (to the extent such concept or a similar concept exists under the laws of such jurisdiction) of such Loan Party as of a recent date from such Secretary of State (or other similar official), and (B) otherwise, (1) certified by the Secretary or Assistant Secretary of such Loan Party or other Person duly authorized by the constituent documents of such Loan Party or (2) in form and substance reasonably satisfactory to the Lender; and

(y) a certificate of the Secretary or Assistant Secretary or similar officer of such Loan Party or other Person duly authorized by the constituent documents of such Loan Party dated as of the Closing Date and certifying:

(A) that attached thereto is a true and complete copy of the limited liability company agreement, certificate of incorporation, by-laws or other equivalent constituent and governing documents of such Loan Party as in effect on the Closing Date and at all times since a date prior to the date of the resolutions described in clause (B) below;

(B) that attached thereto is a true and complete copy of the resolutions (or equivalent authorizing actions) duly adopted by such Loan Party's managing member or non-member manager or board of directors, as applicable, authorizing the execution, delivery and performance of the Loan Documents to which it is a party, the Purchase Agreement and the Consent and Direction and, in the case of such resolutions of the Borrower, the borrowings pursuant to the Loan, and that such resolutions have not been modified, rescinded or amended and are in full force and effect on the Closing Date;

(C) that the certificate of formation, limited liability company agreement, certificate of incorporation, by-laws or other equivalent constituent and governing documents

of such Loan Party have not been amended since the date of the last amendment thereto disclosed pursuant to clause (ii)(x) above;

(D) that attached thereto are true and complete copies of each of the Transaction Documents to which it is a party; and

(E) as to the incumbency and specimen signature of each officer or other duly authorized Person executing any Loan Document or any other document delivered in connection herewith on behalf of each of the Loan Parties (including, without limitation, the Purchase Agreement, the Baxalta Consent and Direction and the Roche Consent and Direction);

(iii) the Lenders shall have received (A) UCC-1 financing statements in appropriate form for filing and necessary and sufficient to perfect the security interests created pursuant to this Agreement, (B) evidence satisfactory to it that an appropriate UCC-1 financing statement has been filed in the correct filing office with respect to the sale and back-up security interest provided for in the Purchase Agreement and (C) the results of a recent lien search in each of the jurisdictions where the Borrower, Halozyme and their respective assets, including the Collateral, are located or deemed located, and such search shall reveal no Liens on any of the Borrower's assets (including those acquired from Halozyme pursuant to the Purchase Agreement), including the Collateral;

(iv) the Lenders shall have received an opinion or opinions of counsel to the Loan Parties, satisfactory in scope, form and substance to the Lenders, in respect of (A) certain corporate and Code matters, and (B) true sale and consolidation;

(v) the Lenders shall have received (A) the Baxalta Consent and Direction, fully executed by the parties thereto, and a copy of the Commencement Notice delivered by Halozyme to Baxalta, and (B) the Roche Consent and Direction, fully executed by the parties thereto, and a copy of the Commencement Notice delivered by Halozyme to Roche;

(vi) each Loan Document Representation and Warranty shall be true and correct at and as of the time the Loan is to be made;

(vii) no Default shall have occurred and be continuing at the time the Loan is to be made or would result from the making of the Loan or from the application of the proceeds thereof;

(viii) no Regulatory Change Enacted after the Agreement Date makes it unlawful or impossible for any Lender to make the Loan;

(ix) the Lenders shall have received a certificate, signed by a financial officer of the Borrower, on the date of the Loan, (x) stating that no Default has occurred and is continuing and (y) stating that each Loan Document Representation and Warranty of the Borrower is true and correct as of such date;

(x) the Lenders shall have received a certificate, signed by an officer of Halozyme, on the date of the Loan, stating that each Loan Document Representation and Warranty of Halozyme is true and correct as of such date; and

(xi) the Lenders shall have received evidence of the Consent, Release and Third Amendment to Amended and Restated Loan and Security Agreement, dated as of December 28, 2015,

by and among, Oxford Finance LLC, Silicon Valley Bank, Halozyme and Parent, which remains in full force and effect as of the Closing, and, for the avoidance of doubt, the release described in Section 3 therein shall be effective and each of the covenants in Section 9 therein shall be fully satisfied.

ARTICLE IV

CERTAIN REPRESENTATIONS AND WARRANTIES

In order to induce the Lenders to enter into this Agreement and to make the Loan, each of the Borrower and Halozyme, severally and not jointly with the other, represents and warrants to the Collateral Agent and the Lenders as follows, which representations and warranties shall be deemed to be made on the Agreement Date and the Closing Date (both with and without giving effect to the Loan):

Section 4.01 Organization; Power; Qualificat ion. Such Loan Party is a corporation or limited liability company, as applicable, duly formed, validly existing and in good standing under the laws of the State of Delaware (in the case of the Borrower) or the State of California (in the case of Halozyme), has the power and authority to own its properties and to carry on its business as now being and hereafter proposed to be conducted and is duly qualified and in good standing as a foreign company, and is authorized to do business, in all jurisdictions in which the character of its properties or the nature of its business requires such qualification or authorization, except for qualifications and authorizations the lack of which, singly or in the aggregate, has not had and will not have a Material Adverse Effect.

Section 4.02 Authorization; Enforceability; Required Consents; Absence of Confl icts. Such Loan Party has the power, and has taken all necessary action to authorize it, to execute, deliver and perform in accordance with their respective terms the Loan Documents and Transaction Documents to which it is party and to exercise its rights under the License Agreement and the other Transaction Documents to which it is a party. This Agreement has been, and each of the other Loan Documents to which it is a party when delivered to the Lenders will have been, duly executed and delivered by such Loan Party and is, or when so delivered will be, a legal, valid and binding obligation of such Loan Party, enforceable against such Loan Party in accordance with its terms, except as may be limited by applicable bankruptcy, insolvency, reorganization, moratorium or similar laws affecting the enforcement of creditors' rights generally. The execution, delivery and performance in accordance with their respective terms by such Loan Party of the Loan Documents and the Transaction Documents to which it is party, and, in the case of the Borrower, the borrowing hereunder, do not and (absent any change in any Applicable Law or any applicable Contract) will not (a) require any Governmental Approval or any other consent or approval to have been obtained or any Governmental Registration to have been made, other than (i) Governmental Approvals and other consents and approvals and Governmental Registrations that have been obtained or made, as the case may be, are final and not subject to review on appeal or to collateral attack, are in full force and effect and copies of which have been delivered to the Lenders and (ii) the filing of financing statements under the Code necessary and sufficient to perfect the security interests created pursuant to this Agreement, or (b) violate, conflict with, result in a breach of, constitute a default under, require the consent or approval of any Person (other than the Baxalta Consent and Direction and the Roche Consent and Direction), or, except as expressly contemplated in the Loan Documents, result in or require the creation of any Lien upon any assets of such Loan Party under, (i) any Contract to which such Loan Party is a party or by which such Loan Party or any of its properties may be bound or (ii) any Applicable Law. Each of the Transaction Documents to which such Loan Party is a party is in full force and effect, and has not been amended, modified or supplemented.

Section 4.03 Litigation. There are not, in any court or before any arbitrator of any kind or before or by any governmental or non-governmental body, any actions, suits or proceedings pending or, to the knowledge of such Loan Party, threatened against or in any other way relating to or affecting (a) such Loan Party or any of its business or properties, (b) Product or (c) any Loan Document or Transaction Document to which it is a party, except (in the case of (a) and (b) above) those actions, suits or proceedings that, if adversely determined, could not reasonably be expected to have, either individually or in the aggregate, a Material Adverse Effect (without giving effect the parenthetical in clause (d) of the definition of "Material Adverse Effect").

Section 4.04 Information. The Information furnished to the Collateral Agent and the Lenders by or on behalf of such Loan Party on or prior to the Agreement Date does not, and the Information furnished to the Collateral Agent and the Lenders by or on behalf of such Loan Party after the Agreement Date will not, contain any untrue statement of a material fact or omit to state a material fact necessary in order to make the statements contained therein not misleading in the light of the circumstances under which they were made; provided, however, that in no event does a Loan Party make any representation as to the truth or accuracy of Information generated or disclosed by third parties, including Baxalta and Roche.

Section 4.05 No Adverse Change or Event. No change, effect, event, occurrence, state of facts, development or condition has occurred relating to or affecting the business, assets, Liabilities, financial condition, results of operations or business prospects of the Borrower, and no change, effect, event, occurrence, state of facts, development or condition relating to or affecting either License Agreement, the other Transaction Documents, any other Loan Party (or any of its Subsidiaries or Affiliates other than Borrower), or, to such Loan Party's knowledge, Baxalta (or any of its Subsidiaries or Affiliates) or Roche (or any of its Subsidiaries or Affiliates) has occurred or failed to occur, that has had or could reasonably be expected to have, either alone or in conjunction with all other such changes, effects, events, occurrences, facts, developments, conditions and failures, a Material Adverse Effect (without giving effect the parenthetical in clause (d) of the definition of "Material Adverse Effect").

Section 4.06 No Default. No Default exists hereunder or would result from the making of the Loan or from the application of the proceeds thereof.

Section 4.07 Investment Company Act. Such Loan Party is not an "investment company" or a Person "controlled" by an "investment company", within the meaning of the Investment Company Act of 1940.

Section 4.08 License Agreements.

(a) Other than the Transaction Documents and the Loan Documents to which it is a party, there is no contract, agreement or other arrangement (whether written or oral) to which such Loan Party or any of its Subsidiaries or Affiliates is a party or by which any of its or their assets or properties is bound or committed (i) that creates a Lien on the Collateral (or any portion thereof) or (ii) the breach, nonperformance, cancellation or termination of which could reasonably be expected to result, individually or in the aggregate, in a Material Adverse Effect.

(b) The Baxalta License Agreement, the Baxalta Side Letters and the Baxalta Consent and Direction constitute the entire agreement between Halozyme and Baxalta (and its Affiliates) relating to the Collateral (including, without limitation, the Post-Closing Royalty Amounts).

(c) The Roche License Agreement, the Roche Side Letters and the Roche Consent and Direction constitute the entire agreement between Halozyme (and its Affiliates) and Roche (and its Affiliates) relating to the Collateral (including without limitation the Post-Closing Royalty Amounts).

(d) The Baxalta License Agreement is the legal, valid and binding obligation of Halozyme and, to the knowledge of such Loan Party, Baxalta, enforceable against Halozyme and, to the knowledge of such Loan Party, Baxalta, in accordance with its terms, subject, as to enforcement of remedies, to bankruptcy, insolvency, reorganization, moratorium or similar laws affecting creditors' rights generally and general equitable principles. There is no breach or default, and no event has occurred or circumstance exists (other than as expressly provided for in the Baxalta License Agreement) that (with or without notice or lapse of time, or both) would constitute or give rise to a breach or default, in the performance of the Baxalta License Agreement by Halozyme or, to the knowledge of such Loan Party, Baxalta. To the knowledge of such Loan Party, no event has occurred or circumstance exists that (with or without notice or lapse of time, or both) would give either Halozyme or Baxalta the right to terminate the Baxalta License Agreement for breach or give Baxalta or any of its Affiliates a right of Set-off against any amounts payable thereunder, including any Post-Closing Royalty Amounts.

(e) The Roche License Agreement is the legal, valid and binding obligation of Halozyme and, to the knowledge of such Loan Party, Roche, enforceable against Halozyme and, to the knowledge of such Loan Party, Roche, in accordance with its terms, subject, as to enforcement of remedies, to bankruptcy, insolvency, reorganization, moratorium or similar laws affecting creditors' rights generally and general equitable principles. There is no breach or default, and no event has occurred or circumstance exists (other than as expressly provided for in the Roche License Agreement) that (with or without notice or lapse of time, or both) would constitute or give rise to a breach or default, in the performance of the Roche License Agreement by Halozyme or, to the knowledge of such Loan Party, Roche. To the knowledge of such Loan Party, no event has occurred or circumstance exists that (with or without notice or lapse of time, or both) would give either Halozyme or Roche the right to terminate the Roche License Agreement for breach or give Roche or any of its Affiliates a right of Set-off against any amounts payable thereunder, including any Post-Closing Royalty Amounts.

(f) Halozyme has not waived any rights or defaults under either License Agreement or taken any action or omitted to take any action under either License Agreement that adversely affects the Collateral Agent's or the Lenders' rights under any of the Loan Documents, including its or their rights in respect of the Collateral (including the Post-Closing Royalty Amounts), or that could otherwise have a Material Adverse Effect.

(g) Halozyme has not received any notice, and has no knowledge, of (i) Baxalta's intention to terminate, amend or restate the Baxalta License Agreement in whole or in part, (ii) Roche's intention to terminate, amend or restate the Roche License Agreement in whole or in part, (iii) Baxalta's or any other Person's or Governmental Authority's (where applicable) intention to challenge the validity or enforceability of the Baxalta License Agreement or the obligation of Baxalta to pay the Post-Closing Royalty Amounts or other monetary payment under the Baxalta License Agreement, (iv) Roche's or any other Person's or Governmental Authority's (where applicable) intention to challenge the validity or enforceability of the Roche License Agreement or the obligation of Roche to pay the Post-Closing Royalty Amounts or other monetary payment under the Roche License Agreement, (v) Halozyme or Baxalta being in breach or default of any of its obligations under the Baxalta License Agreement, or (vi) Halozyme or Roche being in breach or default of any of its obligations under the Roche License Agreement.

(h) Neither the granting of a Lien on the Collateral to the Collateral Agent or the Lenders pursuant to Section 8.01 nor the consummation of the other transactions contemplated by the Purchase Agreement, the other Transaction Documents or the Loan Documents will require the approval, consent, ratification, waiver, or other authorization of Baxalta (other than as expressly provided in the Baxalta Consent and Direction), Roche (other than as expressly provided in the Roche Consent and Direction) or any other Person or Governmental Authority under either License Agreement, the other Transaction Documents or otherwise and will not constitute a breach of or default

or event of default under either License Agreement, the other Transaction Documents or any other agreement to which such Loan Party or any of its Subsidiaries or Affiliates is a party.

(i) All of the representations or warranties made by Halozyme in Sections 2 and 6.6 of the Baxalta License Agreement were accurate and complete in all material respects as of the effective date of the Baxalta License Agreement and continue to be accurate and complete in all material respects as of the Agreement Date and as of the Closing Date (it being understood and agreed that any representations and warranties stated to relate to a specific earlier date shall have been true and correct in all material respects solely as of such earlier date).

(j) All of the representations or warranties made by Halozyme in Sections 2 , 6.6 and 11.9 of the Roche License Agreement were accurate and complete in all material respects as of the effective date of the Roche License Agreement and continue to be accurate and complete in all material respects as of the Agreement Date and as of the Closing Date (it being understood and agreed that any representations and warranties stated to relate to a specific earlier date shall have been true and correct in all material respects solely as of such earlier date).

(k) To the knowledge of such Loan Party, (i) Baxalta has not indicated (whether in writing or orally) that the royalties paid pursuant to Section 4.3 of the Baxalta License Agreement would, in the reasonable determination of such Loan Party, be insufficient to enable the Borrower to make payments of principal of and interest on the Loan or the Notes when and as due and payable in accordance with the terms of this Agreement and the Notes, and (ii) Roche has not indicated (whether in writing or orally) that the royalties paid pursuant to Section 4.3 of the Baxalta License Agreement would, in the reasonable determination of such Loan Party, be insufficient to enable the Borrower to make payments of principal of and interest on the Loan or the Notes when and as due and payable in accordance with the terms of this Agreement and the Notes.

Section 4.09 UCC Representations and War ranties. The Borrower's exact legal name is, and has always been, "Halozyme Royalty LLC". Halozyme's exact legal name is, and, since September 1, 2007 has been, "Halozyme, Inc." The principal place of business and chief executive office of the Borrower has always been, and the office where it keeps its books and records relating to the License Agreement are located at, the address of the Borrower set forth in Section 10.01 hereof. The Borrower's Delaware organizational identification number and Federal Employer Identification Number are 5920833 and 81-0926319, respectively.

Section 4.10 Intellectual P roperty.

(a) Halozyme is the sole owner or exclusive licensee of the Halozyme Technology, free and clear of all Liens created by Halozyme (or any of its Affiliates).

(b) Halozyme is a co-owner with Baxalta or Roche, as applicable, or licensee of any Collaboration Supported Biologic Patent Rights (that are not also Collaboration Supported PH20 Patent Rights) to the extent that there exist any such Collaboration Supported Biologic Patent Rights and to the knowledge of such Loan Party of the existence of any such Collaboration Supported Biologic Patent Rights, free and clear of all Liens created by Halozyme (or any of its Affiliates).

(c) Halozyme is the sole owner or nonexclusive licensee of the Collaboration Supported PH20 Patent Rights, free and clear of all Liens, and in the case of Collaboration Supported PH20 Patent Rights in respect of which Halozyme is the nonexclusive licensee, free and clear of all Liens, created by Halozyme (or any of its Affiliates).

(d) To the knowledge of such Loan Party, no third party owns any Intellectual Property rights that could be validly asserted against the development, manufacture, use, sale or importation of any Product.

(e) No claims have been made or, to the knowledge of such Loan Party, threatened, against Halozyme (or any of its Affiliates) or, to the knowledge of such Loan Party, any Licensee (or any of its Affiliates), since the effective date of the Baxalta License Agreement and the Roche License Agreement, respectively, that the development, manufacture, use, sale or importation of any Product (including the development, manufacture, use, sale or importation of any Product under the License Agreements), infringes, misappropriates, or otherwise violates any Intellectual Property right of any third party.

(f) To the knowledge of such Loan Party, no Licensee has given Halozyme (or any of its Affiliates) any written notice of any claims that have been made or threatened against such Licensee that any Product, any licensed process or licensed technology or any use or practice thereof by such Licensee (or any of its Affiliates), in each case with respect to any Product, infringes, misappropriates, or otherwise violates any Intellectual Property right of any third party.

(g) To the knowledge of such Loan Party, no third party is currently infringing, misappropriating, or otherwise violating in any respect any Licensed Patent Rights, Collaboration Supported Biologic Patent Rights or Collaboration Supported PH20 Patent Rights.

(h) To the knowledge of such Loan Party, each of the Licensed Patent Rights, Collaboration Supported Biologic Patent Rights and Collaboration Supported PH20 Patent Rights are valid and enforceable, and no third party is currently challenging, has challenged, or has a reasonable basis to challenge, the validity, the scope, a priority claim, term, inventorship, ownership or enforceability of any Licensed Patent Right, Collaboration Supported Biologic Patent Right or Collaboration Supported PH20 Patent Right in any respect.

(i) To the knowledge of such Loan Party, no third party has provided notice or other information to a Licensee with respect to the submission or the acceptance for review of an application under section 351(k) of the Public Health Service Act (42 U.S.C. 262(k)) for a product that references the Baxalta Product or the Roche Product.

(j) To the knowledge of such Loan Party, no third party has provided notice to such Loan Party under section 505(b)(3) or 505(j)(2)(B) of the Federal Food, Drug and Cosmetic Act relating to a patent certification under section 505(b)(2)(A)(iv) or 505(j)(2)(A)(vii)(IV) of such Act, commonly referred to as a Paragraph IV certification, to U.S. Patent No. 7,767,429 or to any other Collaboration Supported PH20 Patent Rights.

Section 4.11 Royalty Rights. Pursuant to the Purchase Agreement, the Borrower has purchased, acquired and accepted from Halozyme, and Halozyme has sold, assigned and transferred to the Borrower, all of Halozyme's right, title and interest in and to the Post-Closing Royalty Amounts (the "Royalty Rights"), free and clear of any and all Liens of any kind whatsoever. Prior to such purchase, such Royalty Rights were owned exclusively and at all times by Halozyme, free and clear of any and all Liens of any kind whatsoever.

Section 4.12 Manufacturing and Supply.

(a) During each of the 2014 and 2015 calendar years, Halozyme supplied, indirectly through Avid BioServices, sufficient rHuPH20 to satisfy 100% of rHuPH20 ordered by each of Roche and Baxalta during each such calendar year and, to the knowledge of Halozyme, Avid BioServices had sufficient capacity to manufacture up to 100% of rHuPH20 ordered by each of Roche and Baxalta during each such calendar year.

(b) To the knowledge of Halozyme, Avid BioSciences has manufacturing capacity to supply sufficient rHuPH20 during 2016 in order for Roche to manufacture *** of Herceptin SC and *** of MabThera SC and for Baxalta to manufacture *** of HyQvia.

Section 4.13 Regulatory Communications. To the knowledge of Halozyme, neither Baxter nor Roche has filed or has expressed an intention to file a Biological Product Deviation Report with the FDA or EMA relating to MabThera SC, Herceptin SC or HYQVIA.

Section 4.14 Certain Information.

(a) To the knowledge of Halozyme, there are no adverse events or other safety issues associated with HYQVIA observed or reported since the approval of the biologics license application for HYQVIA by the FDA on September 12, 2014 that are likely to (A) give rise to any material limitation or modification of the US regulatory approval or labeling for HYQVIA or (B) materially adversely affect the current level of use of HYQVIA in patients.

(b) To the knowledge of Halozyme, there are no adverse events or other safety issues associated with Herceptin SC or MabThera SC observed or reported since the date of announcement of the recommendation for marketing authorization by the European Commission on September 2, 2013 (for Herceptin SC) and January 24, 2014 (for MabThera SC) that are likely to (A) give rise to any material limitation or modification of the European marketing authorization or labeling for Herceptin SC or MabThera SC, or (B) materially adversely affect the current level of use of Herceptin SC or MabThera SC in patients.

*** Portions of this page have been omitted pursuant to a request for Confidential Treatment and filed separately with the Commission.

(c) To the knowledge of Halozyme, Halozyme has received no data, information or reports from the long-term safety study of HYQVIA as described in the September 12, 2014, FDA approval letter for HYQVIA that are likely to (A) give rise to a material limitation or modification of the US regulatory approval or labeling for HYQVIA or (B) materially adversely affect the current level of use of HYQVIA in patients.

Section 4.15 OFAC; Anti-Terrorism L aws.

(a) No Loan Party or any of their respective Affiliates (i) is a Sanctioned Person, (ii) has more than 10% of its assets in Sanctioned Countries or (iii) derives more than 10% of its operating income from investments in, or transactions with, Sanctioned Persons or Sanctioned Countries.

(b) Each Loan Party is in compliance in all material respects with (i) the PATRIOT Act and (ii) the Trading with the Enemy Act.

ARTICLE V

CERTAIN COVENANTS

From the Agreement Date and until the Repayment Date, the Borrower or Halozyme, as applicable, shall, or shall cause their Affiliates to:

Section 5.01 Preservation of Existence and Properties; Compliance with Law; Payment of Taxes and Claims; Preservation of Enforceability; S eparateness.

(a) (i) Preserve and maintain (A) in the case of the Borrower, the Borrower's limited liability company existence, (B) in the case of Halozyme, Halozyme's corporate existence, and (C) as to both Halozyme and the Borrower, all of their respective other franchises, rights and privileges material to the conduct of its business, (ii) comply with Applicable Law, (iii) pay or discharge when due all Taxes and all Liabilities of the Borrower that are or might become Liens on any of its properties and (iv) take all action and obtain all consents and Governmental Approvals and make all Governmental Registrations the Borrower is required to take or obtain so that its obligations under the Loan Documents will at all times be legal, valid and binding and enforceable against the Borrower and Halozyme and each of their respective rights and obligations under the Transaction Documents to which it is a party will at all times be legal, valid and binding and enforceable by the Borrower or Halozyme, as applicable, against the relevant counterparty in accordance with their respective terms, except that this Section 5.01(a) (other than clauses (i), insofar as it requires the Borrower to preserve its limited liability company existence and Halozyme to preserve its corporate existence, and (iv)) shall not apply in any circumstance where noncompliance, together with all other noncompliances with this Section 5 .01(a), will not have a Material Adverse Effect.

(b) Take all actions necessary for the Borrower to remain a Single Purpose Entity.

Section 5.02 Use of P roceeds. (a) Use the proceeds of the Loan solely to fund the purchase price payable pursuant to the Purchase Agreement, to fund the Additional Consideration and to pay for other closing costs related to the transactions contemplated by this Agreement and (b) not use the proceeds of the Loan to purchase or carry, or to reduce or retire or refinance any credit incurred to purchase or carry, any margin stock (within the meaning of Regulations U and X of the Board of Governors of the Federal Reserve System) or to extend credit to others for the purpose of purchasing or carrying any margin stock, in each case in violation of said Regulations. If requested by a

Lender, the Borrower shall complete and sign Part I of a copy of Federal Reserve Form G-3 referred to in Regulation U and deliver such copy to such Lender.

Section 5.03 Visits, Inspections and D iscussions. Permit representatives (whether or not officers or employees) of the Lenders, from time to time but no more than one (1) time per year (except that during the occurrence and continuation of an Event of Default, no such limit on frequency shall apply) upon not less than five (5) Business Days prior written notice, to (a) visit any of the Borrower's premises or property, (b) inspect, and verify the amount, character and condition of, any of the Borrower's property, (c) review and make extracts from the Borrower's books and records and from the books and records of others relating to the Borrower, including management letters prepared by its independent certified public accountants and books and records relating to the Post-Closing Royalty Amounts, and (d) discuss with the Borrower's manager and other principal officers its business, assets, Liabilities, financial condition, results of operation and business prospects.

Section 5.04 Information to Be F urnished. Furnish to the Lenders:

(a) Royalty and Audit R eports. Promptly upon, but in no event later than five (5) Business Days following, any Loan Party's receipt thereof, each report required or contemplated by, or otherwise delivered pursuant to, (i) Section 4.5 of the Baxalta License Agreement, (ii) Section 4.5 of the Roche License Agreement, and (iii) to the extent relating to any Post-Closing Royalty Amount, any other reports, accountings or similar materials delivered pursuant to the Baxalta License Agreement, including Section 4.6.1 thereof, or delivered pursuant to the Roche License Agreement, including Section 4.6.6 thereof (any such report, accounting or materials, a " Paym ent R eport").

(b) Requested Informa tion. From time to time and promptly upon request of any Lender, such Information regarding the Loan Documents, the Loan, the Transaction Documents, Product, the Post-Closing Royalty Amounts and the business, assets, Liabilities, financial condition, results of operations or business prospects of the Borrower as such Lender may reasonably request (including any notices, reports or correspondence required or contemplated by, or otherwise delivered pursuant to, Section 5.1(a)(iii) of the Purchase Agreement), in each case in form and substance and certified in a manner reasonably satisfactory to such Lender, and any other Information such Loan Party (or its Affiliates) receives from Baxalta or Roche and is permitted to share with the Lenders pursuant to and in accordance with the confidentiality obligations and disclosure provisions set forth in, with respect to Baxalta, the Baxalta License Agreement and the Baxalta Consent and Direction, and with respect to Roche, the Roche License Agreement and the Roche Consent and Direction, which the Lenders shall receive subject to the confidentiality obligations in Section 10 .10.

(c) Notice of Defaults and Material Adverse E ffect. Prompt notice, after a Responsible Officer of the applicable Loan Party shall have obtained knowledge thereof, of (i) the occurrence of any Default, or (ii) any event or circumstance that would render any of the representations or warranties in Section 4.05 or 4.08(f) hereof untrue if made at such time.

(d) Notice of Amendments, Modifications and Terminations of Transaction Documen ts. Without limiting Section 5 .13, prompt notice of any amendment, restatement, modification or termination of any of the Transaction Documents, together with a true and correct copy of such amendment, restatement or modification or any writing evidencing such termination, as applicable.

(e) Notice of Litiga tion. Promptly following Borrower's receipt thereof, all notices required or contemplated by, or otherwise delivered pursuant to, Section 5.1(a)(ii) of the Purchase Agreement.

(f) Notice of Paragraph IV Patent Cert ification. Promptly following any Loan Party's receipt thereof, all notices or other information relating to a Paragraph IV patent certification under section 505(b) or section 505(j) of the Food, Drug and Cosmetic Act to U.S. Patent No. 7,767,429 or to any other Collaboration Supported PH20 Patent Rights.

Section 5.05 Modification of Certain Documen ts. Maintain the Borrower's organizational documents in conformity with this Agreement, such that it does not amend, restate, supplement or otherwise modify its Certificate of Formation or the LLC Agreement in any respect except for such amendments, restatements, supplements or modifications that: (a) do not materially and adversely affect the rights and privileges of any Loan Party or that would impair the ability of any Loan Party to comply with the terms or provisions of any of the Loan Documents to which it is a party, including, without limitation, this Section 5 .05, (b) do not affect the interests of the Lenders or the Collateral Agent under the Loan Documents or in the Collateral, and (c) could not reasonably be expected to have a Material Adverse Effect. Without limiting the foregoing, the Borrower shall not amend or modify or permit the amendment or modification of Sections 9(j) and 10 of the LLC Agreement and, at all times on and after the Agreement Date, the LLC Agreement shall (i) provide for not less than ten (10) days' prior written notice to the Lenders of (A) the removal of the Independent Director and (B) the proposed appointment of any Person that is to serve as an Independent Director or a successor Independent Director, as applicable, and (ii) require as a condition precedent to giving effect to the appointment or replacement of a new Independent Director that (A) the Borrower certify that the designated Person has satisfied the criteria set forth in the definition in the LLC Agreement of "Independent Director" and (B) the Lenders acknowledge in writing that in their reasonable judgment such designated Person satisfies the criteria set forth in the definition in the LLC Agreement of "Independent Director" (which acknowledgement shall not be unreasonably withheld or delayed).

Section 5.06 Conduct of B usiness. (a) Comply, in the case of Halozyme, in all material respects with its obligations under each License Agreement, (b) comply in all material respects with all Applicable Law, (c) in the case of Halozyme, not terminate either License Agreement, (d) not take any action that may cause either License Agreement to be terminated and (e) not engage in any action with the intent to, directly or indirectly, adversely impact or materially delay, or which would reasonably be expected to have the effect of adversely impacting or materially delaying, the payment of any Post-Closing Royalty Amounts as contemplated by either License Agreement, this Agreement and the Escrow Agreement.

Section 5.07 Purchase Agreeme nt. Maintain the effectiveness of, and continue to perform under, the Purchase Agreement, such that it does not amend, restate, supplement, cancel, terminate or otherwise modify the Purchase Agreement, or give any consent, waiver, directive or approval thereunder or waive any default, action, omission or breach under the Purchase Agreement or otherwise grant any indulgence thereunder, without (in each case) the prior written consent of the Required Lenders in their sole discretion.

Section 5.08 I ndebtedness. The Borrower shall not create, incur, Guarantee, assume or suffer to exist any Indebtedness, other than (a) Indebtedness under this Agreement and the other Loan Documents and (b) with the prior written consent of the Required Lenders (not to be unreasonably withheld or delayed), secured or unsecured Indebtedness of the Borrower to any Person; provided that (i) the incurrence of such secured or unsecured Indebtedness does not (A) adversely affect any of the rights of the Lenders (or their respective successors or permitted assigns) hereunder or under any of the other Loan Documents, or (B) cause any adverse tax consequence to any Lender (or its successors or permitted assigns) or any its Affiliates, (ii) in the case of any such secured Indebtedness, such Indebtedness may be secured solely by the Residual Amount and the funds credited to the Residual Account in respect of any Residual

Amount (and, for the avoidance of doubt, shall not be secured by, and the holders of such Indebtedness (or the agent or other representative acting on behalf of, and for the benefit of, such holders) shall have no recourse to, any other assets or properties of the Borrower), (iii) the Borrower and the holders of such Indebtedness (or the agent or other representative acting on behalf of, and for the benefit of, such holders) shall have entered into a subordination and intercreditor agreement with the Lenders in form and substance satisfactory to the Lenders in their sole discretion, and (iv) no Default or Event of Default exists immediately prior to, or would result from, the incurrence of such Indebtedness.

Section 5.09 Liens. The Borrower shall not create, grant or permit to exist any Lien on any of its assets or property, including the Collateral, other than (i) Permitted Liens and (ii) solely with respect to the Residual Amount and the funds credited to the Residual Account in respect of any Residual Amount, the Liens securing Indebtedness permitted by Section 5.08(b). For the avoidance of doubt, the parties hereto acknowledge and agree that this Section 5.09 shall not apply to any Residual Amount if and to the extent such Residual Amount has been distributed from the Residual Account to Halozyme by the Escrow Agent.

Section 5.10 Restricted Payments.

(a) The Borrower shall not declare, order, pay, make or set apart any sum for any Restricted Payment except that, so long as no Default or Event of Default shall have occurred and be continuing at such time, the Borrower may make dividends or other distributions to Halozyme, free and clear of all Liens and claims of the Lenders, in an aggregate amount in respect of any Interest Period not greater than the sum of (i) the Residual Amount in respect of such Interest Period and (ii) any Residual Amount in respect of any prior Interest Period if and only to the extent such amount has been disbursed to the Residual Account and has not been previously distributed to Halozyme.

(b) Notwithstanding anything herein to the contrary, the Borrower and Lenders agree that, notwithstanding the occurrence and continuance of any Default or Event of Default, the Escrow Agent, acting at the direction of Halozyme pursuant to Section 6.04 and the Escrow Agreement, may make distributions to Halozyme, free and clear of all Liens and claims of Lenders, but only to the extent such distributions constitute amounts allocated for the reimbursement to Halozyme of any Escrow Agent Fees not previously reimbursed in an aggregate amount in respect of any Interest Period not greater than the amounts paid by Halozyme under the Escrow Agreement in respect of such Interest Period.

Section 5.11 Mergers. The Borrower shall not merge or consolidate with or into, or convey, transfer, lease or otherwise dispose of (whether in one transaction or in a series of transactions, and except as otherwise contemplated herein) all or substantially all of its assets (whether now owned or hereafter acquired) to, or acquire all or substantially all of the assets of, any Person.

Section 5.12 No Subsidiaries. The Borrower shall not create, have, acquire, maintain or hold any interest in any Subsidiary.

Section 5.13 No Modifications. Not waive any of its rights under, amend or otherwise modify any of the Transaction Documents in a manner which could reasonably be expected to directly or indirectly affect any Post-Closing Royalty Amount, the Collateral (or any portion thereof), or any of the rights of any Lender or Collateral Agent related thereto or under any Loan Document, or permit any of its Affiliates party thereto to do any of the foregoing, without the prior written consent of the Lenders.

Section 5.14 Enforcement of Rights. Not fail to diligently monitor (a) the performance of Baxalta under the Baxalta License Agreement, (b) the performance of Roche under the Roche License Agreement and (c) the Escrow Agent under the Escrow Agreement, and enforce all rights under such agreements.

Section 5.15 Audit Rights of Halozyme. Halozyme agrees that it shall not initiate an audit under the Baxalta License Agreement or the Roche License Agreement without first providing the Lenders with (i) prior written notice of such audit, and (ii) an opportunity to consult in good faith with Halozyme with respect to the particulars of such audit. To the extent that the Lenders believe in good faith that Baxalta or Roche has underpaid any Post-Closing Royalty Amounts resulting in a reduction to any Adjusted Post-Closing Royalty Amounts payable to Lenders under Section 2.04, the Required Lenders shall, in writing, notify Halozyme of such belief, including the calendar quarter in question, and shall request that Halozyme initiate an audit for the fiscal year that includes such calendar quarter pursuant to Section 4.6.1 of the Baxalta License Agreement or Section 4.6.6 of the Roche License Agreement, as applicable, to confirm the accuracy of such Post-Closing Royalty Amounts, and Halozyme shall initiate such audit pursuant to Section 4.6.1 of the Baxalta License Agreement or Section 4.6.6 of the Roche License Agreement, as applicable; provided that, in such case, (a) the Lenders shall reimburse Halozyme for all expenses of such audit actually incurred by Halozyme pursuant to Section 4.6.1 of the Baxalta License Agreement (to the extent such expenses are not paid by Baxalta) or Section 4.6.6 of the Roche License Agreement (to the extent such expenses are not paid by Roche) and (b) Halozyme shall direct Baxalta or Roche, as applicable, to remit into the Escrow Account the amount of any underpayments revealed by such audit or, if received by Halozyme, Halozyme shall promptly remit such amount into the Escrow Account.

Section 5.16 Defense of Intellectual Property. Notwithstanding Halozyme's retention of the right to pursue infringement claims and other enforcement actions with respect to all Licensed Patents Rights under the Baxalta License Agreement and with respect to all Licensed Patent Rights and Collaboration Supported PH20 Patent Rights under the Roche License Agreement, if Halozyme becomes aware of alleged or threatened infringement of any such patent rights, including the submission or the acceptance for review of an application under section 351(k) of the Public Health Service Act (42 U.S.C. 262(k)) for a product that references a Baxalta Product or a Roche Product, Halozyme will give prompt written notice of such alleged or threatened infringement to the Lenders and will, where reasonable, take steps to enforce its patent rights subject to and consistent with the terms of the Baxalta License Agreement or Roche License Agreement, as applicable.

Section 5.17 Manufacturing and Supply. Halozyme will use its best efforts to ensure that Avid BioSciences or another manufacturer maintains manufacturing capacity to supply and directly, or indirectly through Halozyme, supplies Baxalta with sufficient rHuPH20 during the 2016 calendar year so that Roche can manufacture no less than *** of Herceptin SC and *** of MabThera SC and Baxalta can manufacture no less than *** of HyQvia.

Section 5.18 Affiliates. Other than those expressly contemplated by the Loan Documents, not enter into, amend, extend, renew or terminate any agreement between Borrower and any of its Affiliates (the "Affiliate Agreements"), or waive or fail to enforce any term or provision of any Affiliate Agreement (other than a de minimis term or provision) in a manner which could reasonably be expected to directly or indirectly affect any Post-Closing Royalty Amount, the Collateral (or any portion thereof), or any of the rights of any Lender or Collateral Agent related thereto or under any Loan Document without the prior written consent of the Lenders.

*** Portions of this page have been omitted pursuant to a request for Confidential Treatment and filed separately with the Commission.

Section 5.19 Sanctions. Directly or indirectly, use a portion of the Loan or any portion of the proceeds of the Loan, or lend, contribute or otherwise make available such a portion of the Loan or any portion of the proceeds of the Loan to any Sanctioned Person, to fund any activities of or business with any Sanctioned Person, or in any Sanctioned Country, that, at the time of such funding, is the subject of Sanctions, or in any other manner that will result in a violation by any Person (including any Person participating in the transaction, whether as a Lender, Collateral Agent, or otherwise) of Sanctions.

Section 5.20 Anti-Corruption Laws. Directly or indirectly, use any portion of the Loan or any portion of the proceeds of the Loan for any purpose which would breach the United States Foreign Corrupt Practices Act of 1977, the UK Bribery Act 2010 and other similar anti- corruption legislation in other jurisdictions.

ARTICLE VI

COVENANTS RELATING TO THE ESCROW

Section 6.01 Remittances to Escrow Account.

(a) On or before the Closing Date, (i) Borrower and Halozyme shall direct Baxalta to promptly remit to the Escrow Account any and all Post-Closing Royalty Amounts, pursuant to the Baxalta Consent and Direction, (ii) Borrower and Halozyme shall direct Roche to promptly remit to the Escrow Account any and all Post-Closing Royalty Amounts, pursuant to the Roche Consent and Direction, and (iii) Halozyme shall notify each of Baxalta and Roche, in writing, that the transactions contemplated herein and in the Purchase Agreement have been consummated, and shall provide to each of Baxalta and Roche in such notice the identity of the Escrow Agent and the details of the Escrow Account (each such notice, a "Commencement Notice").

(b) If and to the extent any Post-Closing Royalty Amounts are received by Borrower or Halozyme (despite and in contradiction to the Baxalta Consent and Direction, the Roche Consent and Direction and the Commencement Notices), (i) such amounts shall be held in trust for the benefit of Lenders, and (ii) Borrower or Halozyme, as applicable, shall promptly remit any and all such amounts directly to the Escrow Agent by deposit to the Escrow Account.

Section 6.02 Information to Be Furnished. On each Licensee Payment Date:

(a) Halozyme shall deliver a written notice to Borrower, the Collateral Agent and Lenders setting forth any Escrow Agent Fees previously paid by Halozyme under the Escrow Agreement prior to or during the portion of the Interest Period occurring prior to such Licensee Payment Date and not previously reimbursed, and to be reimbursed on the next Quarterly Payment Date and all supporting documentation therefor.

(b) Borrower shall deliver a written notice to the Collateral Agent and Lenders setting forth any Borrower Expenses due and payable by Borrower on the next Quarterly Payment Date and not previously paid or reimbursed, and to be paid or reimbursed on the next Quarterly Payment Date and all supporting documentation therefor.

(c) Halozyme shall deliver a written notice to Borrower, the Collateral Agent and Lenders setting forth any out-of-pocket costs (including reasonable attorney's fees) actually incurred by Halozyme prior to or during the portion of the Interest Period occurring prior to such Licensee Payment Date in connection with the collection

of any indemnity payments paid or payable pursuant to Section 9.1 of the Baxalta License Agreement with respect to Liabilities (as defined in the Baxalta License Agreement) suffered by Borrower after the effective date of the Purchase Agreement with respect to any amounts payable under Sections 4.3 or 4.6.1 of the Baxalta License Agreement or pursuant to Section 9.1 of the Roche License Agreement with respect to Liabilities (as defined in the Roche License Agreement) suffered by Borrower after the effective date of the Purchase Agreement with respect to any amounts payable under Sections 4.3 or 4.6.6 of the Roche License Agreement (any and all such out-of-pocket costs, " Indem nity Collection C osts") and not previously reimbursed, and to be reimbursed on the next Quarterly Payment Date and all supporting documentation therefor.

Section 6.03 Disbursement I nstructions.

(a) Promptly upon its receipt of each Payment Report and the notices described in Section 6 .02, the Collateral Agent and Lenders shall determine, in consultation with Borrower and Halozyme, the calculations of the amounts described in clause (b)(i) through (v) below relating to the next Quarterly Payment Date (the " Calculations"), which Calculations shall be binding on all parties hereto absent manifest error.

(b) Promptly upon such determination, in consultation with Borrower and Halozyme, of the Calculations, but in no event later than two (2) Business Days prior to the next Quarterly Payment Date, Lenders and Borrower shall jointly deliver to Halozyme and Escrow Agent a duly executed written notice setting forth the following transfers to be made by Escrow Agent from the Escrow Account on such Quarterly Payment Date in the following order of priority (a " Joint Disbursement I nstruction"):

(i) The amount of Escrow Agent Fees described in Section 6.02(a) not previously reimbursed, if any, to be transferred by Escrow Agent to Halozyme on such Quarterly Payment Date, together with the account of Halozyme to which such funds are to be transferred under the Escrow Agreement;

(ii) The amount of Borrower Expenses described in Section 6.02(b) not previously paid or reimbursed, if any, to be transferred by Escrow Agent to Borrower on such Quarterly Payment Date, together with the account of Borrower to which such funds are to be transferred under the Escrow Agreement;

(iii) The amount of Indemnity Collection Costs described in Section 6.02(c) not previously reimbursed, if any, to be transferred by Escrow Agent to Halozyme on such Quarterly Payment Date, together with the account of Halozyme to which such funds are to be transferred under the Escrow Agreement;

(iv) To the extent the Available Amount is sufficient therefor,

(A) the amount of unpaid and uncapitalized interest accrued during prior Interest Periods, if any, to be transferred by Escrow Agent to Lenders on such Quarterly Payment Date,

(B) the amount of interest accrued during the current Interest Period to be transferred by Escrow Agent to Lenders on such Quarterly Payment Date, and

(C) the amount of outstanding principal under the Loan to be transferred by Escrow Agent to Lenders on such Quarterly Payment Date, together with the account of Lenders to which such funds are to be transferred under the Escrow Agreement; and

(v) The Residual Amount, if any, to be transferred by Escrow Agent to the Residual Account on such Quarterly Payment Date.

For the avoidance of doubt, such Disbursement Instruction shall specify the Quarterly Payment Date on which such transfers are to be made by Escrow Agent pursuant to the Escrow Agreement and instruct Escrow Agent to make such transfers on such date.

(c) In the event Lenders and Borrower fail to jointly deliver to Escrow Agent the Disbursement Instruction at least two (2) Business Days prior to any Quarterly Payment Date, the parties hereto agree that so long as Halozyme has timely delivered to Borrower, the Collateral Agent and Lenders the notices described in Section 6 .02(a), Halozyme shall have the right to deliver to Escrow Agent a duly executed written notice of the occurrence of such failure, setting forth: (i) the amount of Escrow Agent Fees described in Section 6.02(a) not previously reimbursed, if any, to be transferred by Escrow Agent to Halozyme on such Quarterly Payment Date (which amount shall be equal to the amount stated in such applicable notice); (ii) the account of Halozyme to which such funds are to be transferred under the Escrow Agreement; and (iii) the Quarterly Payment Date on which such transfers are to be made by Escrow Agent pursuant to the Escrow Agreement (a " Parent Disbursement I nstruction"). In the event any Lender has delivered an Event of Default Notice to Escrow Agent, the parties hereto further agree that so long as Halozyme has timely delivered to Borrower, the Collateral Agent and Lenders the notices described in Section 6 .02(a), Halozyme shall have the right to deliver a Parent Disbursement Instruction to Escrow Agent.

Section 6.04 Disbursements upon Event of D efault.

(a) During the continuance of any Event of Default, any Lender, upon written notice to the Borrower, may notify Escrow Agent in writing that an Event of Default hereunder has occurred and is continuing (an " Event of Default N otice"); p rovided, h owever, that upon the occurrence of an Event of Default specified in Section 7.01(i) with respect to Borrower, any Lender may deliver an Event of Default Notice to Escrow Agent without any notice to the Borrower.

(b) The parties hereto acknowledge and agree that in the event Escrow Agent receives an Event of Default Notice, Escrow Agent shall not make any disbursements from the Escrow Account in accordance with any pending or future Joint Disbursement Instruction, until such time as Escrow Agent receives written notice from Lenders that such Event of Default no longer exists; p rovided, h owever, that, notwithstanding the foregoing, Escrow Agent shall continue to make disbursements from the Escrow Account only to the extent in accordance with any pending or future Parent Disbursement Instruction.

(c) At such time as an Event of Default is no longer continuing, if any Lender has delivered an Event of Default Notice to Escrow Agent in respect of such Event of Default, Borrower shall promptly notify Escrow Agent in writing that such Event of Default no longer exists.

ARTICLE VII DEFAULT

Section 7.01 Events of Default. The occurrence and continuance of any of the following shall constitute an Event of Default, whatever the reason for such event and whether it shall be voluntary or involuntary, or within or without the control of the Borrower, or be effected by operation of law or pursuant to any judgment or order of any court or any order, rule or regulation of any governmental or nongovernmental body:

(a) Any payment of principal of the Loan or the Notes, including any payment of Prepayment Premium applicable thereto, shall not be made within three (3) Business Days of when such payment is due and payable hereunder;

(b) Any Loan Document Representation and Warranty shall at any time prove to have been incorrect or misleading in any material respect when made;

(c) Any Loan Party shall fail to perform or observe its respective obligations under:

(A) any term, covenant, condition or agreement contained in Section 5.01(a)(i) (insofar as such Section requires the preservation of the limited liability company existence of Borrower), 5.01(a)(iv), 5 .02, 5 .04(a), 5.04(c) , and Sections 5.05 through 5 .15; or

(B) any term, covenant, condition or agreement contained in this Agreement (other than a term, covenant, condition or agreement a failure in the performance or observance of which is elsewhere in this Section 7.01 specifically addressed) or any other Loan Document and, if capable of being remedied, such failure shall continue unremedied for a period of thirty (30) days after such Loan Party obtains knowledge of any such default;

(d) Halozyme shall fail to perform or observe Section 10.14(c) hereof, which failure is not cured within thirty (30) days after written demand thereof by the Collateral Agent or the Required Lenders;

(e) The occurrence of any failure by Baxalta to pay any material amount, or other material breach or default by Baxalta, under the Baxalta License Agreement, or any material delay, elimination or material diminution of the amounts paid or payable by Baxalta under Sections 4 .3, 4.6.1 or 9.1 of the Baxalta License Agreement with respect to Post-Closing Royalty Amounts, in each case, only if and to the extent caused by or resulting from an actual breach or default by Halozyme of any of its obligations under the Baxalta License Agreement;

(f) The occurrence of any failure by Roche to pay any material amount, or other material breach or default by Roche, under the Roche License Agreement, or any material delay, elimination or material diminution of the amounts paid or payable by Roche under Sections 4 .3, 4.6.6 or 9.1 of the Roche License Agreement with respect to Post-Closing Royalty Amounts, in each case, only if and to the extent caused by or resulting from a breach or default by Halozyme of any of its obligations under the Roche License Agreement;

(g) This Agreement shall for any reason fail to be in full force and effect or fail to be effective to give the Collateral Agent a valid and perfected first priority security interest in and Lien upon any and all of the Collateral (subject only to Permitted Liens), or any Loan Party (or any of its Affiliates) asserts, or institutes any proceedings seeking to establish, that any provision of the Loan Documents, or all or any portion of the Lien on the

Collateral granted pursuant to this Agreement, is invalid, not binding or unenforceable, in each case unless any such failure is due to any act or omission on the part of the Collateral Agent or the Lenders;

(h) (i) The occurrence of a material breach or default by Borrower under the Escrow Agreement, or (ii) the occurrence of a material breach or default by Halozyme under the Purchase Agreement, in each case, which breach or default is not cured within thirty (30) days after written demand thereof by the Collateral Agent or the Required Lenders;

(i) (i) Any Loan Party shall (A) commence a voluntary case under the Federal bankruptcy laws (as now or hereafter in effect), (B) file a petition seeking to take advantage of any other laws, domestic or foreign, relating to bankruptcy, insolvency, reorganization, winding up or composition or adjustment of debts, (C) consent to or fail to contest in a timely and appropriate manner any petition filed against it in an involuntary case under such bankruptcy laws or other laws, (D) apply for, or consent to, or fail to contest in a timely and appropriate manner, the appointment of, or the taking of possession by, a receiver, custodian, trustee, liquidator or the like of itself or of a substantial part of its assets, domestic or foreign, (E) admit in writing its inability to pay, or generally not be paying, its debts (other than those that are the subject of bona fide disputes) as they become due, (F) make a general assignment for the benefit of creditors, or (G) take any corporate or limited liability company action, as applicable, for the purpose of effecting any of the foregoing;

(ii) (A) A case or other proceeding shall be commenced against any Loan Party seeking (1) relief under the Federal bankruptcy laws (as now or hereafter in effect) or under any other laws, domestic or foreign, relating to bankruptcy, insolvency, reorganization, winding up or composition or adjustment of debts, or (2) the appointment of a trustee, receiver, custodian, liquidator or the like of such Loan Party, or of all or any substantial part of its assets, domestic or foreign, and such case or proceeding shall continue undismissed and unstayed for a period of sixty (60) days, or (B) an order granting the relief requested in such case or proceeding against any Loan Party (including an order for relief under such Federal bankruptcy laws) shall be entered;

(j) The occurrence of (A) any materially adverse effect on the binding nature, validity or enforceability of any Loan Document as an obligation of any Loan Party that is a party thereto, (B) any materially adverse effect on the binding nature, validity or enforceability of either License Agreement as an obligation of Halozyme or Baxalta or Roche, as applicable, (C) any materially adverse effect on the binding nature, validity or enforceability of the Escrow Agreement as an obligation of the Escrow Agent, (D) any materially adverse effect on the binding nature, validity or enforceability of the Purchase Agreement as an obligation of Halozyme, or (E) any material adverse change in any of the rights or remedies of Borrower against Halozyme under the Purchase Agreement;

(k) Any Person shall be appointed as an Independent Director of the Borrower (other than the Independent Director as of the Closing Date) without (i) at least ten (10) days' prior written notice to the Collateral Agent and the Lenders of (x) in the case of removal of the Independent Director, the removal of such Independent Director and (y) the proposed appointment of the Independent Director or a successor Independent Director, as applicable, which shall include a certification by the Borrower that such Person has satisfied the criteria set forth in the definition of "Independent Director" in the LLC Agreement, in accordance with Section 5 .05, and (ii) the written acknowledgement by the Collateral Agent or the Lenders that such Person satisfies, in the reasonable judgment of the Collateral Agent or the Lenders (as applicable), the criteria set forth in the definition of "Independent Director" in the LLC Agreement (which acknowledgement shall not be unreasonably withheld);

(l) Halozyme shall at any time cease to own, of record and beneficially, 100% of the Equity Interests in the Borrower; or

(m) The payment of the Additional Consideration shall not be made when such payment is due and payable hereunder.

For the avoidance of doubt, the Lenders and Borrower confirm that neither (x) the failure to pay or other default by Baxalta under the Baxalta License Agreement, or any delay, elimination or diminution of the amounts paid or payable by Baxalta under Sections 4.3, 4.6.1 or 9.1 of the Baxalta License Agreement for any reason other than a breach or default by Halozyme of any of its obligations under the Baxalta License Agreement, nor (y) the failure to pay or other default by Roche under the Roche License Agreement, or any delay, elimination or diminution of the amounts paid or payable by Roche under Sections 4 .3, 4.6.6 or 9.1 of the Roche License Agreement for any reason other than a breach or default by Halozyme of any of its obligations under the Roche License Agreement, and, in either case, any consequent delay, elimination and reduction of the amounts paid or payable by the Borrower hereunder with respect to the Loan, shall constitute an Event of Default under Section 7 .01(a).

Section 7.02 Remedies upon Event of D efault. Upon the occurrence and during the continuance of any Event of Default:

(a) Acceleration of I ndebtedness. The Required Lenders may declare all or any part of the Loan (including, for the avoidance of doubt, the applicable Prepayment Premium) immediately due and payable, whereupon the Loan (including, for the avoidance of doubt, the applicable Prepayment Premium) shall become immediately due and payable without presentment, demand, protest, notice or legal process of any kind, all of which are hereby expressly waived by the Borrower (provided, however, that all Loan (including, for the avoidance of doubt, the applicable Prepayment Premium) shall automatically become due and payable upon the occurrence of an Event of Default under Section 7.01(i) with respect to the Borrower);

(b) Other Remed ies. The Collateral Agent may with the approval of the Required Lenders and shall at the direction of the Required Lenders pursue all other remedies available to it by contract, at law or in equity, including its rights under the Loan Documents.

(c) Right of Set -off. Each Lender may, and is hereby authorized by the Borrower to, at any time and from time to time, to the fullest extent permitted by Applicable Law, without advance notice to the Borrower (any such notice being expressly waived by the Borrower), Set off and apply any and all deposits (general or special, time or demand, provisional or final) at any time held and any other indebtedness at any time owing by such Lender or any of its Affiliates to or for the credit or the account of the Borrower against any or all of the Secured Obligations now or hereafter existing, whether or not such obligations have matured. Each Lender agrees promptly to notify the Borrower, each other Lender and the Collateral Agent after any such Set-off or application; p rovided, h owever, that the failure to give such notice shall not affect the validity of such Set-off and application.

(d) Rights and Remedies Cumulative; Non-Waiver; e tc. The enumeration of the Collateral Agent's and the Lenders' rights and remedies set forth in this Agreement is not intended to be exhaustive and the exercise by the Collateral Agent or the Lenders of any right or remedy shall not preclude the exercise of any other rights or remedies, all of which shall be cumulative, and shall be in addition to any other right or remedy given hereunder, under the other Loan Documents or under any other agreement between the Borrower and the Collateral Agent or the Lenders or that may now or hereafter exist in law or in equity or by suit or otherwise. No delay or failure to take action on the part of the Collateral Agent or the Lenders in exercising any right, power or privilege shall operate as a waiver

thereof, nor shall any single or partial exercise of any such right, power or privilege preclude other or further exercise thereof or the exercise of any other right, power or privilege or shall be construed to be a waiver of any Event of Default. No course of dealing between the Loan Parties and the Collateral Agent or the Lenders or their respective agents or employees shall be effective to change, modify or discharge any provision of this Agreement or any of the other Loan Documents or to constitute a waiver of any Event of Default.

(e) Notices to Lenders. The Collateral Agent shall deliver to the Lenders any notice of acceleration received by it pursuant to Section 7.02(a) and written approval or written direction received by it pursuant to Section 7.02(b); provided, that any delivery of or failure to deliver any such notice, approval or direction shall not otherwise alter or effect the rights of the Lenders or the Collateral Agent under this Section 7.02 or Section 8.04. In addition, to the extent the Collateral Agent or the Required Lenders deliver any notices to the Borrower with regards to the failure by any Loan Party to perform any covenant, restriction or agreement contained in any Loan Document, the Collateral Agent or the Required Lenders, as applicable, will also deliver such notice to the other Lenders on or about the same time such notice is provided to the Borrower; provided, that the delivery of or failure to deliver such notice to the other Lenders shall not in any way effect the obligations of the Borrower, or the rights of the Collateral Agent or the Required Lenders, in respect of such notice.

(f) Prepayment Premium. The Borrower acknowledges and agrees that if all or any part of the Loan shall be repaid prior to the repayment schedule required by Section 2.04 or prior to maturity (including without limitation by acceleration pursuant to Sections 2.05, 2.06 and 7.02(a)), the Prepayment Premium shall become due and payable by the Borrower upon such repayment or acceleration, whether such acceleration is automatic or is effected by the Collateral Agent's or the Lenders' declaration thereof.

ARTICLE VIII COLLATERAL

Section 8.01 Pledge and Grant of Security Interest and Lien. (a) The Borrower hereby pledges and collaterally assigns to the Collateral Agent, for the ratable benefit of the Lenders, and hereby grants to the Collateral Agent, for the ratable benefit of the Lenders, a first priority Lien upon and security interest in all of the assets and all real, intangible and personal property of the Borrower (subject only to Permitted Liens), including all of the Borrower's right, title and interest in and to the Pledged Royalty Rights and the following other property, in each case, wherever located and whether now owned or at any time hereafter acquired by the Borrower or in which the Borrower now has or at any time in the future may acquire any right, title or interest (such assets and property referred to herein as the "Collateral"), as security for the prompt and complete payment and performance when due (whether at the stated maturity, by acceleration or otherwise) and observance of all Secured Obligations:

(i) all Accounts;

(ii) all Chattel Paper;

(iii) all Commercial Tort Claims described in Section 8.03(b);

(iv) all Deposit Accounts;

(v) all Documents;

(vi) all Equipment;

(vii) all Fixtures;

(viii) all General Intangibles;

(ix) all Goods;

(x) all Instruments;

(xi) all Intellectual Property and Intellectual Property Licenses;

(xii) all Inventory

(xiii) all Investment Property, including all Equity Interests and Securities;

(xiv) all Letters of Credit and Letter of Credit Rights;

(xv) all Money;

(xvi) all Securities Accounts;

(xvii) all books, records, ledger cards, files, correspondence, customer lists, blueprints, technical specifications, manuals, computer software, computer printouts, tapes, disks and other electronic storage media and related data processing software and similar items that at any time pertain to or evidence or contain information relating to any of the Collateral or are otherwise necessary or helpful in the collection thereof or realization thereupon;

(xviii) all Proceeds, products, accessions, rents and profits of or in respect of any of the foregoing; and

(xix) to the extent not otherwise included, all other personal property, whether tangible or intangible, of the Borrower and all Proceeds, products, accessions, rents, issues and profits of any and all of the foregoing and all collateral security, supporting obligations and guarantees given by any Person with respect to any of the foregoing.

Section 8.02 Representations and Warranties regarding the C ollateral. Without limitation of any of the representations or warranties in Article I V, the Borrower represents and warrants to the Collateral Agent and the Lenders as of the date hereof and the date of the Loan that:

(a) The Borrower is the record and beneficial owner of, and has good and marketable title to, the Collateral;

(b) No security agreement, financing statement or other public notice with respect to all or any part of the Collateral is on file or of record in any government or public office, and the Borrower has not filed or consented to the filing of any such statement or notice, except (i) Code financing statements naming the Collateral Agent as secured party, (ii) filings with respect to which termination statements and other necessary releases have been delivered to the Collateral Agent for filing or will be filed promptly on or after the Agreement Date, and (iii) as may be otherwise permitted by this Agreement or any other Loan Document;

(c) This Agreement, together with the filing, with respect to the Borrower, of duly completed Code financing statements naming the Borrower as debtor, the Collateral Agent as secured party, and describing the Collateral, in the office of the Secretary of State of the State of Delaware creates, and at all times shall constitute, a valid and perfected security interest in and Lien upon the Collateral in favor of the Collateral Agent, for the benefit of the Secured Parties, to the extent a security interest therein can be perfected by such filings or possession, as applicable, superior and prior to the rights of all other Persons therein (except for Permitted Liens), enforceable as such against all creditors of the Borrower and any Persons purporting to purchase any Collateral from the Borrower, and no other or additional filings, registrations, recordings or actions are or shall be necessary or appropriate in order to maintain the perfection and priority of such Lien and security interest, other than continuation statements required under the Code.

(d) (i) the Borrower holds the Collateral free and clear of all Liens of every kind and nature, except for the security interest granted to the Collateral Agent hereunder and the other Permitted Liens, (ii) the Collateral is subject to no options to purchase or any similar rights of any Person, (iii) the Borrower will neither make nor permit to be made any assignment, pledge, hypothecation or loan, transfer of, or create any security interest in, the Collateral, except for the security interest granted to the Collateral Agent hereunder and the Permitted Liens, and the Borrower agrees to deliver promptly or cause to be delivered to the Collateral Agent any and all certificates or instruments at any time representing any of the Collateral, together with any necessary endorsement or instruments of transfer satisfactory to the Collateral Agent, and such other instruments and documents as the Collateral Agent may request that are necessary to perfect its security interest.

(e) No authorization, consent or approval of, or declaration or filing with, any Governmental Authority is required for the valid execution, delivery and performance by the Borrower of this Agreement, the grant by it of the Lien and security interest in favor of the Collateral Agent provided for herein, or the exercise by the Collateral Agent of its rights and remedies hereunder, except for the filings described in clause (c) above.

(f) There are no statutory or regulatory restrictions, prohibitions or limitations on the Borrower's ability to grant to the Collateral Agent a Lien upon and security interest in the Collateral pursuant to this Agreement or on the exercise by the Collateral Agent of its rights and remedies hereunder (including any foreclosure upon or collection of the Collateral), and there are no contractual restrictions on the Borrower's ability to grant such Lien and security interest.

Section 8.03 Covenants with respect to the Collate ral. Borrower covenants and agrees with the Lenders that, from the Agreement Date and until the Repayment Date, the Borrower will:

(a) not, directly or indirectly, sell, assign, transfer, exchange or otherwise dispose of, or grant any option with respect to, or amend or modify, any Collateral; provided that the foregoing shall not prohibit the Borrower from (i) making payments to the Lenders pursuant to this Agreement and the other Loan Documents, (ii) making Restricted Payments expressly permitted under Section 5.10 hereof, (iii) paying the Purchase Price under, and as defined in, the Purchase Agreement, or (iv) any other assignment, transfer or disposal required or expressly permitted by this Agreement. Borrower shall defend the right, title and interest of the Lenders in and to the Collateral against the claims and demands of all Persons whomsoever; and

(b) if Borrower shall acquire any interest in any commercial tort claim having a value predicted of $5,000,000 or more (as reasonably determined by a Responsible Officer of Borrower in good faith and based upon reasonable assumptions), whether from another Person or because such commercial tort claim shall have come into

existence, (i) promptly (and in any event, within five (5) Business Days) upon such acquisition, deliver to the Collateral Agent, in each case, in form and substance reasonably satisfactory to the Collateral Agent, a notice of the existence and nature of such commercial tort claim containing a specific description of such commercial tort claim, (ii) Section 8.01 shall apply to such commercial tort claim and (iii) Borrower shall execute and deliver to the Collateral Agent, in each case, in form and substance reasonably satisfactory to the Collateral Agent, any document, and take all other action, deemed by the Collateral Agent to be reasonably necessary or appropriate for the Collateral Agent to obtain a perfected security interest having at least the priority set forth in Section 8.01 in all such commercial tort claims.

Section 8.04 Remedies with respect to C ollateral. Without limiting the generality of Section 7 .02:

(a) If an Event of Default shall occur and be continuing, the Collateral Agent may exercise, in addition to all other rights and remedies granted in this Agreement, at law or in equity, and in any other instrument or agreement securing, evidencing or relating to the Loan, all rights and remedies of a secured creditor under the Code, and, subject to any restrictions set forth below, may foreclose or otherwise realize upon the Collateral in such portions or in full as the Collateral Agent sees fit in its sole discretion. If an Event of Default shall occur and be continuing, without limiting the generality of the foregoing, the Collateral Agent, without demand of performance or other demand, presentment, protest, advertisement or notice of any kind (except any notice required by law referred to below) to or upon any Person (which demands, presentments, protests, advertisements and notices, or other defenses, are hereby waived by the Borrower), may collect, receive, appropriate and realize upon the Collateral, or any part thereof, or may forthwith sell, assign, give option or options to purchase or otherwise dispose of and deliver the Collateral or any part thereof (or contract to do any of the foregoing), in one or more parcels at public or private sale or sales, in the over-the-counter market, at any exchange, broker's board or office of the Collateral Agent or elsewhere upon such terms and conditions as it may deem advisable and at such prices as it may deem best, for cash or on credit or for future delivery without assumption of any credit risk. The Collateral Agent shall have the right upon any such public sale or sales, and, to the extent permitted by law, upon any such private sale or sales, to purchase the whole or any part of the Collateral so sold. To the extent permitted by Applicable Law, the Borrower waives all claims, damages and demands it may acquire against the Collateral Agent or any Lender arising out of the exercise by the Collateral Agent of any of its rights and remedies hereunder. If any notice of a proposed sale or other disposition of the Collateral shall be required by Applicable Law, such notice shall be deemed reasonable and proper if given at least ten (10) Business Days before such sale or other disposition. The Borrower shall remain liable for any deficiency if the proceeds of any sale or other disposition of the Collateral are insufficient to pay the Secured Obligations and the reasonable fees and disbursements of any attorneys employed by the Collateral Agent to collect such deficiency. Any proceeds of any sale or other disposition of the Collateral that remain after the full and final payment of all the Secured Obligations shall be returned to the Borrower.

(b) The Collateral Agent shall have such rights and remedies as are set forth in this Agreement, all the rights, powers and privileges of a secured party under the Code as in effect in the applicable jurisdictions, and all other rights and remedies available to the Collateral Agent, at law or in equity. Upon the occurrence and during the continuance of an Event of Default, the Collateral Agent shall have, to the extent permitted under Applicable Law, the right to the appointment of a receiver for the properties and assets of the Borrower, and the Borrower hereby consents to such rights and such appointment and hereby waives any objection the Borrower may have thereto or the right to have a bond or other security posted by the Collateral Agent in connection therewith.

(c) Upon the occurrence and during the continuance of an Event of Default, the Collateral Agent may, on behalf of the Borrower, modify, terminate, waive or release, enforce and sue on the Purchase Agreement and, without releasing the Borrower from its obligations under the Purchase Agreement, perform any and all obligations

of the Borrower under the Purchase Agreement and exercise any and all other rights of the Borrower therein contained as fully as the Borrower itself could, to the extent such actions are necessary or appropriate in order to accomplish or further effect the purposes of this Agreement. Notwithstanding the foregoing, the Collateral Agent shall not be obligated to perform any obligation of the Borrower under the Purchase Agreement.

Section 8.05 Security Interest Absolute; Rights Cumulative; the Borrower Remains Liable; Further Assurances.

(a) All rights of the Collateral Agent and all security interests and all obligations of the Borrower hereunder shall be continuing, absolute and unconditional irrespective of: (i) any lack of validity or enforceability of this Agreement, the Notes, the Loan, the other Loan Documents, or any other documents executed and delivered in connection therewith; (ii) any change in the time, manner or place of payment of, or any other term in respect of, all or any of the Secured Obligations, or any other amendment or waiver of or consent to any departure from this Agreement, the Notes, the Loan, or any other document executed or delivered in connection therewith; (iii) any increase in, addition to, exchange or release of, or non-perfection of any Lien on or security interest in any other collateral or any release of, amendment of, waiver of, consent to or departure from any security document or guaranty, for all or any of the Secured Obligations; (iv) the failure of the Collateral Agent to do any of the things or exercise any of the rights, interests, powers and authorities hereunder; or (v) the absence of any action on the part of the Collateral Agent to obtain payment or performance of the Secured Obligations from any other Person. The Collateral Agent shall not in any way be responsible for any failure to do any or all of the things for which rights, interests, power and authority are herein granted.

(b) The Borrower agrees that the rights of the Collateral Agent and the Lenders under this Agreement, the Notes, the Loan, or any other Loan Document (now or hereafter in existence) shall be cumulative, and that the Collateral Agent may from time to time exercise such rights and such remedies as the Collateral Agent may have thereunder and under the laws of the United States and any state, as applicable, in the manner and at the time that the Collateral Agent in its sole discretion desires. The Borrower further expressly agrees that the Collateral Agent shall not in any event be under any obligation to resort to any Collateral prior to exercising any other rights that the Collateral Agent may have against the Borrower or its property, or to resort to any other collateral for the Secured Obligations prior to the exercise of remedies hereunder nor shall the rights and remedies of the Collateral Agent be conditional or contingent on any attempt of the Collateral Agent to exercise any of its rights under any other documents executed in connection herewith or in connection with the Collateral against such party or against any other Person, including Baxalta, Roche, Halozyme or the Escrow Agent.

(c) Notwithstanding anything herein to the contrary, (i) the Borrower shall remain liable for all obligations under the Collateral and nothing contained herein is intended or shall be construed as a delegation of duties to the Collateral Agent or Lenders and (ii) the exercise by the Collateral Agent of any of its rights or remedies hereunder shall not release the Borrower from any of its duties or obligations under the contracts and agreements included in the Collateral.

(d) This Agreement shall remain in full force and effect and continue to be effective should any petition be filed by or against the Borrower for liquidation or reorganization, should the Borrower become insolvent or make an assignment for the benefit of creditors or should a receiver or trustee be appointed for all or any significant part of the Borrower's assets, and shall continue to be effective or be reinstated, as the case may be, if at any time payment and performance of the Secured Obligations, or any part thereof, is, pursuant to Applicable Law, rescinded or reduced in amount, or must otherwise be restored or returned by the Collateral Agent or the Lenders, whether as a

"voidable preference," "fraudulent conveyance," or otherwise, all as though such payment or performance had not been made. In the event that any payment, or any part thereof, is rescinded, reduced, restored or returned, the Secured Obligations shall be reinstated and deemed reduced only by such amount paid and not so rescinded, reduced, restored or returned.

(e) The Borrower agrees to make, execute, deliver or cause to be done, executed and delivered, from time to time, all such further acts, documents and things as the Collateral Agent or the Required Lenders may reasonably require for the purpose of perfecting or protecting its or their rights hereunder or otherwise giving effect to this Agreement, all promptly upon request therefor. The Borrower shall take or cause to be performed such acts and actions as shall be necessary or appropriate to assure that the security interests granted herein shall not become subordinate or junior to the security interests, liens or claims of any other Person.

ARTICLE IX

THE COLLATERAL AGENT

Section 9.01 Appointment and A uthority. Each of the Lenders hereby irrevocably appoints BioPharma Credit Investments IV Sub, LP to act on its behalf as the Collateral Agent hereunder and under the other Loan Documents and authorizes the Collateral Agent to take such actions on its behalf and to exercise such powers as are delegated to the Collateral Agent by the terms hereof or thereof, together with such actions and powers as are reasonably incidental thereto. Except for the penultimate paragraph of Section 9 .08, the provisions of this Article IX are solely for the benefit of the Collateral Agent and the Lenders, and neither the Borrower nor Halozyme shall have rights as a third party beneficiary of any of such provisions. Subject to Section 9.08 and Section 1 0.04, any action required or permitted to be taken by the Collateral Agent hereunder shall be taken with the prior approval of the Required Lenders.

Section 9.02 Rights as a L ender. The Person serving as the Collateral Agent hereunder shall have the same rights and powers in its capacity as a Lender as any other Lender and may exercise the same as though it were not the Collateral Agent and the term "Lender" or "Lenders" shall, unless otherwise expressly indicated or unless the context otherwise requires, include the Person serving as the Collateral Agent hereunder in its individual capacity. Such Person and its Affiliates may lend money to, own securities of, act as the financial advisor or in any other advisory capacity for and generally engage in any kind of business with the Borrower or any Subsidiary or other Affiliate thereof as if such Person were not the Collateral Agent hereunder and without any duty to account therefor to the Lenders.

Section 9.03 Exculpatory P rovisions. The Collateral Agent shall not have any duties or obligations except those expressly set forth herein and in the other Loan Documents to which it is a party. Without limiting the generality of the foregoing, the Collateral Agent:

(i) shall not be subject to any fiduciary or other implied duties, regardless of whether a Default or Event of Default has occurred and is continuing;

(ii) shall not have any duty to take any discretionary action or exercise any discretionary powers, except discretionary rights and powers expressly contemplated hereby or by the other Loan Documents to which it is a party that the Collateral Agent is required to exercise as directed in writing by the Required Lenders (or such other number or percentage of the Lenders as shall be expressly provided for herein or in such other Loan Documents), provided that the Collateral Agent shall not be required to take

any action that, in its opinion or the opinion of its counsel, may expose the Collateral Agent to liability or that is contrary to any Loan Document or Applicable Law; and

(iii) shall not, except as expressly set forth herein and in the other Loan Documents to which it is a party, have any duty to disclose, and shall not be liable for the failure to disclose, any information relating to the Borrower or any of its Affiliates that is communicated to or obtained by the Person serving as the Collateral Agent or any of its Affiliates in any capacity.

(b) The Collateral Agent shall not be liable for any action taken or not taken by it (i) with the consent or at the request of the Required Lenders (or such other number or percentage of the Lenders as shall be necessary, or as the Collateral Agent shall believe in good faith shall be necessary, under the circumstances as provided in Section 1 0.04) or (ii) in the absence of its own gross negligence or willful misconduct as determined by a court of competent jurisdiction by final and nonappealable judgment. The Collateral Agent shall be deemed not to have knowledge of any Default or Event of Default unless and until notice describing such Default or Event of Default is given to the Collateral Agent in writing by the Borrower or a Lender.

(c) The Collateral Agent shall not be responsible for or have any duty to ascertain or inquire into (i) any statement, warranty or representation made in or in connection with this Agreement or any other Loan Document, (ii) the contents of any certificate, report or other document delivered hereunder or thereunder or in connection herewith or therewith, the performance or observance of any of the covenants, agreements or other terms or conditions set forth herein or therein or the occurrence of any Default or Event of Default, (iv) the validity, enforceability, effectiveness or genuineness of this Agreement, any other Loan Document or any other agreement, instrument or document or (v) the satisfaction of any condition set forth in Article III or elsewhere herein, other than to confirm receipt of items expressly required to be delivered to the Collateral Agent.

Section 9.04 Reliance by Collateral A gent. The Collateral Agent shall be entitled to rely upon, and shall not incur any liability for relying upon, any notice, request, certificate, consent, statement, instrument, document or other writing (including any electronic message, internet or intranet website posting or other distribution) believed by it to be genuine and to have been signed, sent or otherwise authenticated by the proper Person. The Collateral Agent also may rely upon any statement made to it orally or by telephone and believed by it to have been made by the proper Person, and shall not incur any liability for relying thereon. The Collateral Agent may consult with legal counsel (who may be counsel for the Borrower), independent accountants and other experts selected by it, and shall not be liable for any action taken or not taken by it in accordance with the advice of any such counsel, accountants or experts.

Section 9.05 Delegation of D uties. The Collateral Agent may perform any and all of its duties and exercise its rights and powers hereunder or under any other Loan Document by or through any one or more sub-agents appointed by the Collateral Agent. The Collateral Agent and any such sub-agent may perform any and all of its duties and exercise its rights and powers by or through their respective Related Parties. The exculpatory provisions of this Article IX shall apply to any such sub-agent and to the Related Parties of the Collateral Agent and any such sub- agent. The Collateral Agent shall not be responsible for the negligence or misconduct of any sub-agent except to the extent that a court of competent jurisdiction determines in a final and nonappealable judgment that the Collateral Agent acted with gross negligence or willful misconduct in the selection of such sub-agent. Prior to its appointment hereunder, each sub- agent shall agree to be bound by the confidentiality agreement set forth in Section 10.10 and Annex A hereto.

Section 9.06 Resignation of Collateral A gent. The Collateral Agent may at any time give notice of its resignation to the Lenders and the Borrower. Upon the receipt of any such notice of resignation, the Required Lenders

shall have the right, in consultation with the Borrower so long as no Default or Event of Default has occurred and is continuing, to appoint a successor. If no successor shall have been so appointed by the Required Lenders and shall have accepted such appointment within thirty (30) days after the retiring Collateral Agent gives notice of its resignation, then the retiring Collateral Agent may, on behalf of the Lenders, appoint a successor Collateral Agent; provided that, whether or not a successor has been appointed or has accepted such appointment, such resignation shall become effective upon delivery of the notice thereof. Upon the acceptance of a successor's appointment as Collateral Agent hereunder, such successor shall succeed to and become vested with all of the rights, powers, privileges and duties of the retiring (or retired) Collateral Agent, and the retiring Collateral Agent shall be discharged from all of its duties and obligations under the Loan Documents (if not already discharged therefrom as provided above in this Section 9.06). After the retiring Collateral Agent's resignation, the provisions of this Article IX and Section 10.14 shall continue in effect for the benefit of such retiring Collateral Agent, its sub-agents and their respective Related Parties in respect of any actions taken or omitted to be taken by any of them while the retiring Collateral Agent was acting as Collateral Agent. Upon any resignation by the Collateral Agent, all payments, communications and determinations provided to be made by, to or through the Collateral Agent shall instead be made by, to or through each Purchaser directly, until such time as a Person accepts an appointment as Collateral Agent in accordance with this Section 9.06.

Section 9.07 Non-Reliance on Collateral Agent and Other Lenders. Each Lender acknowledges that it has, independently and without reliance upon the Collateral Agent or any other Lender or any of their Related Parties and based on such documents and information as it has deemed appropriate, made its own credit analysis and decision to enter into this Agreement and make the Loan hereunder. Each Lender also acknowledges that it will, independently and without reliance upon the Collateral Agent or any other Lender or any of their Related Parties and based on such documents and information as it shall from time to time deem appropriate, continue to make its own decisions in taking or not taking action under or based upon this Agreement, any other Loan Document or any related agreement or any document furnished hereunder or thereunder.

Section 9.08 Collateral Matters. Each Lender agrees that any action taken by the Collateral Agent or the Required Lenders in accordance with the provisions of this Agreement or of the other Loan Documents, and the exercise by the Collateral Agent or Required Lenders of the powers set forth herein or therein, together with such other powers as are reasonably incidental thereto, shall be authorized and binding upon all of the Lenders. Without limiting the generality of the foregoing, the Lenders irrevocably authorize the Collateral Agent, at its option and in its discretion:

(a) to release any Lien on any property granted to or held by the Collateral Agent (A) upon discharge of the Secured Obligations, (B) that is sold, transferred, disposed or to be sold, transferred, disposed as part of or in connection with any sale, transfer or other disposition (other than any sale to a Loan Party) permitted hereunder, or (C) subject to Section 10.04, if approved, authorized or ratified in writing by the Required Lenders;

(b) to subordinate any Lien on any property granted to or held by the Collateral Agent under any Loan Document to the holder of any Permitted Lien on such property; and

(c) to enter into a subordination and intercreditor agreement as contemplated by Section 5.08.

Upon request by the Collateral Agent at any time the Required Lenders will confirm in writing the Collateral Agent's authority to release or subordinate its interest in particular types or items of property pursuant to this Section 9.08.

In each case as specified in this Section 9.08, the Collateral Agent will (and each Lender irrevocably authorizes the Collateral Agent to), at the Borrower's expense, execute and deliver to the applicable Loan Party such documents as such Loan Party may reasonably request (i) to evidence the release or subordination of such item of collateral from

the assignment and security interest granted hereunder, or (ii) to enter into a subordination and intercreditor agreement as contemplated by Section 5 .08, in each case in accordance with the terms of the Loan Documents and this Section 9.08 and in form and substance reasonably acceptable to the Collateral Agent.

The Collateral Agent shall deliver to the Lenders notice of any action taken by it under this Section 9.08 as soon as reasonably practicable after the taking thereof; p rovided, that delivery of or failure to deliver any such notice shall not affect the Collateral Agent's rights, powers, privileges and protections under this Article I X.

Section 9.09 Reimbursement by L enders. To the extent that the Borrower for any reason fails to indefeasibly pay any amount required under Section 10.14 to be paid by it to the Collateral Agent (or any sub-agent thereof) or any Related Party of any of the foregoing, each Lender severally agrees to pay to the Collateral Agent (or any such sub-agent) or such Related Party, as the case may be, such Lender's pro rata share (based upon the percentages as used in determining the Required Lenders as of the time that the applicable unreimbursed expense or indemnity payment is sought) of such unpaid amount; provided that the unreimbursed expense or indemnified loss, damage, liability or related expense, as the case may be, was incurred by or asserted against the Collateral Agent (or any such sub-agent) in its capacity as such or against any Related Party of any of the foregoing acting for the Collateral Agent (or any sub-agent) in connection with such capacity.

ARTICLE X MISCELLANEOUS

Section 10.01 Notices and Deliveries . Except as otherwise expressly provided, all notices, communications and materials to be given or delivered pursuant to the Loan Documents shall be given or delivered in writing (which shall include telecopy transmissions) at the following respective addresses and telecopier numbers and to the attention of the following individuals or departments or at such other address or telecopier or telephone number or to the attention of such other individual or department as the party to which such information pertains may hereafter specify:

(a) if to the Borrower or Halozyme, to it at:

Halozyme Royalty LLC c/o Halozyme, Inc.
11388 Sorrento Valley Road San Diego, CA 92121
Attn: Laurie Stelzer Tel: 858-794-8889
Fax: 858-704-8311

With a copy to:

Attn: Corporate Secretary Tel: 858-794-8889
Fax: 858-704-8311

or

Halozyme, Inc.
11388 Sorrento Valley Road San Diego, CA 92121
Attn: Laurie Stelzer Tel: 858-794-8889
Fax: 858-704-8311

With a copy to:

Attn: Corporate Secretary Tel: 858-794-8889
Fax: 858-704-8311

in either case, with copies (which shall not constitute notice) to:

DLA Piper LLP (US)
4365 Executive Drive, Suite 1100
San Diego, California 92121-2133 Attn: Douglas Rein, Esq. Tel. 858-677-1443
Fax: 858-638-5043

(b) if to the Collateral Agent, to it at:

BioPharma Credit Investments IV Sub, LP
c/o Intertrust Corporate Services (Cayman) Limited
190 Elgin Avenue
Georgetown, Grand Cayman KY1-9005
Grand Cayman]
Attention: Director
Facsimile: (347) 945-4757

with copies (which shall not constitute notice) to: Pharmakon Advisors LP

110 East 59th Street, #3300
New York, NY 10022
Attn: Pedro Gonzalez de Cosio
Phone: (212) 883-2296
Fax: (212) 490-7576

and

Akin Gump Strauss Hauer & Feld LLP
One Bryant Park
New York, NY 10036-6745
Attn: Geoffrey E. Secol, Esq.
Phone: (212) 872-8081

Fax: (212) 872-1002

(c) if to any Lender, to it at the address(es) set forth on Exhibit A hereto for such Lender.

Notices, communications and materials shall be deemed given or delivered when delivered or received at the appropriate address or telecopy number to the attention of the appropriate individual or department.

Section 10.02 Amounts Payable Due upon Request for Payme nt. All amounts payable by the Borrower under the Loan Documents shall, except as otherwise expressly provided, be immediately due upon request for the payment thereof.

Section 10.03 Rights C umulative. Each of the rights and remedies of the Collateral Agent and the Lenders under the Loan Documents shall be in addition to all of its other rights and remedies under the Loan Documents and Applicable Law, and nothing in the Loan Documents shall be construed as limiting any such rights or remedies.

Section 10.04 Amendments; Wai vers. Any term, covenant, agreement or condition of the Loan Documents may be amended or modified, and any right under such Loan Documents may be waived, if, but only if, such amendment, modification or waiver is in writing and is signed by the Required Lenders and, in the case of an amendment or modification, by the Borrower and, if its rights or obligations hereunder are affected thereby, by Halozyme; provi ded, h owever, that:

(a) unless agreed to by each Lender directly affected thereby, no amendment, waiver or modifications shall: (i) reduce or forgive the principal amount of the Loan or any Note, reduce the rate of or forgive any interest thereon, or reduce or forgive any premium or fees hereunder, (ii) extend the final scheduled maturity date or any other scheduled date for the payment of any principal of or interest on the Loan or any Note, or extend the time of payment of any premium or fees hereunder, (iii) except as expressly contemplated hereunder, increase the original principal amount the Loan over the amount thereof in effect or extend the maturity thereof (it being understood that a waiver of any condition precedent set forth in Article III or of any Default or Event of Default, if agreed to by the Required Lenders or all Lenders (as may be required hereunder with respect to such waiver), shall not constitute such an increase), (iv) reduce the percentage of the aggregate outstanding principal amount of the Loan or Notes, or the number or percentage of Lenders, that shall be required for the Lenders or any of them to take or approve, or direct the Collateral Agent to take, any action hereunder or under any other Loan Document (including as set forth in the definition of "Required Lenders"), (v) change any other provision of this Agreement or any of the other Loan Documents requiring, by its terms, the consent or approval of all the Lenders for such amendment, modification, waiver, discharge, termination or consent, (vi) change or waive any provision of Sections 2.12 or 2 .04, any other provision of this Agreement or any other Loan Document requiring pro rata treatment of any Lenders, or this Section 1 0.04, or (vii) release any Lien on all or substantially all of the Collateral other than in connection with a sale or transfer of assets permitted by this Agreement; and

(b) unless agreed to by the Collateral Agent in addition to the Lenders required as provided hereinabove to take such action, affect the respective rights or obligations of the Collateral Agent, as applicable, hereunder or under any of the other Loan Documents.

Unless otherwise specified in such waiver, a waiver of any right under the Loan Documents shall be effective only in the specific instance and for the specific purpose for which given. No election not to exercise, failure to exercise or delay in exercising any right, nor any course of dealing or performance, shall operate as a waiver of any right of any Lender under the Loan Documents or Applicable Law, nor shall any single or partial exercise of any such right

preclude any other or further exercise thereof or the exercise of any other right of any Lender under the Loan Documents or Applicable Law.

Section 10.05 Set-Off. Subject to Section 2.12 hereof, each Lender is hereby authorized by the Borrower, at any time and from time to time, without notice, upon the occurrence and during the continuance of any Event of Default, to set off against, and to appropriate and apply to the payment of, the Liabilities of the Borrower under the Loan Documents (whether matured or unmatured, fixed or contingent or liquidated or unliquidated) any and all Liabilities owing by such Lender or any of its Affiliates to Borrower (whether payable in Dollars or any other currency and whether matured or unmatured).

Section 10.06 Assignment and Sale. The Borrower may not sell, assign or transfer this Agreement or any of the other Loan Documents or any portion hereof or thereof, including their respective rights, title, interests, remedies, powers, and duties hereunder or thereunder. Nothing in any Loan Document shall prohibit any Lender from pledging or assigning this Agreement, its portion of the Loan or its Note and such Lender's rights under any of the Loan Documents, including collateral therefor, any portion hereof or thereof to any Person; provided that (i) in the case of an assignment of any Lender's portion of the Loan or any Note or any rights or participations therein, such Person shall agree in writing to the provisions hereof applicable to Lenders (including the provisions of Article IX and Sections 10.04 and 10.10) and (ii) unless such assignment is to another Lender or an Affiliate of a Lender, so long as no Default or Event of Default has occurred and is continuing, (x) the prior written consent of the Borrower is obtained (such consent not to be unreasonably withheld, conditioned or delayed), (y) no assignment shall be made to a Competitor, and (z) such pledgee or assignee represents in writing to the assigning Lender that such pledgee or assignee is not a Competitor. Any assignee or successor to a Lender shall provide notice of the assignment to Collateral Agent for purposes of the Register to be maintained pursuant to Section 2.07, which notice shall include information related to the new Lender, the amount and form of the assignment and such other information as Collateral Agent may reasonably request. Any assignee or successor to a Lender shall become a "Lender" under this Agreement at the time such Person's ownership interest in the Loan or a Note is recorded in the Register and such Person shall be subject to the obligations set forth in this Agreement.

Section 10.07 Governing Law. This Agreement and the other Loan Documents and any claims, controversy, dispute or cause of action (whether in contract or tort or otherwise) based upon, arising out of or relating to this Agreement or any other Loan Document (except as may be expressly otherwise provided in any Loan Document) shall be governed by, and construed in accordance with, the law of the State of New York (including Sections 5-1401 and 5-1402 of the New York General Obligations Law, but excluding all other choice of law and conflicts of law rules).

Section 10.08 Judicial Proceedings; Waiver of Jury Trial. Each party hereto agrees that any judicial proceeding brought against it with respect to any Loan Document Related Claim may be brought in any court of competent jurisdiction in the City of New York and irrevocably waives any objection it may now or hereafter have as to the venue of any such proceeding brought in such a court or that such a court is an inconvenient forum. Each party hereto waives personal service of process and consents that service of process upon it may be made by certified or registered mail, return receipt requested, at its address specified or determined in accordance with the provisions of Section 10.01, and service so made shall be deemed completed on the third Business Day after such service is deposited in the mail. Any judicial proceeding by any Loan Party against the Lender involving any Loan Document Related Claim shall be brought only in a court of the State of New York sitting in the City and County of New York and of the United States District Court of the Southern District of New York and any appellate court thereof. EACH PARTY HERETO HEREBY IRREVOCABLY WAIVES, TO THE FULLEST EXTENT PERMITTED BY APPLICABLE LAW, ANY RIGHT IT MAY HAVE TO A TRIAL BY JURY IN ANY LEGAL PROCEEDING DIRECTLY OR INDIRECTLY INVOLVING

ANY LOAN DOCUMENT RELATED CLAIM (WHETHER BASED ON CONTRACT, TORT OR ANY OTHER THEORY). EACH PARTY HERETO (A) CERTIFIES THAT NO REPRESENTATIVE, AGENT OR ATTORNEY OF ANY OTHER PERSON HAS REPRESENTED, EXPRESSLY OR OTHERWISE, THAT SUCH OTHER PERSON WOULD NOT, IN THE EVENT OF LITIGATION, SEEK TO ENFORCE THE FOREGOING WAIVER AND (B) ACKNOWLEDGES THAT IT AND THE OTHER PARTIES HERETO HAVE BEEN INDUCED TO ENTER INTO THIS AGREEMENT AND THE OTHER CREDIT DOCUMENTS BY, AMONG OTHER THINGS, THE MUTUAL WAIVERS AND CERTIFICATIONS IN THIS SECTION 1 0.08.

Section 10.09 Severability of P rovisions. Any provision of the Loan Documents that is prohibited or unenforceable in any jurisdiction shall, as to such jurisdiction, be ineffective to the extent of such prohibition or unenforceability without invalidating the remaining provisions thereof or affecting the validity or enforceability of such provision in any other jurisdiction. To the extent permitted by Applicable Law, each Loan Party hereby waives any provision of Applicable Law that renders any provision of the Loan Documents prohibited or unenforceable in any respect.

Section 10.10 C onfidentiality. For so long as this Agreement is in effect and for a period of (a) five (5) years following the date of termination of this Agreement or (b) in the case of any Confidential Information arising under or subject to any of the License Agreements, five (5) years following the expiration or earlier termination of the applicable License Agreement, the Loan Parties, the Collateral Agent and the Lenders shall comply with and be bound by the provisions set forth in Annex A hereto, with the party that discloses Confidential Information (as defined in Annex A) being the " Discloser" and the party that receives Confidential Information being the " Recipient"; p rovided, h owever, that nothing herein shall limit the rights of any Lender, or Collateral Agent, Escrow Agent or their respective successor or assigns to disclose Confidential Information as contemplated by the Baxalta Consent and Direction or the Roche Consent and Direction. The confidentiality obligations of the Lenders under this Agreement supersede any prior confidentiality agreements between the Lenders (or their Affiliates) and Halozyme or Borrower.

Section 10.11 C ounterparts. This Agreement may be signed in any number of counterparts, each of which shall be an original, with the same effect as if the signatures thereto were upon the same instrument.

Section 10.12 Entire Agreeme nt. This Agreement and the other Loan Documents embody the entire agreement between the Borrower, the Collateral Agent and the Lenders relating to the subject matter hereof and supersede all prior agreements, representations and understandings, if any, relating to the subject matter hereof.

Section 10.13 Successors and A ssigns. All of the provisions of this Agreement shall be binding upon and inure to the benefit of the parties hereto and their respective successors and assigns.

Section 10.14 Expenses; Indemni fication.

(a) The Borrower agrees to pay, within ten (10) Business Days after the receipt of written notice from the Collateral Agent or any Lender, all reasonable and documented out-of-pocket expenses of the Collateral Agent and the Lenders, including reasonable fees and disbursements of counsel, in connection with: (i) the negotiation, preparation, execution, delivery, and filing, if required of this Agreement and the other Loan Documents (provided that the obligation to reimburse under this clause (i) shall not exceed $300,000 in the aggregate), (ii) any amendments, modifications, supplements, consents or waivers hereto or to the other Loan Documents and (iii) the administration, preservation or enforcement of its or their rights under this Agreement and the other Loan Documents (collectively, the " Borrower E xpenses").

(b) From and at all times after the Agreement Date, and in addition to all of the Collateral Agent's and the Lenders' other rights and remedies against the Borrower, the Borrower agrees to indemnify, defend and hold harmless the Collateral Agent and the Lenders and their respective Related Parties (each such Person, including the Collateral Agent and the Lenders, being called an "Indemnitee") from and against all damages, losses and other out-of-pocket costs and expenses of any kind or nature whatsoever (including reasonable attorneys' fees and expenses, court costs and fees, and consultant and expert witness fees and expenses, but limited in the case of attorney's fees and expenses to the reasonable and documented out of pocket fees, disbursements and other charges of one counsel to the Indemnitees, taken as a whole and if reasonably necessary, one local counsel in each appropriate jurisdiction (and, in the case of a conflict of interest, where the Indemnitee affected by such conflict notifies the Borrower of the existence of such conflict and thereafter retains its own counsel, one additional separate counsel for all similarly affected Indemnitees) (collectively "Costs") arising in any manner, directly or indirectly, out of or by reason of any and all claims (whether valid or not), actions, suits, inquiries, investigations and administrative proceedings (collectively, "Proceedings") relating to (i) the negotiation, preparation, execution or performance of this Agreement or the other Loan Documents, or any transaction contemplated herein or therein, whether or not any party protected under this Section 10.14(b) is a party to, or target of, any Proceeding in question (provided, however, that no Indemnitee shall have the right to be indemnified hereunder for any liability resulting from the willful misconduct or gross negligence of such Indemnitee (as finally determined by a court of competent jurisdiction), material breach by any Lender of its obligations under this Agreement, or disputes that are solely among Lenders or among the Collateral Agent and the Lenders other than disputes arising from an act or omission of the Borrower), (ii) any breach of any of the covenants, warranties or representations of the Borrower hereunder or under any other Loan Document, (iii) any Lien or charge upon amounts payable hereunder by the Borrower to the Lenders or any taxes, assessments, impositions and other charges in respect of the Collateral, or (iv) any violation or alleged violation of any Applicable Law, equitable requirement or other legal requirement by the Borrower or with respect to any Collateral to the extent that the Borrower is alleged to be responsible for such violation or alleged violation. All Costs shall be additional Secured Obligations under this Agreement, shall be payable within ten (10) Business Days of demand to the Indemnitee and shall be secured by the security interest and Lien created hereunder. The obligations of the Borrower under this Section 10.14(b) shall not be limited to any extent by payment of the Secured Obligations and termination of this Agreement and shall remain in full force and effect until expressly terminated by the Lenders in writing. This Section 10.14(b) shall not apply with respect to Taxes other than any Taxes that represent losses, claims, damages, etc. arising from any non-Tax claim, or any Indemnified Taxes.

(c) Halozyme agrees to indemnify each Indemnitee against, and to hold each Indemnitee harmless from, any and all Costs incurred by or asserted against any Indemnitee arising out of, in any way connected with, or as a result of: (i) any representation, warranty or certification made by Halozyme in this Agreement or certificates given by Halozyme in writing pursuant hereto which is untrue, inaccurate or incomplete in any material respect; (ii) any Parent Disbursement Instruction delivered to Escrow Agent by Halozyme pursuant to Section 6.03(c) which is untrue, inaccurate or incomplete; (iii) any material breach of or default under any covenant or agreement by Halozyme pursuant to this Agreement and, if capable of being remedied, such breach or default shall continue unremedied for a period of thirty (30) days, (iv) any material breach or default under any covenant or agreement by Halozyme pursuant to either License Agreement, and if capable of being remedied, such breach or default shall continue unremedied for a period of thirty (30) days; or (v) any Set-off by Roche (or its Affiliates) or Baxalta (or its Affiliates) of any amount against the otherwise required amount of any Post- Closing Royalty Amounts; provided that such indemnity shall not, as to any Indemnitee, apply to any such Costs arising from willful misconduct or gross negligence of such Indemnitee (as finally determined by a court of competent jurisdiction). Notwithstanding the foregoing, (x) no provision of this Agreement shall be deemed or may be construed to constitute a Guaranty or assurance by Halozyme as to the amount

of any Post-Closing Royalty Amount or of the value of the Collateral and (y) neither the Collateral Agent, the Lenders nor any other Indemnitee shall have any recourse under this Agreement against Halozyme, its assets or properties, except for claims expressly provided for under this Section 1 0.14(c).

(d) The provisions of this Section 10.14 shall survive termination of this Agreement, and shall remain operative and in full force and effect regardless of the consummation of the transactions contemplated hereby, the repayment of the Loan, the occurrence of the Maturity Date, the invalidity, illegality, or unenforceability of any term or provision of this Agreement or any other Loan Document, or any investigation made by or on behalf of the Collateral Agent or any Lender. All amounts due under this Section 10.14 shall be payable within ten (10) Business Days following written demand therefor.

Section 10.15 Tax Legending of N otes. Notwithstanding anything to the contrary contained in this Agreement, each Note shall bear the following legend:

> THIS NOTE HAS BEEN ISSUED WITH ORIGINAL ISSUE DISCOUNT ("OID") FOR U.S. FEDERAL INCOME TAX PURPOSES. THE ISSUE PRICE, AMOUNT OF OID, ISSUE DATE AND YIELD TO MATURITY OF THIS SECURITY MAY BE OBTAINED BY WRITING TO HALOZYME AT THE ADDRESS SPECIFIED IN SECTION 10.01(A) OF THE CREDIT AGREEMENT.

[Signature Pages Follow]

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed by their duly authorized officers all as of the Agreement Date.

HALOZYME ROYALTY LLC, as the Borrower

By: /s/ Laurie Stelzer Name: Laurie Stelzer
Title: Vice President and Treasurer

HALOZYME, INC.

By: /s/ Laurie Stelzer Name: Laurie Stelzer
Title: Chief Financial Officer

BIOPHARMA CREDIT INVESTMENTS IV SUB, LP,
as the Collateral Agent and a Lender

By: Pharmakon Advisors, LP, its Investment Manager

By: Pharmakon Management I, LLC, its General Partner

By: /s/ Pedro Gonzalez de Cosio Name: Pedro Gonzalez de Cosio
Title: Managing Member

ATHYRIUM OPPORTUNITIES II ACQUISITION LP,
as a Lender

By: Athyrium Opportunities Associates II LP, its General Partner

By: Athyrium Opportunities II Associates II GP, LLC, its General Partner

By: /s/ Andrew C. Hyman Name: Andrew C. Hyman
Title: Authorized Signatory

ANNEX A

1. Confidential Informa tion. " Confidential Informa tion" shall mean any information related to Discloser's business, prospects, technologies, current products, future products and proposed products and services, whether written, oral or visual, disclosed or provided by the Discloser to Recipient, including patent, copyright, trade secret and other proprietary information, research, development, scientific or financial data, compilations, formulae, models, design details, patent disclosures, procedures, processes, projections, protocols, results of experimentation and testing, specifications, strategies and techniques, customer lists and information, business forecasts, sales information, pricing, manufacturing information and assets. Without limiting the foregoing, "Confidential Information" includes any information that may be made known to Recipient and which Discloser has received from others that Discloser is obligated to treat as confidential or proprietary, whether or not marked as confidential. "Confidential Information" does not include information which the Recipient can establish by competent evidence: (a) was in the public domain at or subsequent to the time such information was communicated by Discloser to Recipient through no fault of Recipient; (b) was developed by employees, contractors or agents of Recipient independently of and without use of or reference to any Confidential Information disclosed by Discloser to Recipient; (c) was known to Recipient at the time of disclosure; (d) was approved for release by prior written authorization of Discloser; or (e) was provided to Recipient by a third party or was otherwise obtained by Recipient without obligation of confidentiality.

2. Nondisclosure and Nonuse O bligations. Recipient shall not use, disseminate, or in any way disclose the Confidential Information of the Discloser at any time except in furtherance of the transactions contemplated under the Loan Documents. Further, Recipient shall not disclose the existence of this Agreement or any other Loan Document without the prior written consent of the Discloser. Recipient shall treat all Confidential Information with the same degree of care as Recipient accords to Recipient's own confidential information, but not less than reasonable care. Recipient shall maintain the Confidential Information of the Discloser in confidence, and shall not disclose the Confidential Information of the Discloser to any third party. Recipient shall disclose Confidential Information only to those of its employees, Affiliates, directors, consultants or agents (collectively, " Re presentatives ") who have a need to know such information and assist Recipient with respect to the transactions contemplated under the Loan Documents. Recipient certifies that each such Representative will have agreed, either as a condition of employment (as applicable) or in order to obtain the Confidential Information, to be under an obligation to Recipient to be bound by terms and conditions no less restrictive than those terms and conditions applicable to Recipient under this Agreement. Recipient shall immediately give notice to Discloser of any unauthorized use or disclosure of the Confidential Information. Recipient shall assist Discloser, at Recipient's expense, in remedying any such unauthorized use or disclosure of the Confidential Information. Recipient shall be liable to Discloser for any breach of the confidentiality or use obligations hereunder by Recipient or any Representative of Recipient. A disclosure of any Confidential Information (a) in response to a valid order by a court or other Governmental Authority or (b) as otherwise required by Applicable Law shall not be considered to be a breach of this Agreement or a waiver of confidentiality for other purposes; p rovided, however that Recipient shall provide prompt prior written notice thereof to Discloser to enable Discloser to seek a protective order or otherwise prevent such disclosure. The burden of establishing the existence of such exclusions rests with the Recipient.

EXHIBIT A

LOAN AMOUNTS; NOTICE ADDRESSES

Lender	Principal Amount	Notice Address
BioPharma Credit Investments IV Sub, LP	$100,000,000.00	c/o Intertrust Corporate Services (Cayman) Limited 190 Elgin Avenue Georgetown, Grand Cayman KY1- 9005 Grand Cayman Attention: Director Facsimile: (345) 945-4757 with copies (which shall not constitute notice) to: Pharmakon Advisors LP 110 East 59th Street, #3300 New York, NY 10022 Attn: Pedro Gonzalez de Cosio Phone: (212) 883-2296 Fax: (212) 490-7576 Em ail: pg@pharmakonadvisors.com and Akin Gump Strauss Hauer & Feld LLP One Bryant Park New York, NY 10036-6745 Attn: Geoffrey E. Secol, Esq. Phone: (212) 872-8081 Fax: (212) 872-1002 Em ail: gsecol@akingump.com

Athyrium Opportunities II Acquisition LP	$50,000,000.00	c/o Athyrium Capital Management, LP 530 5th Avenue, 25th Floor New York, NY 10036 Attn: Laurent Hermouet and Andrew Hyman Phone: (212) 402-6925 Em ail: lhermouet@athyrium.com, and ahyman@athyrium.com with a copy (which shall not constitute notice) to:
		Moore & Van Allen PLLC 100 North Tyron Street Charlotte, NC 28202 Attn: Jim Langdon, Esq. Phone: (704) 331-3705 Fax: (704) 339-5855 Em ail: jlangdon@mvalaw.com

EXHIBIT B

THIS NOTE HAS BEEN ISSUED WITH ORIGINAL ISSUE DISCOUNT ("OID") FOR U.S. FEDERAL INCOME TAX PURPOSES. THE ISSUE PRICE, AMOUNT OF OID, ISSUE DATE AND YIELD TO MATURITY OF THIS SECURITY MAY BE OBTAINED BY WRITING TO HALOZYME AT THE ADDRESS SPECIFIED IN SECTION 10.01(A) OF THE CREDIT AGREEMENT.

FORM OF SECURED PROMISSORY NOTE

$_____.__ _____, 201_

FOR VALUE RECEIVED, HALOZYME ROYALTY LLC, a Delaware limited liability company (the "Borrower") hereby promises to pay to the order of [ ] (the "Lender"), the unpaid principal amount of the Loan made by the Lender under the Credit Agreement referred to below, on the Closing Date pursuant to Section 2.04 of the Credit Agreement, and to pay interest on the principal amount of the Loan (including principal consisting of capitalized interest on the Loan) on the dates and at the rate specified in or determined pursuant to Sections 2.03 and 2.04 of the Credit Agreement and otherwise in accordance with the terms and conditions of this secured note (this "Note") and the Credit Agreement. Principal, interest and all other amounts due to the Lender with respect to this Note are payable to the Lender at the place, in the type of money and funds and in the manner specified in Section 2.09 of the Credit Agreement. The defined terms in the Credit Agreement are used herein with the same meaning.

Presentment, demand, protest, notice of dishonor and notice of intent to accelerate are hereby waived by the undersigned.

This Note evidences the Loan made under, and is entitled to the benefits of, and subject to the burdens of, the Credit Agreement, dated as of December , 2015, among the Borrower, Halozyme, Inc., BioPharma Credit Investments IV Sub, LP, as Collateral Agent and a Lender and the other Lenders from time to time parties thereto, as the same may be amended, modified, restated or supplemented from time to time (the "Credit Agreement"), including the security interest granted by the Borrower to the Collateral Agent for the ratable benefit of the Secured Parties thereunder.

This Note is one of the Notes referred to in the Credit Agreement and is issued to evidence the Loan made by the Lender pursuant to the Credit Agreement. All of the terms, conditions and covenants of the Credit Agreement are expressly made a part of this Note by reference in the same manner and with the same effect as if set forth herein at length, and any holder of this Note is entitled to the benefits of and remedies provided in the Credit Agreement and the other Loan Documents. Reference is made to the Credit Agreement for provisions relating to the interest rate, maturity, payment, prepayment and acceleration of this Note.

In the event of an acceleration of the maturity of this Note pursuant to the Credit Agreement, this Note shall become immediately due and payable, without presentation, demand, protest or notice of any kind, all of which are hereby waived by the Borrower.

In the event this Note is not paid when due at any stated or accelerated maturity, the Borrower agrees to pay, in addition to the principal and interest, all costs of collection, including reasonable attorneys' fees.

This Note and any claims, controversy, dispute or cause of action (whether in contract or tort or otherwise) based upon, arising out of or relating to this Note shall be governed by, and construed in accordance with, the law of the State of New York. The Borrower hereby submits to the nonexclusive jurisdiction and venue of the courts of the State of New York sitting in the City and County of New York and of the United States District Court of the Southern District of New York, and any appellate court from any thereof, although the Lender shall not be limited to bringing an action in such courts.

The ownership of an interest in this Note shall be registered on a record of ownership maintained by the Collateral Agent. Notwithstanding anything else in this Note to the contrary, the right to the principal of, and stated interest on, this Note may be transferred only if the transfer is registered on such record of ownership and the transferee is identified as the owner of an interest in the obligation. The Borrower shall be entitled to treat the registered holder of this Note (as recorded on such record of ownership) as the owner in fact thereof for all purposes and shall not be bound to recognize any equitable or other claim to or interest in this Note on the part of any other person or entity.

HALOZYME ROYALTY LLC, as the Borrower

By: Name:

Title:

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EXHIBIT 21.1

SUBSIDIARIES OF HALOZYME THERAPEUTICS, INC.

Name of Subsidiary	State or Jurisdiction of Incorporation or Organization	Percent Owned
Halozyme, Inc.	California	100%
Halozyme Holdings Ltd., a wholly owned subsidiary of Halozyme, Inc.	Bermuda	100%
Halozyme Royalty LLC, a wholly owned subsidiary of Halozyme, Inc.	Delaware	100%

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 (Form S-3 No. 333-179444) of Halozyme Therapeutics, Inc.,

(2) Registration Statement (Form S-8 No. 333-119969) pertaining to the Halozyme Therapeutics, Inc. 2004 Stock Plan and Nonstatutory Stock Option Agreement with Andrew Kim and Assumed Options Under the Deliatroph Pharmaceuticals, Inc. Amended and Restated 2001 Stock Plan of Halozyme Therapeutics, Inc.,

(3) Registration Statement (Form S-8 No. 333-133829) pertaining to the Halozyme Therapeutics, Inc. 2005 Outside Directors' Stock Plan and Halozyme Therapeutics, Inc. 2006 Stock Plan of Halozyme Therapeutics, Inc.,

(4) Registration Statement (Form S-8 No. 333-152914) pertaining to the Halozyme Therapeutics, Inc. 2008 Outside Directors' Stock Plan and Halozyme Therapeutics, Inc. 2008 Stock Plan of Halozyme Therapeutics, Inc.,

(5) Registration Statement (Form S-8 No. 333-174013) pertaining to the Halozyme Therapeutics, Inc. 2011 Stock Plan of Halozyme Therapeutics, Inc.,

(6) Registration Statement (Form S-8 No. 333-188997) pertaining to the Halozyme Therapeutics, Inc. Amended and Restated 2011 Stock Plan of Halozyme Therapeutics, Inc., and

(7) Registration Statement (Form S-8 No. 333-206279) pertaining to the Halozyme Therapeutics, Inc. 2011 Stock Plan of Halozyme Therapeutics, Inc.;

of our reports dated February 29, 2016 , with respect to the consolidated financial statements and schedule of Halozyme Therapeutics, Inc. and the effectiveness of internal control over financial reporting of Halozyme Therapeutics, Inc. included in this Annual Report (Form 10-K) of Halozyme Therapeutics, Inc. for the year ended December 31, 2015 .

/s/ Ernst & Young LLP

San Diego, California
February 29, 2016

EXHIBIT 31.1

CERTIFICATION OF PRINCIPAL EXECUTIVE OFFICER

I, Helen I. Torley, M.B. Ch.B, M.R.C.P. , Chief Executive Officer of Halozyme Therapeutics, Inc. certify that:

1. I have reviewed this Annual Report on Form 10-K of Halozyme Therapeutics, Inc.;

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.

Date: February 29, 2016

/s/ Helen I. Torley, M.B. Ch.B, M.R.C.P.

Helen I. Torley, M.B. Ch.B, M.R.C.P.

President and Chief Executive Officer

EXHIBIT 31.2

CERTIFICATION OF PRINCIPAL FINANCIAL OFFICER

I, Laurie D. Stelzer, Chief Financial Officer of Halozyme Therapeutics, Inc. certify that:

1. I have reviewed this Annual Report on Form 10-K of Halozyme Therapeutics, Inc.;

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.

Date: February 29, 2016

/s/ Laurie D. Stelzer

Laurie D. Stelzer

Senior Vice President and Chief Financial Officer

EXHIBIT 32

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

In connection with the Annual Report of Halozyme Therapeutics, Inc. (the "Registrant") on Form 10-K for the fiscal year ended December 31, 2015 , as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Helen I. Torley, M.B. Ch.B, M.R.C.P. , Chief Executive Officer of the Registrant, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that, to the best of my knowledge:

(1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. 78m); and
(2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Registrant.

Dated: February 29, 2016

/s/ Helen I. Torley, M.B. Ch.B, M.R.C.P.

Helen I. Torley, M.B. Ch.B, M.R.C.P.
President and Chief Executive Officer

In connection with the Annual Report of Halozyme Therapeutics, Inc. (the "Registrant") on Form 10-K for the fiscal year ended December 31, 2015 , as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Laurie D. Stelzer, Chief Financial Officer of the Registrant, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that, to the best of my knowledge:

(1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. 78m); and
(2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Registrant.

Dated: February 29, 2016

/s/ Laurie D. Stelzer

Laurie D. Stelzer
Senior Vice President and Chief Financial Officer

CORPORATE INFORMATION

BOARD OF DIRECTORS

Jean-Pierre Bizzari, M.D.
Former Executive Vice President
Clinical Development
Celgene Corporation

James M. Daly
Former Executive Vice President
and Chief Commercial Officer,
Incyte Corporation

Kathryn E. Falberg
Chairman of the Board,
Halozyme Therapeutics

Jeffrey W. Henderson
Former Chief Financial Officer
of Cardinal Health
Director, FibroGen, Inc.
and Qualcomm Inc.

Kenneth J. Kelley
Advanced Leadership Fellow,
Harvard University

Randal J. Kirk
Chairman and
Chief Executive Officer,
Intrexon
Senior Managing Director
and Chief Executive Officer,
Third Security, LLC.

Connie L. Matsui
Former Executive Vice President,
Knowledge and Innovation Networks,
Biogen Idec

Matthew L. Posard
Executive Vice President and
Chief Commercial Officer,
Trovagene, Inc.

Helen Torley, M.B. Ch.B., M.R.C.P
President and Chief Executive Officer,
Halozyme Therapeutics

EXECUTIVE TEAM

Helen Torley, M.B. Ch.B., M.R.C.P
President and Chief Executive Officer,
Halozyme Therapeutics

Athena M. Countouriotis, M.D.
Senior Vice President &
Chief Medical Officer

William J. Fallon
Vice President, CMC Operations

Sunil Joshi
Vice President & Global Product
Team Lead, Oncology

Michael J. LaBarre, Ph.D.
Vice President and Chief Scientific Officer

Harry J. Leonhardt, Esq.
Senior Vice President, General Counsel,
Chief Compliance Officer and
Corporate Secretary

Jim S. Mazzola
Vice President,
Corporate Communication
and Investor Relations

Michael E. Paolucci
Vice President, Alliances
and Human Capital

Kenneth A. Schultz, M.D.
Vice President of Innovation,
Strategy & Business Development

Laurie D. Stelzer
Senior Vice President and
Chief Financial Officer

Kristina Vlaovic
Vice President of Regulatory & Safety

GENERAL INFORMATION

Corporate Headquarters
11388 Sorrento Valley Road
San Diego, CA 92121
858-794-8889

Outside Counsel
DLA Piper LLP (U.S.)
San Diego, California

Independent Auditors
Ernst & Young LLP
San Diego, California

Transfer Agent
Corporate Stock Transfer, Inc.
3200 Cherry Creek Drive South,
Suite 430
Denver, Colorado 80209
303-282-4800

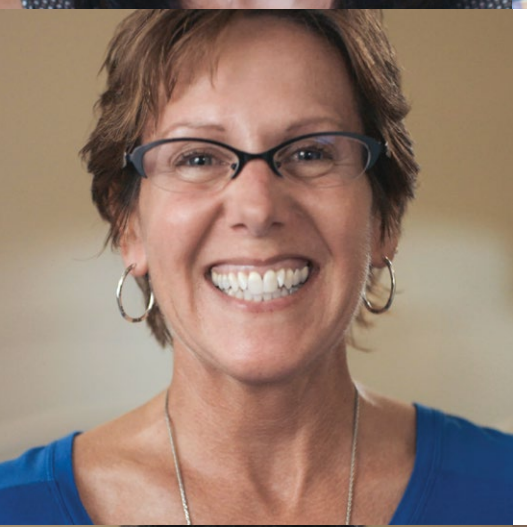
Form 10-K Annual Report
Each Stockholder may receive without charge a copy of the Annual Report on form 10-K filed with the Securities and Exchange Commission by written request addressed to Investor Relations at the address provided.

Stock Listing
Halozyme Therapeutics, Inc. common stock trades on the Nasdaq Stock Market under the symbol HALO.

SAFE HARBOR STATEMENT

This Annual Report contains forward-looking statements regarding our products in development, anticipated clinical, regulatory and commercial milestones, business intentions, financial conditions and results of operations and prospects and other statements concerning future matters. Words such as "expects," "anticipates," "intends," "plans," "believes," "seeks," "estimates" and similar expressions or variations of such words are intended to identify forward-looking statements, but are not the exclusive means of identifying forward-looking statements in the Annual Report. Actual results could differ materially from the expectations contained in forward-looking statements as a result of several factors, including unexpected expenditures and costs, unexpected results or delays in development and regulatory review, regulatory approval requirements, unexpected adverse events and competitive conditions. These and other factors that may result in differences are discussed in greater detail in the Company's reports on Forms 10-K, 10-Q, and other filings with the Securities and Exchange Commission.



Halozyme

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