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, 2016

OR

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

For the transition period from _____ to _____

Commission File Number: 001-32335

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, 2016 was approximately $1.1 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, 2017 , there were 129,764,415 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 2017 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., Halozyme Royalty LLC and Halozyme Switzerland GmbH. 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 Incorporated was acquired by Shire plc in June 2016) (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 pre-clinical and clinical stage product candidates in oncology. Our lead oncology program is PEGPH20 (PEGylated recombinant human hyaluronidase), a molecular entity we are developing in combination with currently approved cancer therapies as a candidate for the systemic treatment of tumors that accumulate HA. We have demonstrated that 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 has been demonstrated in animal models to work 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. Through our efforts and efforts of our partners and collaborators, we are currently in Phase 2 and Phase 3 clinical testing for PEGPH20 with ABRAXANE ® (nab-paclitaxel) and gemcitabine in stage IV pancreatic ductal adenocarcinoma (PDA) (Studies 109-202 and 109-301), in Phase 1b clinical testing for PEGPH20 with KEYTRUDA ® (pembrolizumab) in non-small cell lung cancer and gastric cancer (Study 107-101) and in Phase 1b/2 clinical testing for PEGPH20 with HALAVEN ® (eribulin) in patients treated with up to two lines of prior therapy for HER2-negative metastatic breast cancer.

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 2016, we continued our strategy of focusing on developing our oncology pipeline and expanding our collaborations for ENHANZE Technology. This business model allows for revenue garnered from collaboration products to help fund our investment in PEGPH20 clinical development, with the goal of a future product approval that will support sustained growth.

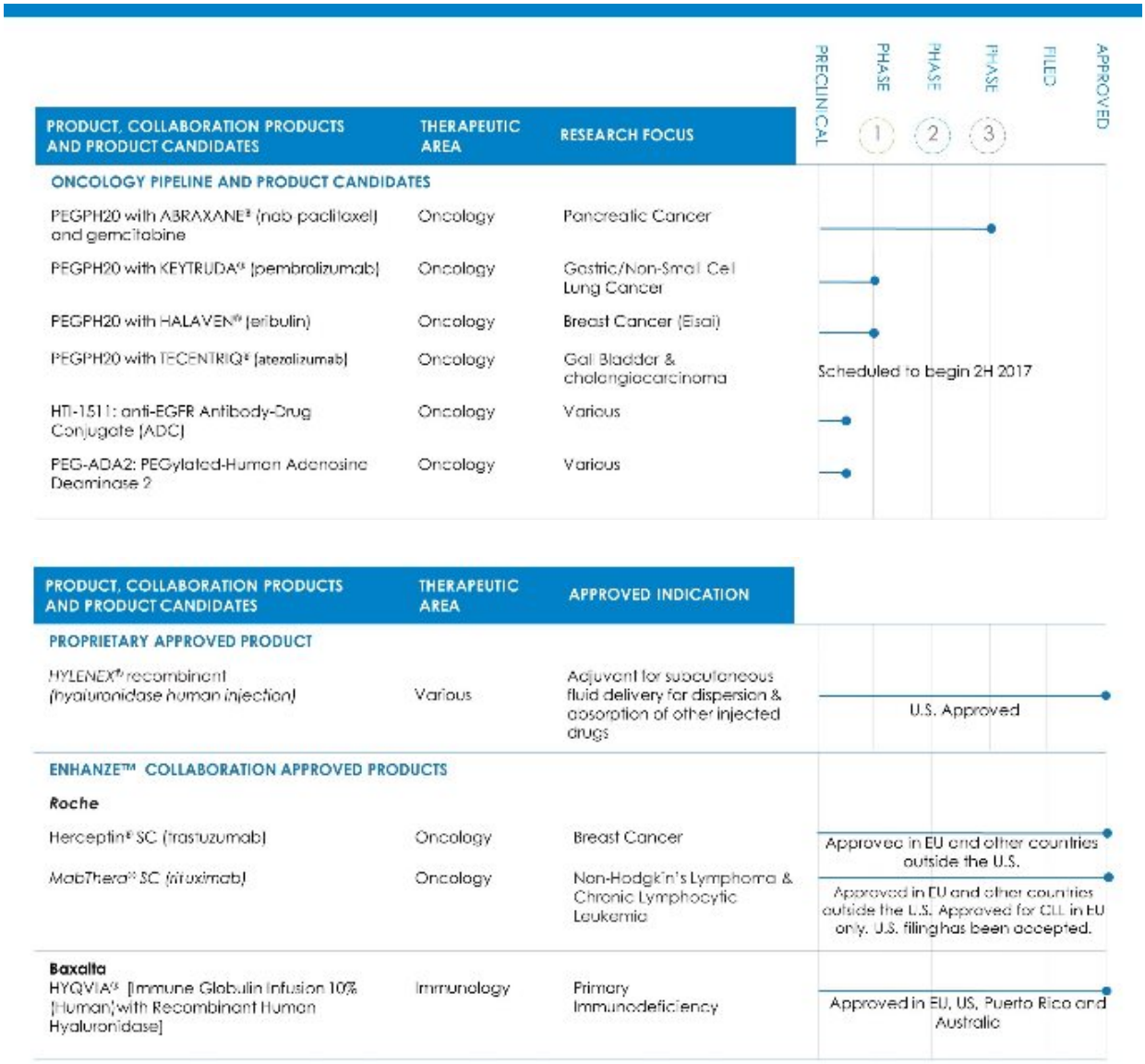
Key aspects of our corporate strategy include the following:

- Focus on our oncology pipeline. We are currently 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, in Phase 1b development in non-small cell lung cancer and gastric cancer and in Phase 1b/2 development in patients treated with up to two lines of prior therapy for HER2-negative metastatic breast cancer. Over time, it is our goal to study additional types of cancer and to advance this program toward regulatory approval and commercial launch. In addition, we have two novel oncology preclinical assets.

- Focus on our ENHANZE platform. 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, three partnered products, one proprietary product candidate targeting several indications in various stages of development, and two preclinical product candidates. The following table summarizes our proprietary product and product candidate as well as products and product candidates under development with our collaborators:



Proprietary Pipeline

Hylenex Recombinant (hyaluronidase human injection)

Hylenex recombinant is a formulation of rHuPH20 that has received U.S. Food and Drug Administration (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 in combination with currently approved cancer therapies as a candidate for the systemic treatment of tumors that accumulate HA. '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 certain currently approved cancer therapies. Among solid tumors, PDA has been reported to be associated with the highest frequency of HA accumulation. There are approximately 65,000 annual diagnoses of PDA in the United States and the European Union, and we estimate that 35-40% have high levels of HA.

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.

We are developing PEGPH20 as a targeted therapy, for patients who have tumors with high levels of HA. We have a collaboration with Ventana Medical Systems Inc. (Ventana), a member of the Roche Group, to develop, and for Ventana to ultimately commercialize, a companion diagnostic assay for use with PEGPH20. The companion diagnostic assay is being used to identify high levels of HA in tumor biopsies, and may be the first diagnostic to target tumor-associated HA and possibly the first companion diagnostic assay in pancreatic cancer.

Pancreatic cancer indications **:**

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/m ^{2} 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 ABRAXANE (PAG arm) compared to those who are receiving gemcitabine and ABRAXANE alone (AG arm). 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 in the PAG arm versus the group of patients treated in the AG arm. This portion of the study and patients in this portion are now referred to as Stage 1. At the time of the clinical hold all patients remaining in the study continued on gemcitabine and ABRAXANE. In July 2014, 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 in the clinical trial, with a 2:1 randomization for the PAG arm compared to the AG arm.

In March 2016, our partner Ventana received approval for an investigational device exemption (IDE) application from the FDA for our companion diagnostic test to enable patient selection in our Phase 3 Study 301 of PEGPH20 in HA-High patients. Based on the cutpoint for the Ventana diagnostic, we expect approximately 35 to 40 percent of stage IV PDA patients to have HA-High tumors, similar to the previously reported interim results from Stage 1 of Study 202 using the Halozyme prototype assay.

In January 2017, we announced topline results from the combined analysis of Stage 1 and Stage 2, and Stage 2 alone, based on a December 2016 data cutoff. The combined analysis included 135 treated patients in Stage 1, of whom a total of 45 patients (25 in the PAG arm and 21 in the AG arm) were determined to have high HA, and 125 treated patients in Stage 2, of whom a total of 35 patients (24 in the PAG arm and 11 in the AG arm) were determined to have high HA. This analysis of secondary and exploratory endpoints was conducted using the Ventana companion diagnostic to prospectively identify high levels of HA. The key results showed in the combined Stage 1 and Stage 2 dataset:

- The primary endpoint of PFS in the efficacy evaluable population (total of 231 patients) was met with statistical significance with a median PFS of 6.0 months in the PAG arm compared to 5.3 months in the AG arm, hazard ratio (HR) with a 95% confidence interval (CI): 0.73 (0.53, 1.00); p=0.048;
- The secondary endpoint of PFS in the HA-High intent to treat population (total of 84 HA-High patients) was met with

statistical significance with a median PFS of 9.2 months in the PAG arm compared to 5.2 months in the AG arm, HR 0.51 (95% CI: 0.26, 1.00); p=0.048;

- The exploratory analysis of median OS was 11.5 months vs. 8.5 months in the PAG vs. AG arms, respectively. Factors potentially having an impact on these results include less aggressive disease among patients in the AG arm within the Stage 1 patient population, and 9 of the 24 patients in the PAG arm (approximately 40 percent) discontinued PEGPH20 treatment at the time of the clinical hold, resulting in many patients receiving AG alone in both arms.

In the Stage 2 cohort population, in a total of 35 HA-High patients, the key results showed:

- Median PFS was 8.6 months in the PAG arm compared to 4.5 months in the AG arm, hazard ratio of 0.63 (95% CI: 0.21, 1.93);
- Median overall survival (OS) was 11.7 months in the PAG arm compared to 7.8 months in the AG arm, hazard ratio of 0.52 (95% CI: 0.22, 1.23);
- The primary safety endpoint of decreasing the rate of TE events in Stage 2 was also met with the rate of TE events reducing from 43 percent to 10 percent in the PAG arm and from 25 percent to 6 percent in the AG arm, following a protocol amendment that excluded patients at high risk of TE events and with the introduction of prophylaxis with low molecular weight heparin (enoxaparin) in Stage 2 of the study with the current 1mg/kg/day dose of enoxaparin prophylaxis given in both treatment arms of the study.

Study 202 is an ongoing study with an open database and therefore we continue to collect and receive data on both Stage 1 and Stage 2 patients. When the database is considered complete and locked, an updated analysis and Final Study Report will be generated.

Study Halo 109-301 :

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 OS. The study will enroll patients whose tumors accumulate high levels of HA measured using the Ventana companion diagnostic test. The FDA provided feedback on the current companion diagnostic approach and confirmed that an approved IDE is required for the Phase 3 study.

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

- Magnitude of the PFS treatment effect observed;
- Toxicity profile; and
- Interim OS 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 March 2016, we dosed the first patient in 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 evaluate the effects on PFS and OS of PEGPH20 with gemcitabine and ABRAXANE compared with gemcitabine and ABRAXANE alone in stage IV PDA patients at approximately 200 sites in 20 countries located in North America, Europe, South America and Asia Pacific. By January 2017, we had initiated 85% of the global study sites participating in the HALO 301 study.

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.

Clinical collaboration:

In October 2016, we announced that PEGPH20 will be included in a pancreatic cancer clinical trial initiative called Precision Promise, an initiative that aims to change the current treatment approach to pancreatic cancer by offering options to patients based on the molecular profile of their tumor. This is being accomplished through the Pancreatic Cancer Action Network leading a collaboration that brings together clinicians, researchers, and drug developers. Pancreatic Cancer Action Network has announced plans to begin enrolling patients at 12 initial consortium sites in Spring 2017.

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 August 2016, after assessing recruitment and the enrollment of increasingly later line patients, we discontinued the PRIMAL study.

Study HALO 107-101:

In November 2015, we initiated a Phase 1b study exploring the combination of PEGPH20 and KEYTRUDA®, an immuno-oncology agent in relapsed non-small cell lung cancer (NSCLC) and gastric cancer. In December 2016, we identified a dose of PEGPH20, namely 2.2 ug/kg, to move into the dose expansion phase of the study with KEYTRUDA in combination with PEGPH20. We are now enrolling both NSCLC and gastric cancer patients prospectively based on a patient being determined to be HA-High using the Ventana companion diagnostic test.

Clinical collaborations:

In July 2015, we entered into a clinical collaboration agreement with Eisai Co., Ltd.. (Eisai) to evaluate Eisai's HALAVEN® (eribulin) with PEGPH20 in HER2-negative metastatic breast cancer. In July 2016, the first patient was dosed in a Phase 1b/2 study for patients treated with up to two lines of prior therapy for HER2-negative HA-High metastatic breast cancer. Halozyme and Eisai are jointly sharing the costs to conduct this global study which remains in dose escalation.

In November 2016, we entered into an agreement with Genentech, a member of the Roche Group, to collaborate on clinical studies evaluating up to eight different tumor types, beginning in 2017. The first study will be a Phase 1b/2 open-label, multi-arm randomized global study, led by Genentech to evaluate their cancer immunotherapy Tecentriq® (atezolizumab), an anti-PD-L1 monoclonal antibody, in combination with PEGPH20 in up to six tumor types. Halozyme will supply PEGPH20 for the Genentech study, which will have an initial focus on gastrointestinal malignancies, including pancreatic and gastric cancers. The second study will be a Phase 1b open-label randomized study led by Halozyme to assess Tecentriq in combination with PEGPH20 and chemotherapy in advanced or metastatic biliary and gallbladder cancers. Genentech will supply Tecentriq for the Halozyme study.

Regulatory

The FDA has 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 OS. 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.

The FDA has 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. Similarly, 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 March 2016, our partner, Ventana, received approval for an IDE application from the FDA for our companion diagnostic test to enable patient selection in our Phase 3 Study 301 of PEGPH20 in HA-High patients.

Other Pipeline Assets

PEG-ADA2: PEGylated adenosine deaminase 2, or PEG-ADA2, is an immune checkpoint inhibitor that targets adenosine, which may accumulate to high levels in the tumor microenvironment and has been linked to immunosuppression. We are currently in preclinical development with PEG-ADA2, with the next milestone expected to be final drug candidate selection to determine its suitability for continued evaluation as a targeted therapy for clinical development.

HTI-1511: HTI-1511 is a novel antibody-drug conjugate (ADC) targeting epidermal growth factor receptor (EGFR) to treat solid tumors, including those with drug-resistant mutations. We are in preclinical development with a drug candidate selected. Good laboratory practices (GLP) toxicity studies and chemistry, manufacturing and controls (CMC) development activities are planned as next steps in support of a potential investigational new drug (IND) filing.

ENHANZE Collaborations

Roche Collaboration

In December 2006, we and Roche entered into a collaboration and license agreement under which Roche obtained a worldwide, 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 three pre-defined Roche biologic targets with the option to develop and commercialize rHuPH20 with ten additional targets. Roche had the right to exercise this option to identify additional targets for ten years. As of the ten year anniversary of the Roche Collaboration in December 2016, Roche had elected a total of eight targets, two of which are exclusive.

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, compared to 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. 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. Directed at the same target, Roche initiated a Phase 1 study of rHuPH20 with PERJETA® (pertuzumab) in patients with early breast cancer in March 2016.

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). 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 to other parts of the body, interfering with the body's production of healthy blood cells. In May 2016, Roche announced that the EMA approved Mabthera SC to treat patients with chronic lymphocytic leukemia (CLL).

In November 2016, the FDA accepted Genentech's (a member of the Roche Group) Biologic License Application (BLA) for a subcutaneous formulation of rituximab for CLL and NHL. This is a co-formulation with rHuPH20, which is approved and marketed under the MabThera SC brand in countries outside the U.S.

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 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.

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 BLA which utilizes our rHuPH20 platform.

In May 2016, Baxalta announced that HYQVIA received a marketing authorization from the European Commission for a pediatric indication, which is being launched in eight European countries to treat primary and certain secondary immunodeficiencies.

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. Pfizer has elected five targets on an exclusive basis. One of the targets is proprotein convertase subtilisin/kexin type 9 (PCSK9). Pfizer initiated dosing of a subcutaneous formulation of rHuPH20 and bococizumab, an investigational PCSK9 inhibitor, in a Phase 1 trial in February 2016. In November 2016, Pfizer announced they discontinued their development program for bococizumab, including the development of the subcutaneous formulation of rHuPH20 with bococizumab. In December 2016, Pfizer returned PCSK9 as an elected target. In April 2016, Pfizer completed a Phase 1 study of rHuPH20 with rivipansel, directed to another target to treat vaso-occlusive crisis in individuals with sickle cell disease, demonstrating feasibility of large volume subcutaneous administration with rHuPH20. In November 2016, Pfizer made a portfolio decision to discontinue development of rHuPH20 with rivipansel. Pfizer is currently in development of one program on the ENHANZE platform with an undisclosed target.

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, directed at CD38, using ENHANZE Technology, in multiple myeloma patients. In December 2016, Janssen announced results of the trial, which supported continued development of daratumumab with rHuPH20. Janssen has said it plans to initiate a Phase 3 study of daratumumab combined with the ENHANZE technology.

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 elected TNF alpha as the first target on an exclusive basis. In January 2016, AbbVie initiated dosing in a Phase 1 clinical trial evaluating if rHuPH20 with adalimumab (HUMIRA ®) would allow for a reduced number of induction injections and deliver additional performance benefits. In November 2016, AbbVie discontinued this program following completion of the Phase 1 study in which the target results were not achieved.

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 two targets 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,		
	2016	**2015**	**2014**
Roche	63%	42%	57%
Baxalta	12%	7%	3%
Lilly	6%	19%	—
AbbVie	4%	17%	—
Janssen	2%	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 25 issued patents in the U.S., more than 285 issued patents in Europe and other countries in the world and more than 300 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) 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 scaling up our manufacturing of PEGPH20 with third party suppliers to support additional clinical trials, including the Phase 3 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 Commercialization 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 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 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 or request additional information. If additional information is requested we may provide such information or withdraw our 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 applicable regulations and guidelines, these requirements may be subject to change. Accordingly, 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 or a change in the therapeutic landscape. (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 guarantee 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 and other drug candidates. 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. Our long-lived assets located in foreign countries had minimal book value as of December 31, 2016 and 2015 .

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, 2017 , we had 259 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 revenues from product sales to date; we have a history of net losses and negative cash flows, 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, 2016 , we have incurred aggregate net losses of approximately $585.3 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 in the U.S. 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; (v) other equity or debt financings; and/or (vi) monetizing assets.

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 the FDA in June 2014, and we have completed enrollment and continue to monitor ongoing patients who remain either on treatment or in follow-up on Study 202 under a revised clinical protocol.

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 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 fail 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 clinical development plans, 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 the risk for potential negative impact from 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 the FDA in June 2014, and we have completed enrollment and continue to monitor ongoing patients who remain either on treatment or in follow-up on 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, and the ability to procure drug supply required in clinical trial protocols;

- 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 or conditions to assure safe use programs;
- 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 manufacture, 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 manufacture, prepare, fill, finish, package, store and ship our products and product candidates on our behalf. 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 scaling up our manufacturing of PEGPH20 with third party suppliers to support additional clinical trials, including the 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 June 2016, we entered into a Loan and Security Agreement (the New Loan Agreement) with Oxford Finance LLC (Oxford) and Silicon Valley Bank (SVB) (collectively, the Lenders), providing a senior secured loan facility of up to an aggregate principal amount of $70 million, comprising a $55.0 million draw in June 2016 and an additional $15.0 million tranche, which we have the option to draw during the second quarter of 2017. The initial proceeds were partially used to pay the outstanding principal and final payment owed on our previous loan agreement with the Lenders. The remaining proceeds, including any drawdown of the additional $15.0 million, are to be used for working capital and general business requirements. The New Loan Agreement 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 New 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 New 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 New 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 the 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 New 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 New 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. Our use of domestic and international third-party contractors, consultants and staffing agencies also subjects us to potential co-employment liability claims.

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. The high and low sales prices of our common stock during the twelve months ended December 31, 2016 were $17.51 and $6.96 , 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.

Anti-takeover provisions in our charter documents and Delaware law may make an acquisition of us more difficult.

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 PPACA). This law substantially changes the way healthcare is financed by both governmental and private insurers, and significantly impacts the pharmaceutical industry. The PPACA 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 PPACA may negatively affect our revenues in the future. For example, the PPACA 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 PPACA'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. Recently, Congress and the new administration have proposed and taken various steps to revise, or delay implementation of, various aspects of the Heathcare Reform Act. We expect that the PPACA, as it may be amended, 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 and 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 closing sales prices per share of our common stock during each quarter of the two most recent fiscal years:

	2016		2015	
	High	Low	High	Low
First Quarter	$17.51	$6.96	$16.55	$9.47
Second Quarter	$12.33	$7.70	$22.85	$13.91
Third Quarter	$12.75	$8.43	$25.25	$12.80
Fourth Quarter	$14.38	$8.18	$18.65	$12.80

On February 22, 2017 , the closing sales price of our common stock on the NASDAQ Global Select Market was $12.07 per share. As of February 22, 2017 , we had approximately 19,900 stockholders of record and beneficial owners of our common stock.

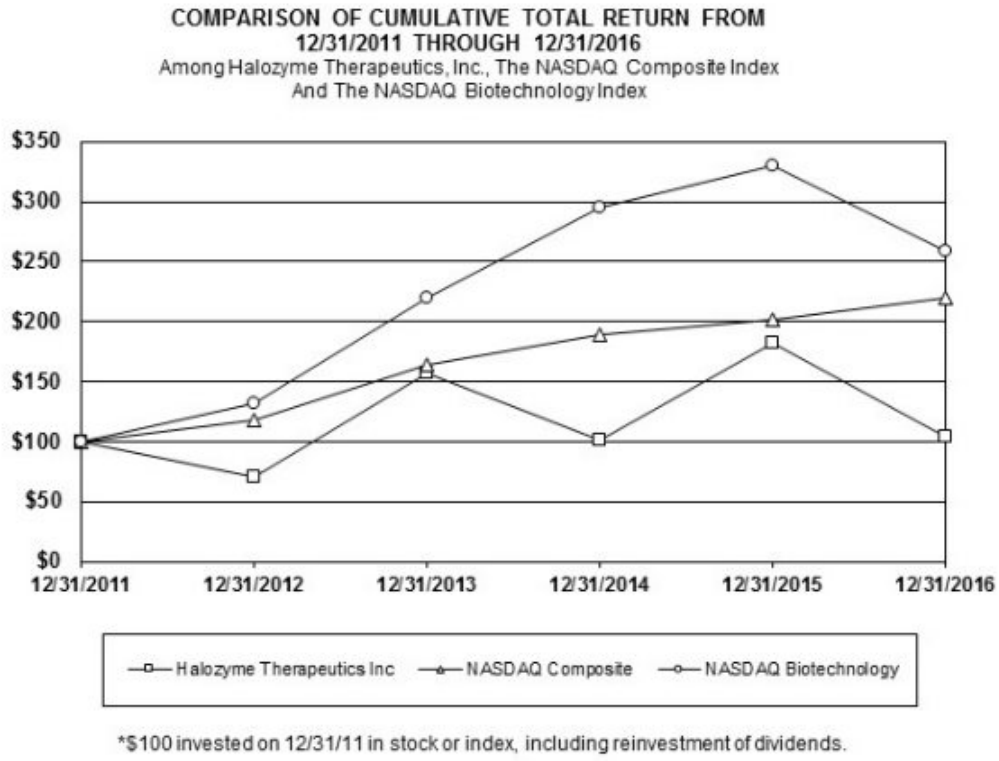
Dividends

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 borrowing arrangements 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, 2011 to December 31, 2016. The historical stock price performance included in this graph is not necessarily indicative of future stock price performance.



	12/31/2011	12/31/2012	12/31/2013	12/31/2014	12/31/2015	12/31/2016
Halozyme Therapeutics, Inc.	$100	$71	$158	$101	$182	$104
NASDAQ Composite	$100	$117	$165	$189	$202	$220
NASDAQ Biotechnology	$100	$132	$220	$295	$330	$259

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

The selected consolidated financial data set forth below as of December 31, 2016 and 2015 , and for the years ended December 31, 2016, 2015 and 2014 , 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, 2014, 2013 and 2012, and for the years ended December 31, 2013 and 2012, 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:	**2016**	**2015**	**2014**	**2013**	**2012** [4]
	(in thousands, except for per share amounts)				
Total revenues	$ 146,691	$ 135,057	$ 75,334	$ 54,799	$ 42,325
Net loss	$ (103,023)	$ (32,231)	$ (68,375)	$ (83,479)	$ (53,552)
Net loss per share, basic and diluted	$ (0.81)	$ (0.25)	$ (0.56)	$ (0.74)	$ (0.48)
Shares used in computing net loss per share, basic and diluted	127,964	126,704	122,690	112,805	111,077

	As of December 31,				
Balance Sheet Data:	**2016**	**2015**	**2014**	**2013**	**2012**
			(in thousands)		
Cash and cash equivalents and available-for-sale marketable securities	$ 204,981	$ 108,339	$ 135,623	$ 71,503	$ 99,501
Working capital	$ 201,947	$ 109,315	$ 136,990	$ 70,293	$ 111,682
Total assets	$ 261,515	$ 181,789	$ 165,977	$ 101,793	$ 134,728
Deferred revenue	$ 44,618	$ 53,223	$ 54,634	$ 53,143	$ 43,846
Long-term debt, net	$ 199,228	$ 27,971	$ 49,860	$ 49,772	$ 29,662
Total liabilities	$ 293,996	$ 138,790	$ 124,625	$ 121,783	$ 85,875
Stockholders' equity (deficit)	$ (32,481)	$ 42,999	$ 41,352	$ (19,991)	$ 48,854

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. 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. Our proprietary development pipeline consists primarily of pre-clinical and clinical stage product candidates in oncology. Our lead oncology program is PEGPH20 (PEGylated recombinant human hyaluronidase), a molecular entity we are developing in combination with currently approved cancer therapies as a candidate for the systemic treatment of tumors that accumulate HA. We have demonstrated that 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. Through our efforts and efforts of our partners and collaborators, we are currently in Phase 2 and Phase 3 clinical testing for PEGPH20 with ABRAXANE ® (nab-paclitaxel) and gemcitabine in stage IV pancreatic ductal adenocarcinoma (PDA) (Studies 109-202 and 109-301), in Phase 1b clinical testing for PEGPH20 with KEYTRUDA ® (pembrolizumab) in non-small cell lung cancer and gastric cancer (Study 107-101) and in Phase 1b/2 clinical testing for PEGPH20 with HALAVEN ® (eribulin) in patients treated with up to two lines of prior therapy for HER2-negative metastatic breast cancer.

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 Incorporated was acquired by Shire plc in June 2016) (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 2016 and recent key accomplishments and events are as follows:

Clinical trials

- In January 2017, we announced topline results from the combined analysis of Stage 1 and Stage 2, and Stage 2 alone, of the Halo 109-202 study, based on a December 2016 data cutoff. Among the findings, the overall study population showed a statistically significant increase in progression-free survival (PFS) in the 84 total HA-High patients treated with PEGPH20 plus ABRAXANE and gemcitabine when compared to HA-High patients receiving ABRAXANE and gemcitabine alone. Stage 2 of the study, which completed enrollment in February 2016, showed a 91 percent improvement in median PFS for HA-High patients in the PEGPH20 arm, 8.6 months compared to 4.5 months in the control arm, and achieved its primary endpoint to evaluate and demonstrate a reduction in the rate of TE events in the PEGPH20 arm.

- In December 2016, we identified a dose of PEGPH20, namely 2.2 ug/kg, to move into the dose expansion phase of Study 107-101, the study with KEYTRUDA in combination with PEGPH20. We are now enrolling both NSCLC and gastric cancer patients prospectively based on a patient being determined to be HA-High.
- In July 2016, we initiated a phase 1b/2 study with our partner, Eisai, Inc. (Eisai) exploring the combination of PEGPH20 and eribulin in patients treated with up to two lines of prior therapy for HER2-negative HA-High metastatic breast cancer.
- In March 2016, we dosed the first patient in the Phase 3 study of PEGPH20 (Halozyme Study 301) in previously untreated stage IV PDA HA-High patients.
- In March 2016, our partner, Ventana Medical Systems, Inc. (Ventana), received approval for an investigational device exemption (IDE) with the U.S. Food and Drug Administration (FDA) for the companion diagnostic test we co-developed to prospectively identify patients with high levels of HA.

ENHANZE collaborations

- In December 2016, Janssen announced results of the Phase 1b clinical trial, which supported continued development of daratumumab with rHuPH20. Janssen has said it plans to initiate a Phase 3 study.
- In November 2016, Pfizer discontinue development of rHuPH20 with rivipansel and with bocoizumab, and AbbVie discontinued development of rHuPH20 with HUMIRA.
- In November 2016, the FDA accepted Genentech's BLA for a subcutaneous formulation of rituximab for CLL and NHL. This is a co-formulation with rHuPH20, which is approved and marketed under the MabThera SC brand in countries outside the U.S.
- In May 2016, Roche announced that the European Medicines Agency approved MabThera SC to treat patients with chronic lymphocytic leukemia, demonstrating the expansion of our ENHANZE Technology into a new indication.
- In May 2016, Baxalta announced that HYQVIA received a marketing authorization from the European Commission for a pediatric indication, which is being launched in eight European countries to treat primary and certain secondary immunodeficiencies.
- In March 2016, Lilly and Pfizer each nominated a new target to be studied with ENHANZE Technology, triggering $9.5 million in milestone payments. In February 2016, Pfizer dosed the first patient in a Phase 1 clinical trial evaluating subcutaneous delivery of bococizumab with ENHANZE Technology, triggering a $1.0 million milestone payment.

Clinical collaborations

- In November 2016, we entered into an agreement with Genentech, a member of the Roche Group, to collaborate on clinical studies evaluating up to eight different tumor types, beginning in 2017. The first study will be a Phase 1b/2 open-label, multi-arm, randomized global study, led by Genentech to evaluate their cancer immunotherapy Tecentriq® (atezolizumab), an anti-PD-L1 monoclonal antibody, in combination with PEGPH20 in up to six tumor types. Halozyme will supply drug only for the Genentech study. This study will have an initial focus on gastrointestinal malignancies, including pancreatic and gastric cancers. The second study will be a Phase 1b open-label randomized study led by Halozyme to assess Tecentriq in combination with PEGPH20 and chemotherapy in advanced or metastatic biliary and gallbladder cancers.
- In October 2016, we announced that PEGPH20 will be included in a pancreatic cancer clinical trial initiative called Precision Promise, an initiative that aims to change the current treatment approach to pancreatic cancer by offering options to patients based on the molecular profile of their tumor. This is being accomplished through the Pancreatic Cancer Action Network leading a collaboration that brings together clinicians, researchers, and drug developers. Pancreatic Cancer Action Network has announced plans to begin enrolling patients at 12 initial consortium sites in Spring 2017.

Financing

- In June 2016, we entered into a new agreement with Oxford Finance LLC and Silicon Valley Bank to borrow $55.0 million, which replaces our previous agreement and provides Halozyme the option to borrow an additional $15.0 million in 2017.
- In January 2016, through our wholly-owned subsidiary, Halozyme Royalty, we received a $150.0 million loan secured by future royalties received from our collaborations with Roche and Baxalta.

Results of Operations

Comparison of Years Ended December 31, 2016, 2015 and 2014

Product Sales, Net

Product Sales, Net – Product sales, net were as follows (in thousands):

	2016	Change	2015	Change	2014
Sales of bulk rHuPH20:					
Roche	$ 24,786	9%	$ 22,773	(3)%	$ 23,523
Baxalta	11,117	73%	6,410	n/a	—
Other	1,332	73%	772	(33)%	1,146
Sales of *Hylenex*	16,157	—	16,127	23 %	13,154
Total product sales, net	$ 53,392	16%	$ 46,082	22 %	$ 37,823

Product sales, net increased in 2016 compared to 2015 due to an increase in the sales of bulk rHuPH20 to Baxalta and Roche. Product sales, net increased in 2015 compared to 2014 due to an increase in the sales of bulk rHuPH20 to Baxalta and an increase in sales of *Hylenex* . We expect that product sales of bulk rHuPH20 will fluctuate in future periods based on the needs of our collaborators and we may have periods of flat or declining revenue as our collaborators manage their inventories of bulk rHuPH20. We expect that future product sales of *Hylenex* will be flat or experience modest growth.

Royalties – Royalty revenue was $51.0 million in 2016 compared to $31.0 million in 2015 and $9.4 million in 2014 . The increases relate to increased sales of Herceptin SC and MabThera SC by Roche and increased sales of HYQVIA by Baxalta. 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 we may have periods with flat or declining royalty revenue as sales of products under collaborations vary.

Revenues Under Collaborative Agreements — Revenues under collaborative agreements for the years ended December 31, 2016, 2015 and 2014 were as follows (in thousands):

	2016	Change	2015	Change	2014
Upfront payments, license maintenance fees and amortization of deferred upfront, license fees and product-based payments:					
Lilly	$ 8,000	(68)%	$ 25,000	n/a	$ —
AbbVie	6,000	(74)%	23,000	n/a	—
Roche	3,328	2%	3,269	8%	3,028
Pfizer	2,500	25%	2,000	100%	1,000
Baxalta	765	—	765	—	765
Janssen	250	n/a	—	(100)%	15,000
	20,843	(61%)	54,034	173%	19,793
Reimbursements for research and development services:					
Roche	18,700	632%	2,556	(63%)	6,923
Janssen	2,051	146 %	834	n/a	—
Baxalta	386	32%	292	(76%)	1,209
Other	335	18%	284	76%	161
	21,472	441%	3,966	(52%)	8,293
Total revenues under collaborative agreements	$ 42,315	(27%)	$ 58,000	107%	$ 28,086

In 2016, we recognized $8.0 million in license fee revenue in connection with the Lilly Collaboration and $6.0 million in license fee revenue in connection with the AbbVie Collaboration related to target nominations. 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 related to upfront payments. In 2014, we recognized $15.0 million in license fee revenue in connection with the Janssen Collaboration upfront payment. These revenues vary from period to period based on our ENHANZE collaboration activity. 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.

Revenue from reimbursements for research and development services increased in 2016 compared to 2015 mainly due to an increase in services provided to Roche related to work associated with bringing on-line a second contract manufacturing facility. The validation of the new facility is scheduled to end in 2017 and therefore we expect to see a decrease in research and development services to Roche in 2017. Revenue from reimbursements for research and development services decreased in 2015 compared to 2014 mainly due to a decrease in reimbursements for manufacturing services to support the launches by Roche and Baxalta, compared to the same period in 2014. 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.

Cost of Product Sales — Cost of product sales increased in 2016 compared to 2015 by $4.0 million , or 14%, due to a $5.8 million increase in cost of product sales of bulk rHuPH20 sold to collaboration partners partially offset by a $1.8 million decrease in *Hylenex* recombinant cost of product sales, due to a decrease in manufacturing costs. 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.

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, 2016, 2015 and 2014 were as follows (in thousands):

	2016	Change	2015	Change	2014
Programs					
Product Candidates:					
PEGPH20	$ 108,102	43%	$ 75,616	117 %	$ 34,857
ENHANZE collaborations and rHuPH20 platform	30,398	189%	10,514	(17)%	12,606
Other	12,342	74%	7,106	(78)%	32,233
Total research and development expenses	$ 150,842	62%	$ 93,236	17 %	$ 79,696

Research and development expenses relating to our PEGPH20 program in 2016 increased by 43%, compared to 2015 primarily due to increased clinical trial activities in Study 109-301, Study 107-101 and the Eisai Clinical Collaboration. Research and development expenses relating to our PEGPH20 program in 2015 increased by 117% , compared to 2014 primarily due to increased clinical trial activities in Study 109-202. We expect these expenses to increase in future periods due to expected increases in our PEGPH20 development activities. Research and development expenses relating to our ENHANZE collaborations and our rHuPH20 platform in 2016 increased by 189% compared to 2015, primarily due to a $17.0 million increase in manufacturing expenses related to Roche. The increase in Roche manufacturing expenses was primarily due to work associated with bringing on-line a second contract manufacturing facility. As we plan to complete validation of the new manufacturing facility in 2017, we expect these expenses to decrease. Research and development expenses related to other programs in 2016 increased by 74% compared to 2015 primarily due to expenses incurred in our preclinical product programs. Research and development expenses related to other programs in 2015 decreased by 78% compared to 2014, primarily relating to the discontinuation of our ultrafast insulin program in 2015.

Selling, General and Administrative — Selling, general and administrative (SG&A) expenses increased in 2016 compared to 2015 by $5.8 million , or 15%, and increased in 2015 compared to 2014 by $4.1 million , or 11% , primarily due to increases in compensation expense from higher average headcount. We expect SG&A expenses to increase moderately in future periods as our operations expand.

Interest Expense — Interest expense included interest expense and amortization of the debt discount related to the long-term debt. Interest expense increased by $14.8 million in 2016 as compared to 2015 , primarily due to interest expense incurred on the Royalty-backed Loan we received in January 2016. Interest expense decreased by $0.4 million in 2015 as compared to 2014 .

Income Tax Expense — Income tax expense of $1.2 million in 2016 comprised U.S. federal alternative minimum tax. For the year ended December 31, 2016, we generated taxable income in the U.S., which was partially offset by utilizing net operating losses carried forward from earlier years. No income tax expense was recognized during the years ended December 31, 2015 and 2014. During the fourth quarter of 2016, we established a new Swiss subsidiary, Halozyme Switzerland GmbH (Halozyme Switzerland). Halozyme Switzerland is party to a tax ruling providing that the total Swiss income tax rate will not exceed 10% through December 2026.

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, 2016 , we had cash, cash equivalents and marketable securities of approximately $205.0 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 commercialization activities. The amount of cash on hand 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 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 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. We may raise cash 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; (v) other equity or debt financings; and/or (vi) monetizing assets.

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 $50.4 million in 2016 compared to $37.1 million in 2015 . The $13.3 million increase in utilization of cash in operations was mainly due to an increase in operating losses compared to the prior year, partially offset by the timing of the collection of accounts receivable.

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 resulted from lower operating losses, mainly due to an increase of license fees and royalties from our collaborators offset in part by increased spending on our R&D programs. Our lower operating losses were offset by increases in working capital including accounts receivable, prepaid expenses and inventory, offset by increases in accounts payable.

Investing Activities

Net cash used in investing activities was $76.8 million in 2016 compared to net cash provided of $5.9 million in 2015 and net cash used of $33.0 million in 2014 . The change in 2016 compared to 2015 was primarily due to net purchases of marketable securities using the proceeds from the Royalty-backed Loan. The change in 2015 compared to 2014 was primarily due to net sales of marketable securities to fund operations in 2015 compared to net purchases of marketable securities during 2014 using the proceeds from issuing shares of our common stock.

Financing Activities

Net cash provided by financing activities was $150.6 million in 2016 compared to $13.1 million in 2015 and $114.5 million in 2014 . Net cash provided by financing activities in 2016 consisted primarily of net proceeds of $148.0 million from the Royalty-backed Loan and $55.0 million from a new Oxford and SVB Loan, partially offset by principal payments and a final payment of $54.3 million on a previously existing Oxford and SVB Loan. Net cash provided by financing activities in 2015 consisted of $13.1 million in net proceeds from options exercised. 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.

Long-Term Debt

Royalty-backed Loan

In January 2016, through our wholly-owned 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. transferred to Halozyme Royalty the right to receive royalty payments from the commercial sales of ENHANZE products owed under the Roche Collaboration and Baxalta Collaboration (Collaboration Agreements). The royalty payments from the Collaboration Agreements will be used to repay the principal and interest on the loan (the Royalty Payments). The Royalty-backed 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%. The interest rate as of December 31, 2016 was 9.71% . The outstanding balance of the Royalty-backed Loan as of December 31, 2016 was $161.8 million , inclusive of payment-in-kind interest expense of $13.2 million and net of unamortized debt discount of $1.4 million .

The Credit Agreement provides that none of the Royalty Payments are required to be applied to the Royalty-backed Loan prior to January 1, 2017, 50% of the Royalty Payments are required to be applied to the Royalty-backed Loan between January 1, 2017 and January 1, 2018 and thereafter all Royalty Payments must be applied to the Royalty-backed Loan. However, 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, as defined, will be capitalized and added to the principal balance of the Royalty-backed Loan on such date. 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 Collaboration 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 Royalty retains its right to the Royalty Payments following repayment of the loan.

Oxford and SVB Loan and Security Agreement

In December 2013, we entered into an Amended and Restated Loan and Security Agreement (the Original Loan Agreement) with Oxford Finance LLC (Oxford) and Silicon Valley Bank (SVB) (collectively, the Lenders), amending and restating in its entirety our previous 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 amended term loan facility was scheduled to mature on January 1, 2018.

In January 2015, we and the Lenders entered into a second amendment to the Original Loan Agreement amending and restating the loan repayment schedule of the Original Loan Agreement. The amended and restated loan repayment schedule provided 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 amended Original Loan Agreement provided for a 7.55% interest rate on the term loan and a final payment equal to 8.5% of the original principal amount, or $4.25 million, which was due when the term loan became due or upon the prepayment of the facility.

In June 2016, we entered into a new Loan and Security Agreement (the New Loan Agreement) with the Lenders, providing a senior secured loan facility of up to an aggregate principal amount of $70 million, comprising a $55.0 million draw in June 2016 and an additional $15.0 million tranche, which we have the option to draw during the second quarter of 2017. The proceeds were partially used to pay the outstanding principal and final payment owed on the amended Original Loan Agreement. The remaining proceeds, including any drawdown of the additional $15.0 million available to us, are to be used for working capital and general business requirements. We have the option to draw the remaining $15 million during the second quarter of 2017 at an annual interest rate equal to the then-current prime rate as reported in The Wall Street Journal plus 4.75%. The New Loan Agreement repayment schedule provides for interest only payments for the first 18 months, followed by consecutive equal monthly payments of principal and interest in arrears through the maturity date of January 1, 2021. The New Loan Agreement provides for a final payment equal to 5.50% of the initial $55 million principal amount and, if we exercise our option to draw an additional $15 million in 2017, 7.25% of the principal amount of the second draw. The final payment is due when the New Loan Agreement becomes due or upon the prepayment of the facility. We have the option to prepay the outstanding balance of the New Loan Agreement in full, subject to a prepayment fee of 2% in the first year and 1% in the second year of the term loan. The outstanding New Loan Agreement balance was $54.8 million as of December 31, 2016 .

The New Loan Agreement 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 New 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; enter into transactions with any of our affiliates outside of the ordinary course of business or permit our subsidiaries to do the same; and make any voluntary prepayment of or modify certain terms of the Royalty-backed Loan. 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 New 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 New 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, a material impairment in the perfection or priority of the Lender’s lien in the collateral or in the value of such collateral or the occurrence of an event of default under the Royalty-backed Loan. In the event of default by us under the New 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 New Loan Agreement, which could harm our financial condition.

Off-Balance Sheet Arrangements

As of December 31, 2016 , 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 relationships.

Contractual Obligations

As of December 31, 2016 , future minimum payments due under our contractual obligations are as follows (in thousands):

	Payments Due by Period				
Contractual Obligations [1]	**Total**	**Less than 1 Year**	**1-3 Years**	**4-5 Years**	**More than 5 Years**
Long-term debt, including interest [2]	$ 266,360	$ 37,338	$ 224,267	$ 4,755	$ —
Operating leases [3]	4,031	2,622	1,373	36	—
Third-party manufacturing obligations [4]	20,694	20,353	341	—	—
Purchase obligations	856	410	446	—	—
Total	$ 291,941	$ 60,723	$ 226,427	$ 4,791	$ —

(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 $8.0 million in milestone payments, plus sales royalties, in the event that all scientific research under these agreements is successful. Also excludes contractual obligations already recorded on our consolidated balance sheet as current liabilities.

(2) Long-term debt obligations include future monthly interest payments for the Oxford and SVB Loan and Security Agreement based on a fixed rate of 8.25% and a final payment of $3.03 million for our long-term debt due in January 2021. Long-term debt obligations also include future quarterly interest and principal payments for the Royalty-backed Loan based on an estimate of future royalty amounts. This estimate could be adversely affected and the repayment period could be extended if future royalty amounts are less than currently expected. The Royalty-backed 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% . Future interest payments will increase if the LIBOR rate increases.

(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.

Contractual obligations for purchases of goods or services include agreements that are enforceable and legally binding to 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 certain 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 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* , 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* , 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 operating expenses 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* , 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* , 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, 2016 , our cash equivalents and marketable securities consisted of investments in money market funds, U.S. Treasury securities, corporate debt obligations and commercial paper. 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. Based on our current investment portfolio as of December 31, 2016 , 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, 2016 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 Exchange Act 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, 2016 . 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, 2016 , 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, 2016 . 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, 2016 , based on criteria established in Internal Control - Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) (the COSO criteria). 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, 2016 , based on the COSO criteria **.**

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the consolidated balance sheets of Halozyme Therapeutics, Inc. as of December 31, 2016 and 2015, and the related consolidated statements of operations, comprehensive loss, cash flows, and stockholders' (deficit) equity for each of the three years in the period ended December 31, 2016 of Halozyme Therapeutics, Inc. and our report dated February 28, 2017 expressed an unqualified opinion thereon.

/s/ Ernst & Young LLP

San Diego, California
February 28, 2017

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 2017 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 and Corporate Governance Guidelines" 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. (54), 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. Within the past five years, Dr. Torley served 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 (49), Senior Vice President, Chief Financial Officer. Ms. Stelzer joined Halozyme in June 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., a biopharmaceutical company. 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., a biopharmaceutical company, 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.

Mark J. Gergen (54), Senior Vice President, Chief Operating Officer. Mr. Gergen joined Halozyme in September 2016 as Senior Vice President and Chief Operating Officer. From February 2013 until August 2016, Mr. Gergen served as Executive Vice President and Chief Operating Officer at Mirati Therapeutics, Inc., a clinical-stage biopharmaceutical company focused on developing a pipeline of targeted oncology products. From May 2005 to November 2012, Mr. Gergen served in senior management positions, including most recently as Senior Vice President, Corporate Development, at Amylin Pharmaceuticals, Inc., a

biopharmaceutical company that was focused on the development and commercialization of medicines to treat chronic diseases. From July 2003 to March 2005, Mr. Gergen served as Executive Vice President of CardioNet Inc., a cardiovascular diagnostic company. From June 1999 to May 2003, he served as Chief Financial and Development Officer and later as Chief Restructuring Officer of Advanced Tissue Sciences, Inc. From August 1994 to June 1999, he was Division Counsel at Medtronic, Inc. Mr. Gergen received a J.D. from the University of Minnesota Law School and a B.A. in Business Administration from Minot State University.

Athena Countouriotis, M.D. (45), 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 Oncology Business Unit at Pfizer Inc., a pharmaceutical company. 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. (60), 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. 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, 2016 :

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 [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]	12,458,020	$11.70	9,001,562
Equity compensation plans not approved by stockholders	—	—	—
	12,458,020	$11.70	9,001,562

(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 and 2005 Outside Directors' 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* " and *"Corporate Governance - Director Independence"* 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

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 and should be read in conjunction with the consolidated financial statements of Halozyme Therapeutics, Inc.

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.

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

None.

SIGNATURES

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

Halozyme Therapeutics, Inc.,
a Delaware corporation

Date: February 28, 2017

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 28, 2017
/s/ Laurie D. Stelzer Laurie D. Stelzer	Senior Vice President and Chief Financial Officer (Principal Financial and Accounting Officer)	February 28, 2017
/s/ Connie L. Matsui Connie L. Matsui	Chair of the Board of Directors	February 28, 2017
/s/ Jean-Pierre Bizzari Jean-Pierre Bizzari	Director	February 28, 2017
/s/ James M. Daly James M. Daly	Director	February 28, 2017
/s/ Jeffrey W. Henderson Jeffrey W. Henderson	Director	February 28, 2017
/s/ Kenneth J. Kelley Kenneth J. Kelley	Director	February 28, 2017
/s/ Randal J. Kirk Randal J. Kirk	Director	February 28, 2017
/s/ Matthew L. Posard Matthew L. Posard	Director	February 28, 2017

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, 2016 and 2015 , and the related consolidated statements of operations, comprehensive loss, cash flows, and stockholders' (deficit) equity for each of the three years in the period ended December 31, 2016 . 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, 2016 and 2015 , and the consolidated results of its operations and its cash flows for each of the three years in the period ended December 31, 2016 , in conformity with U.S. generally accepted accounting principles. 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, 2016 , based on criteria established in Internal Control - Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) and our report dated February 28, 2017 expressed an unqualified opinion thereon.

/s/ Ernst & Young LLP

San Diego, California
February 28, 2017

HALOZYME THERAPEUTICS, INC.

CONSOLIDATED BALANCE SHEETS

(in thousands, except per share data)

	December 31, 2016	December 31, 2015
ASSETS		
Current assets:		
Cash and cash equivalents	$ 66,764	$ 43,292
Marketable securities, available-for-sale	138,217	65,047
Accounts receivable, net	15,680	32,410
Inventories	14,623	9,489
Prepaid expenses and other assets	21,248	21,534
Total current assets	256,532	171,772
Property and equipment, net	4,264	3,943
Prepaid expenses and other assets	219	5,574
Restricted cash	500	500
Total assets	$ 261,515	$ 181,789
LIABILITIES AND STOCKHOLDERS' (DEFICIT) EQUITY		
Current liabilities:		
Accounts payable	$ 3,578	$ 4,499
Accrued expenses	28,821	26,792
Deferred revenue, current portion	4,793	9,304
Current portion of long-term debt, net	17,393	21,862
Total current liabilities	54,585	62,457
Deferred revenue, net of current portion	39,825	43,919
Long-term debt, net	199,228	27,971
Other long-term liabilities	358	4,443
Commitments and contingencies (Note 9)		
Stockholders' (deficit) 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; 129,502 and 128,152 shares issued and outstanding at December 31, 2016 and 2015, respectively	130	128
Additional paid-in capital	552,737	525,628
Accumulated other comprehensive loss	(6)	(99)
Accumulated deficit	(585,342)	(482,658)
Total stockholders' (deficit) equity	(32,481)	42,999
Total liabilities and stockholders' (deficit) equity	$ 261,515	$ 181,789

See accompanying notes to consolidated financial statements.

HALOZYME THERAPEUTICS, INC.

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

	Year Ended December 31,		
	2016	**2015**	**2014**
Revenues:			
Product sales, net	$ 53,392	$ 46,082	$ 37,823
Royalties	50,984	30,975	9,425
Revenues under collaborative agreements	42,315	58,000	28,086
Total revenues	146,691	135,057	75,334
Operating expenses:			
Cost of product sales	33,206	29,245	22,732
Research and development	150,842	93,236	79,696
Selling, general and administrative	45,853	40,028	35,942
Total operating expenses	229,901	162,509	138,370
Operating loss	(83,210)	(27,452)	(63,036)
Other income (expense):			
Investment and other income, net	1,326	422	242
Interest expense	(19,977)	(5,201)	(5,581)
Net loss before income taxes	(101,861)	(32,231)	(68,375)
Income tax expense	1,162	—	—
Net loss	$ (103,023)	$ (32,231)	$ (68,375)
Basic and diluted net loss per share	$ (0.81)	$ (0.25)	$ (0.56)
Shares used in computing basic and diluted net loss per share	127,964	126,704	122,690

See accompanying notes to consolidated financial statements.

HALOZYME THERAPEUTICS, INC.

CONSOLIDATED STATEMENTS OF COMPREHENSIVE LOSS
(in thousands)

	Year Ended December 31,		
	2016	**2015**	**2014**
Net loss	$ (103,023)	$ (32,231)	$ (68,375)
Other comprehensive income (loss):			
Unrealized gain (loss) on marketable securities	93	(58)	(58)
Total comprehensive loss	$ (102,930)	$ (32,289)	$ (68,433)

See accompanying notes to consolidated financial statements.

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

	Year Ended December 31,		
	2016	**2015**	**2014**
Operating activities:			
Net loss	$ (103,023)	$ (32,231)	$ (68,375)
Adjustments to reconcile net loss to net cash used in operating activities:			
Share-based compensation	25,585	20,838	15,274
Depreciation and amortization	2,410	1,677	1,762
Non-cash interest expense	2,896	1,243	2,025
Payment-in-kind interest expense on long-term debt	13,184	—	—
Amortization of premiums on marketable securities, net	552	879	1,457
Loss on disposal of equipment	8	8	233
Deferral of unearned revenue	701	4,379	7,045
Recognition of deferred revenue	(9,304)	(5,789)	(5,554)
Deferral of rent expense	—	441	92
Recognition of deferred rent	(370)	(276)	(108)
Changes in operating assets and liabilities:			
Accounts receivable, net	16,730	(23,261)	(52)
Inventories	(5,134)	(3,083)	(236)
Prepaid expenses and other assets	5,626	(15,774)	(265)
Accounts payable and accrued expenses	(244)	13,866	(816)
Net cash used in operating activities	(50,383)	(37,083)	(47,518)
Investing activities:			
Purchases of marketable securities	(155,412)	(71,482)	(88,884)
Proceeds from maturities of marketable securities	81,783	79,730	57,301
Purchases of property and equipment	(3,137)	(2,360)	(1,368)
Net cash (used in) provided by investing activities	(76,766)	5,888	(32,951)
Financing activities:			
Proceeds from issuance of long-term debt, net	203,006	—	—
Repayment of long-term debt	(54,250)	—	—
Proceeds from issuance of common stock under equity incentive plans, net	1,865	13,098	6,788
Proceeds from issuance of common stock, net	—	—	107,713
Net cash provided by financing activities	150,621	13,098	114,501
Net increase (decrease) in cash and cash equivalents	$ 23,472	(18,097)	34,032
Cash and cash equivalents at beginning of period	43,292	61,389	27,357
Cash and cash equivalents at end of period	$ 66,764	$ 43,292	$ 61,389
Supplemental disclosure of cash flow information:			
Interest paid	$ 3,886	$ 3,775	$ 3,460
Income taxes paid	$ 1,441	$ —	$ —
Supplemental disclosure of non-cash investing and financing activities:			
Amounts accrued for purchases of property and equipment	$ 75	$ 473	$ 156

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, 2014	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, net	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, net	2,056	2	13,096	—	—	13,098
Issuance of restricted stock awards, net	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
Adjustment to beginning retained earnings	—	—	(339)	—	339	—
Share-based compensation expense	—	—	25,585	—	—	25,585
Issuance of common stock pursuant to exercise of stock options and vesting of restricted stock units and performance restricted stock units, net	570	1	1,947	—	—	1,948
Issuance of restricted stock awards, net	780	1	(84)	—	—	(83)
Other comprehensive income	—	—	—	93	—	93
Net loss	—	—	—	—	(103,023)	(103,023)
BALANCE AT DECEMBER 31, 2016	129,502	$ 130	$ 552,737	$ (6)	$ (585,342)	$ (32,481)

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 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 Incorporated was acquired by Shire plc in June 2016) ("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 pre-clinical and clinical stage product candidates in oncology. Our lead oncology program is PEGPH20 (PEGylated recombinant human hyaluronidase), a molecular entity we are developing in combination with currently approved cancer therapies as a candidate for the systemic treatment of tumors that accumulate HA. We have demonstrated that 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 has been demonstrated in animal models to work 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. Through our efforts and efforts of our partners and collaborators, we are currently in Phase 2 and Phase 3 clinical testing for PEGPH20 with ABRAXANE ® (nab-paclitaxel) and gemcitabine in stage IV pancreatic ductal adenocarcinoma ("PDA") (Studies 109-202 and 109-301), in Phase 1b clinical testing for PEGPH20 with KEYTRUDA ® (pembrolizumab) in non-small cell lung cancer and gastric cancer (Study 107-101) and in Phase 1b/2 clinical testing for PEGPH20 with HALAVEN ® (eribulin) in patients treated with up to two lines of prior therapy for HER2-negative metastatic breast cancer.

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., Halozyme Royalty LLC and Halozyme Switzerland GmbH.

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., Halozyme Royalty LLC and Halozyme Switzerland GmbH. 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' (deficit) 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, 2016 and 2015 , 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, U.S. Treasury securities and commercial paper, and are measured at fair value using Level 1 and 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 source. 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, 2016			December 31, 2015		
	Level 1	Level 2	Total estimated fair value	Level 1	Level 2	Total estimated fair value
Cash equivalents:						
Money market funds	$ 60,916	$ —	$ 60,916	$ 38,595	$ —	$ 38,595
Available-for-sale marketable securities:						
Corporate debt securities	—	40,207	40,207	—	62,052	62,052
U.S. Treasury securities	94,010	—	94,010	—	—	—
Commercial paper	—	4,000	4,000	—	2,995	2,995
	$ 154,926	$ 44,207	$ 199,133	$ 38,595	$ 65,047	$ 103,642

There were no transfers between Level 1 and Level 2 of the fair value hierarchy for the years ended December 31, 2016 and 2015 . We have no instruments that are classified within Level 3 as of December 31, 2016 and 2015 .

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 consolidated balance sheets.

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, 2016 and 2015 . Approximately 81% of the accounts receivable balance at December 31, 2016 represents amounts due from Roche and Baxalta. Approximately 89% of the accounts receivable balance at December 31, 2015 represents amounts due from Roche and Lilly.

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

	Year Ended December 31,		
	2016	2015	2014
Roche	63%	42%	57%
Baxalta	12%	7%	3%
Lilly	6%	19%	—
AbbVie	4%	17%	—
Janssen	2%	1%	20%

We attribute revenues under collaborative agreements, including royalties, 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,		
	2016	2015	2014
United States	$ 52,292	$ 77,149	$ 31,397
Switzerland	93,067	57,136	42,791
All other foreign	1,332	772	1,146
Total revenues	$ 146,691	$ 135,057	$ 75,334

As of December 31, 2016 and 2015 , we had $0.1 million and $0.3 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 13% and 20% of the accounts payable balance at December 31, 2016 and 2015 , 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 2% and 4% of the accounts payable balance at December 31, 2016 and 2015 , 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, 2016 and 2015 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. We evaluate 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, 2016 and 2015 , inventories consisted of $2.3 million and $1.4 million of *Hylenex* recombinant inventory, respectively, and $12.3 million and $8.2 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 years ended December 31, 2016 and 2015, there was no impairment of the value of long-lived assets.

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 and is included in accrued expenses and other long-term liabilities, as applicable, 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 the use 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 analyze 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 reserves and 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 product return 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.

Revenues under Collaborative Agreements

We have entered into license and collaboration agreements under which our collaborators obtained worldwide rights for the use of our proprietary rHuPH20 enzyme in the development and commercialization of their biologic compounds identified as targets. These 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 used by 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 collaborative 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 marketplace.

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 is 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 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. 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 years ended December 31, 2016 and 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 operating expenses 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 currently 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. A portion of our obligation to make payments under these contracts depends 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 amounts we are obligated to pay under our clinical trial agreements are modified (for instance, as a result of changes in the clinical trial protocol or scope of work to be performed), we adjust our accruals accordingly on a prospective basis. Revisions to our contractual payment obligations are charged to expense in the period in which the facts that give rise to the revision become reasonably certain. Historically, such revisions to our clinical trial expense accruals have not 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 over the requisite service period of the award. 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. Forfeitures are recognized as a reduction of share-based compensation expense as they occur.

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. Significant judgment is required by management to determine our provision for income taxes, our deferred tax assets and liabilities, and the valuation allowance to record against our net deferred tax assets, which are based on complex and evolving tax regulations throughout the world. Deferred tax assets and other tax benefits are recorded when it is more likely than not that the position will be sustained upon audit. While we have begun to utilize certain of our net operating losses, we have not yet established a track record of profitability. Accordingly, valuation allowances have been recorded to reduce our net deferred tax assets to zero until such time we can demonstrate an ability to realize them.

During the fourth quarter of 2016, we established a new Swiss subsidiary, Halozyme Switzerland GmbH (Halozyme Switzerland). Halozyme Switzerland is party to a tax ruling providing that the total Swiss income tax rate will not exceed 10% through December 2026.

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 common stock equivalents totaling approximately 13,761,123 , 9,780,593 and 8,405,903 were excluded from the calculation of diluted net loss per common share for the years ended December 31, 2016, 2015 and 2014 , respectively, because their effect was anti-dilutive.

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. Our long-lived assets located in foreign countries had minimal book value as of December 31, 2016 and 2015 .

Adoption and Pending Adoption of Recent Accounting Pronouncements

The following table provides a brief description of recently issued accounting standards, those adopted in the current year and those not yet adopted:

Standard	Description	Effective Date	Effect on the Financial Statements or Other Significant Matters
In April 2015, the Financial Accounting Standards Board (“FASB”) issued Accounting Standards Update (“ASU”) 2015-03, Interest - Imputation of Interest (Subtopic 835-30): Simplifying the Presentation of Debt Issuance Costs.	The new guidance 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.	Adopted on January 1, 2016.	There was no material impact on our consolidated financial statements and related disclosures.

Standard	Description	Effective Date	Effect on the Financial Statements or Other Significant Matters
In November 2015, the FASB issued ASU 2015-17, Balance Sheet Classification of Deferred Taxes.	The new guidance 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.	Adopted on January 1, 2016.	There was no material impact on our consolidated financial statements and related disclosures.
In March 2016, the FASB issued ASU 2016-09, Compensation - Stock Compensation.	The new guidance changes certain aspects of accounting for share-based payments to employees and involves several aspects of the accounting for share-based payment transactions, including the income tax consequences, classification of awards as either equity or liabilities, and classification on the statement of cash flows. Specifically, the new guidance requires that all income tax effects of share-based awards be recognized as income tax expense or benefit in the reporting period in which they occur. Additionally, the new guidance amends existing guidance to allow forfeitures of share-based awards to be recognized as they occur.	Adopted on January 1, 2016.	The cumulative effect of adoption was a decrease of $0.3 million to both additional paid-in capital and accumulated deficit.
In August 2014, the FASB issued ASU 2014-15, Presentation of Financial Statements — Going Concern.	The new guidance requires, in connection with preparing financial statements for each annual and interim reporting period, an entity's management to 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).	December 31, 2016.	There was no material impact on our consolidated financial statements and related disclosures in the current period. In an annual or interim reporting period where conditions or events exist that raise substantial double about our ability to continue as a going concern, applicable disclosure will be provided.

Standard	Description	Effective Date	Effect on the Financial Statements or Other Significant Matters
In July 2015, the FASB issued ASU 2015-11, Inventory: Simplifying the Measurement of Inventory.	The new guidance requires that for entities that measure inventory using the first-in, first-out method, inventory should be measured at the lower of cost or 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 approximate normal profit margin. Net realizable value is the estimated selling price in the ordinary course of business, less reasonably predictable costs of completion, disposal, and transportation.	January 1, 2017.	The adoption is not expected to have a material impact on our consolidated financial position or results of operations.
In January 2016, the FASB issued ASU 2016-01, Financial Instruments - Overall; Recognition and Measurement of Financial Assets and Financial Liabilities.	The new guidance 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 to be measured at fair value with changes in the fair value recognized through net income. The new guidance 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.	January 1, 2018.	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.

Standard	Description	Effective Date	Effect on the Financial Statements or Other Significant Matters
In May 2014, the FASB issued ASU 2014-09, Revenue from Contracts with Customers (Topic 606). In March, April, May and December 2016, the FASB issued additional guidance related to Topic 606.	The new standard will supersede nearly all existing revenue recognition guidance. Under Topic 606, an entity is required to recognize revenue upon transfer of promised goods or services to customers in an amount that reflects the expected consideration to be received in exchange for those goods or services. Topic 606 defines a five-step process in order to achieve this core principle, which may require the use of judgment and estimates, and also requires expanded qualitative and quantitative disclosures relating to the nature, amount, timing and uncertainty of revenue and cash flows arising from contracts with customers, including significant judgments and estimates used. The new standard also defines accounting for certain costs related to origination and fulfillment of contracts with customers, including whether such costs should be capitalized. The new standard permits adoption either by using (i) a full retrospective approach for all periods presented in the period of adoption or (ii) a modified retrospective approach where the new standard is applied in the financial statements starting with the year of adoption. Under both approaches, cumulative impact of the adoption is reflected as an adjustment to retained earnings (accumulated deficit) as of the earliest date presented in accordance with the new standard.	January 1, 2018. Early adoption is permitted.	We plan to implement the new guidance on January 1, 2018. We currently plan to adopt using the modified retrospective approach; however, a final decision regarding the adoption method has not been finalized at this time. We are currently evaluating the effect that the updated standard will have on our consolidated financial statements and related disclosures. However, we anticipate an impact to timing of recognition of payments related to certain of our license and collaboration agreements [(1)] and the timing of recognition of our sales-based royalties. [(2)] We anticipate that this standard will have a material impact on our consolidated financial statements. Additional areas of impact may be identified as we continue our evaluation. We cannot reasonably estimate additional quantitative information related to the impact of the new standard on our financial statements at this time.
In August 2016, the FASB issued ASU 2016-15, Statement of Cash Flows: Classification of Certain Cash Receipts and Cash Payments. In November 2016, the FASB issued ASU 2016-18, Statement of Cash Flows: Restricted Cash.	Current U.S. GAAP either is unclear or does not include specific guidance on the eight cash flow classification issues included in ASU 2016-15. The new guidance is an improvement to U.S. GAAP and is intended to reduce the current and potential future diversity in practice. ASU 2016-18 provides additional classification guidance for restricted cash, which requires that restricted cash be included with cash and cash equivalents when reconciling the beginning-of-period and end-of-period total amounts shown on the statement of cash flows.	January 1, 2018. Early adoption is permitted.	We are currently evaluating the effect that the updated standard will have on our consolidated statement of cash flows.

Standard	Description	Effective Date	Effect on the Financial Statements or Other Significant Matters
In February 2016, the FASB issued ASU 2016-02, Leases.	The new guidance requires lessees to recognize assets and liabilities for most leases and provides enhanced disclosures.	January 1, 2019. Early adoption is permitted.	We are currently evaluating the effect that the updated standard will have on our consolidated financial statements and related disclosures. However, we anticipate recognition of additional assets and corresponding liabilities related to our leases on our consolidated balance sheet.

(1) Under the new standard, we are required to assess whether licenses granted under our collaboration and license agreements are distinct from other performance obligations and functional when granted. We expect that license-related amounts, including upfront payments, exclusive designation fees, annual license maintenance fees and sales based milestones will be recognized, generally, when earned. Currently, these amounts as related to certain of our license and collaboration agreements are being amortized over the term of the collaboration agreement. For example, during the year ended December 31, 2016 we recognized revenue from amortization of license payments of $4.1 million , and total deferred revenue related to license payments under collaboration agreements as of December 31, 2016 was $43.9 million . While we have not completed our evaluation at this time, we anticipate a potential reduction or elimination of our associated deferred revenue balances upon adoption of Topic 606.

(2) Under the new standard, we expect sales-based royalties will be recognized in the quarter they are earned based on estimates, with true-up to actual results following the in the subsequent quarter. Sales-based royalty revenue earned under our collaboration and license agreements is presently recognized when the royalty reports are made available. Upon adoption of Topic 606, we will evaluate and reduce our accumulated deficit, and increase our accounts receivable, net, by the amount earned but not yet reported in our consolidated balance sheet at the time of adoption. We are establishing a process to estimate sales-based royalty revenues in the quarter in which the sales occur.

3. Marketable Securities

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

	December 31, 2016			
Description	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Estimated Fair Value
Corporate debt securities	$ 40,221	$ 1	$ (15)	$ 40,207
U.S. Treasury securities	94,002	24	(16)	94,010
Commercial paper	4,000	—	—	4,000
	$ 138,223	$ 25	$ (31)	$ 138,217

	December 31, 2015			
Description	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Estimated Fair Value
Corporate debt securities	$ 62,151	$ —	$ (99)	$ 62,052
Commercial paper	2,995	—	—	2,995
	$ 65,146	$ —	$ (99)	$ 65,047

As of December 31, 2016 , $132.2 million of our available-for-sale marketable securities were scheduled to mature within the next twelve months. There were $81.8 million of available-for-sale securities that matured during the year ended December 31, 2016 . There were no realized gains or losses for the years ended December 31, 2016, 2015 and 2014 . As of December 31, 2016 , 11 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, 2016 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 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 three pre-defined Roche biologic targets with the option to develop and commercialize rHuPH20 with ten additional targets. Roche had the right to exercise this option to identify additional targets for ten years . As of the ten year anniversary in December 2016, Roche has elected a total of eight targets, two of which are exclusive.

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. In May 2016, Roche announced that the EMA approved Mabthera SC to treat patients with chronic lymphocytic leukemia. In November 2016, the FDA accepted Genentech's (a member of the Roche Group) Biologics License Application ("BLA") for a subcutaneous formulation of rituximab for CLL and NHL. This is a co-formulation with rHuPH20, which is approved and marketed under the MabThera SC brand in countries outside the U.S.

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. In the event such valid claims expire, the royalty rate is reduced for the remaining royalty term.

Payments received from Roche, excluding royalties and reimbursements for providing research and development services and supplying bulk rHuPH20, since inception of the collaboration agreement are as follows (in thousands):

	As of December 31, 2016
Upfront license fee payment for the application of rHuPH20 to the initial exclusive targets	$ 20,000
Election of additional exclusive targets and annual license maintenance fees for the right to designate the remaining targets as exclusive targets	23,000
Clinical development milestone payments	13,000
Regulatory milestone payments	8,000
Sales-based milestone payments	15,000
Total payments received	$ 79,000

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 milestone payments were deferred and are being amortized over the remaining term of the Roche Collaboration.

For the years ended December 31, 2016, 2015 and 2014 , we recognized approximately $3.3 million , $3.3 million , and $3.0 million , respectively, of Roche deferred revenues, excluding reimbursements for providing research and development services and supplying bulk rHuPH20, as revenues under collaborative agreements. Total Roche deferred revenues, excluding deferred revenues related to reimbursements for providing research and development services and supplying bulk rHuPH20, were approximately $35.7 million and $39.0 million as of December 31, 2016 and 2015 , respectively.

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.

Under the terms of the Baxalta Collaboration, Baxalta pays us a royalty consisting of a mid-single digit percent of the net sales of HYQVIA. 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 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 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. In the event such valid claims expire, the royalty rate is reduced for the remaining royalty term.

Payments received from Baxalta, excluding royalties and reimbursements for providing research and development services and supplying bulk rHuPH20, since inception of the collaboration agreement are as follows (in thousands):

	As of December 31, 2016
Upfront license fee payment for the application of rHuPH20 to the initial exclusive target	$ 10,000
Regulatory milestone payments	3,000
Sales-based milestone payments	4,000
Total payments received	$ 17,000

Due to our continuing involvement obligations (for example, support activities associated with rHuPH20 enzyme), the upfront license fee and sales-based milestone payments were deferred and are being recognized over the term of the Baxalta Collaboration.

For each of the years ended December 31, 2016, 2015 and 2014 , we recognized approximately $0.8 million of Baxalta deferred revenues as revenues under collaborative agreements. Total Baxalta deferred revenues were approximately $8.2 million and $9.0 million as of December 31, 2016 and 2015 , respectively.

Other Collaborations

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 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, 2016, Lilly has elected two specified exclusive targets and one specified semi-exclusive target. Lilly has the right to elect up to two 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 royalties to us 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. In the event such valid claims expire, the royalty rate is reduced for the remaining royalty term. Lilly may terminate the agreement prior to expiration for any reason in its entirety upon 60 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 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, 2016 , AbbVie has elected one specified exclusive target, TNF alpha. 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 to us 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. In the event such valid claims expire, the royalty rate is reduced for the remaining royalty term. 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, 2016 , Janssen has elected one specified exclusive target, CD38. Janssen has the right to elect four additional targets in the future upon payment of additional fees. In addition, Janssen will pay royalties to us if products under the collaboration are commercialized. 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. In the event such valid claims expire, the royalty rate is reduced for the remaining royalty term. Janssen may terminate the agreement prior to expiration for any reason in its entirety or on a product-by-product 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, 2016 , Pfizer has elected five specified exclusive targets. In December 2016, Pfizer returned one of its elected targets. Pfizer has the right to elect two additional targets in the future upon payment of additional fees. In addition, Pfizer will pay royalties to us if products under the collaboration are commercialized. 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. Royalties are subject to adjustment as set forth in the agreement. 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.

Payments received from other collaborators for upfront license fees, license fees for the election of additional targets, maintenance fees and event-based payments since inception of the collaboration agreements are as follows (in thousands):

	As of December 31, 2016
Lilly	$ 33,000
AbbVie	29,000
Janssen	15,250
Pfizer	16,500
Total payments received	$ 93,750

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 $12.5 million license fees from Pfizer, the $15.3 million license fee from Janssen, the $23.0 million upfront license fee from AbbVie and the $33.0 million license fees 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 $12.5 million license fees under the Pfizer Collaboration, the $15.3 million license fee under the Janssen Collaboration, the $23.0 million upfront license fee under the AbbVie Collaboration and the $33.0 million license fees under the Lilly Collaboration as revenues under collaborative agreements in the period when such license fees were earned. We recognized revenue related to event-based payments or milestone payments under these collaborations of $6.0 million , $1.0 million and zero for the years ended December 31, 2016, 2015 and 2014 , respectively.

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 if requested by any 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 or product sales, as appropriate, 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.

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 under our collaboration agreements with Roche and Pfizer for the successful development of the elected targets in the aggregate of up to $62.5 million upon achievement of specified clinical development milestone events and up to $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, 2016	December 31, 2015
Accounts receivable from revenues under collaborative agreements	$ 6,151	$ 25,939
Accounts receivable from product sales to collaborators	7,854	4,996
Accounts receivable from other product sales	2,234	2,442
Total accounts receivable	16,239	33,377
Allowance for distribution fees and discounts	(559)	(967)
Total accounts receivable, net	$ 15,680	$ 32,410

Inventories consisted of the following (in thousands):

	December 31, 2016	December 31, 2015
Raw materials	$ 761	$ 677
Work-in-process	12,850	8,481
Finished goods	1,012	331
Total inventories	$ 14,623	$ 9,489

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

	December 31, 2016	December 31, 2015
Prepaid manufacturing expenses	$ 9,663	$ 16,155
Prepaid research and development expenses	8,613	9,225
Other prepaid expenses	1,661	1,198
Other assets	1,530	530
Total prepaid expenses and other assets	21,467	27,108
Less long-term portion	219	5,574
Total prepaid expenses and other assets, current	$ 21,248	$ 21,534

Prepaid manufacturing expenses include slot reservation fees and other amounts paid to contract manufacturing organizations. Such amounts are reclassified to work-in-process inventory once the manufacturing process has commenced.

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

	December 31, 2016	December 31, 2015
Research equipment	$ 10,479	$ 9,666
Computer and office equipment	3,373	2,570
Leasehold improvements	2,331	2,025
Subtotal	16,183	14,261
Accumulated depreciation and amortization	(11,919)	(10,318)
Property and equipment, net	$ 4,264	$ 3,943

Depreciation and amortization expense was approximately $2.4 million , $1.7 million and $1.8 million for the years ended December 31, 2016, 2015 and 2014 , respectively.

Accrued expenses consisted of the following (in thousands):

	December 31, 2016	December 31, 2015
Accrued compensation and payroll taxes	$ 11,539	$ 8,636
Accrued outsourced research and development expenses	9,522	8,617
Accrued outsourced manufacturing expenses	3,225	6,205
Other accrued expenses	4,552	4,118
Total accrued expenses	28,838	27,576
Less long-term accrued outsourced research and development expenses	17	784
Total accrued expenses, current	$ 28,821	$ 26,792

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, 2016	December 31, 2015
Collaborative agreements		
License fees and event-based payments:		
Roche	$ 35,709	$ 39,038
Other	8,209	9,724
	43,918	48,762
Reimbursement for research and development services	700	4,461
Total deferred revenue	44,618	53,223
Less current portion	4,793	9,304
Deferred revenue, net of current portion	$ 39,825	$ 43,919

6. Long-Term Debt, Net

Royalty-backed Loan

In January 2016 , through our wholly-owned subsidiary Halozyme Royalty LLC ("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. transferred to Halozyme Royalty the right to receive royalty payments from the commercial sales of ENHANZE products owed under the Roche Collaboration and Baxalta Collaboration ("Collaboration Agreements"). The royalty payments from the Collaboration Agreements will be used to repay the principal and interest on the loan (the "Royalty Payments"). The Royalty-backed 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% . The interest rate as of December 31, 2016 was 9.71% .

The Credit Agreement provides that none of the Royalty Payments are required to be applied to the Royalty-backed Loan prior to January 1, 2017, 50% of the Royalty Payments are required to be applied to the Royalty-backed Loan between January 1, 2017 and January 1, 2018 and thereafter all Royalty Payments must be applied to the Royalty-backed Loan. However, 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, as defined, will be capitalized and added to the principal balance of the Royalty-backed Loan on such date. 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.

Because the repayment of the term loan is contingent upon the level of Royalty Payments received, the repayment term may be shortened or extended depending on the actual level of Royalty Payments. 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 Collaboration Agreements, and (iii) December 31, 2050 . Currently, we estimate that the loan will be repaid in the first quarter of 2020. This estimate could be adversely affected and the repayment period could be extended if future royalty amounts are less than currently expected. 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 Royalty retains its right to the Royalty Payments following repayment of the loan.

As of December 31, 2016 , we were in compliance with all material covenants under the Credit Agreement and there was no material adverse change in our business, operations or financial condition.

During the year ended December 31, 2016 , accrued interest in the amount of $13.2 million was capitalized and added to the principal balance of the Royalty-backed Loan. In addition, we recorded related accrued interest on the debt of $0.7 million as of December 31, 2016 .

In connection with the Royalty-backed Loan, we paid the Royalty-backed Lenders a fee of $1.5 million and incurred additional debt issuance costs totaling $0.4 million , which includes expenses that we paid on behalf of the Royalty-backed Lenders and expenses incurred directly by us. Debt issuance costs and the lender fee have been netted against the debt as of December 31, 2016 , and are being amortized over the estimated term of the debt using the effective interest method. For the year ended December 31, 2016 , the Company recognized interest expense, including amortization of the debt discount, related to the Royalty-backed Loan of $14.5 million . The assumptions used in determining the expected repayment term of the debt and amortization period of the issuance costs requires that we make estimates that could impact the short- and long-term classification of these costs, as well as the period over which these costs will be amortized. The outstanding balance of the Royalty-backed Loan as of December 31, 2016 was $161.8 million , inclusive of payment-in-kind interest expense of $13.2 million and net of unamortized debt discount of $1.4 million .

Oxford and SVB Loan and Security Agreement

In December 2013, we entered into an Amended and Restated Loan and Security Agreement (the "Original Loan Agreement") with Oxford Finance LLC ("Oxford") and Silicon Valley Bank ("SVB") (collectively, the "Lenders"), amending and restating in its entirety our previous loan agreement with the Lenders, dated December 2012. The Original Loan Agreement was scheduled to mature on January 1, 2018 and provided for an additional $20 million principal, bringing the total loan balance to $50 million . The proceeds were used for working capital and general business requirements.

In January 2015, we entered into a second amendment to the Original Loan Agreement with the Lenders, amending and restating the loan repayment schedules of the Original Loan Agreement. The amended and restated term loan repayment schedule provided 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 our previous loan, the amended Original Loan Agreement provided for a 7.55% interest rate and a final interest payment equal to 8.5% of the original principal amount, or $4.25 million , which was due when the loan became due or upon the prepayment of the facility.

In June 2016 , we entered into a new Loan and Security Agreement (the "New Loan Agreement") with the Lenders, providing a senior secured loan facility of up to an aggregate principal amount of $70.0 million , comprising a $55.0 million draw in June 2016 and an additional $15.0 million tranche, which we have the option to draw during the second quarter of 2017. The initial proceeds carry an interest rate of 8.25% and were partially used to pay the outstanding principal and final payment owed on the amended Original Loan Agreement. The remaining proceeds, including any drawdown of the additional $15.0 million , are to be used for working capital and general business requirements. The remaining $15.0 million tranche is subject to an annual interest rate equal to the prime rate as reported in The Wall Street Journal on the draw-down date plus 4.75% . The repayment schedule provides for interest only payments for the first 18 months , followed by consecutive equal monthly payments of principal and interest in arrears through the maturity date of January 1, 2021 . The New Loan Agreement provides for a final payment equal to 5.5% of the initial $55.0 million principal amount and, if we exercise our option to draw an additional $15.0 million in 2017, 7.25% of the principal amount of the second draw. The final payment is due when the New Loan Agreement becomes due or upon the prepayment of the facility. We have the option to prepay the outstanding balance of the New Loan Agreement in full, subject to a prepayment fee of 2% in the first year and 1% in the second year of the New Loan Agreement.

In connection with the New Loan Agreement, 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 loan using the effective interest rate method.

The New Loan Agreement 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 New 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; enter into transactions with any of our affiliates outside of the ordinary course of business or permit our subsidiaries to do the same; and make any voluntary prepayment of or modify certain terms of the Royalty-backed Loan. 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 New 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 New 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, a material impairment in the perfection or priority of the Lender's lien in the collateral or in the value of such collateral or the occurrence of an event of default under the Royalty-backed Loan. In the event of default by us under the New 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 New Loan Agreement, which could harm our financial condition.

As of December 31, 2016 , we were in compliance with all material covenants under the New Loan Agreement and there was no material adverse change in our business, operations or financial condition.

Future maturities and interest payments of long-term debt as of December 31, 2016 , are as follows (in thousands):

2017	$	37,338
2018		94,406
2019		105,758
2020		24,103
2021		4,755
Total minimum payments		266,360
Less amount representing interest		(45,208)
Gross balance of long-term debt		221,152
Less unamortized debt discount		(4,531)
Present value of long-term debt		216,621
Less current portion of long-term debt		(17,393)
Long-term debt, less current portion and unamortized debt discount	$	199,228

Interest expense, including amortization of the debt discount, related to long-term debt for the years ended December 31, 2016, 2015 and 2014 was approximately $20.0 million , $5.2 million and $5.6 million , respectively. Accrued interest, which is included in accrued expenses and other long-term liabilities, was $1.1 million and $3.2 million as of December 31, 2016 and December 31, 2015 , respectively.

7. Stockholders' Equity

During 2016 , we issued an aggregate of 413,248 shares of common stock, in connection with the exercises of stock options for cash in the aggregate amount of approximately $2.8 million . In addition, we issued 780,066 shares of common stock, net of RSAs canceled, in connection with the grants of RSAs. The RSA holders surrendered 8,388 RSAs to pay for minimum withholding taxes totaling approximately $0.9 million . We issued 134,944 shares of common stock upon vesting of RSUs. The RSU holders surrendered 83,335 RSUs to pay for minimum withholding taxes totaling approximately $0.8 million . We issued 21,775 shares of common stock upon vesting of PRSUs. The PRSU holders surrendered 8,262 PRSUs to pay for minimum withholding taxes totaling approximately $0.1 million .

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 and 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 .

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 was approved by the stockholders on May 6, 2016 and provides for the grant of up to 44.2 million shares of common stock to selected employees, consultants and non-employee members of our Board of 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, 2016 , we granted share-based awards under the 2011 Stock Plan. At December 31, 2016 , 12,458,020 shares were subject to outstanding awards and 9,001,562 shares were available for future grants of share-based awards.

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

	Year Ended December 31,		
	2016	2015	2014
Research and development	$ 11,470	$ 9,795	$ 7,939
Selling, general and administrative	14,115	11,043	7,335
Share-based compensation expense	$ 25,585	$ 20,838	$ 15,274

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

	Year Ended December 31,		
	2016	2015	2014
Stock options	$ 16,544	$ 11,145	$ 7,884
RSAs, RSUs and PRSUs	9,041	9,693	7,390
	$ 25,585	$ 20,838	$ 15,274

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, 2016	
	Unrecognized Expense	Remaining Weighted Average Recognition Period (years)
Stock options	$ 42,592	2.8
RSAs	$ 8,857	2.3
RSUs	$ 8,442	2.6

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 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, 2016, 2015 and 2014 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, 2014	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		
Granted	4,466,306	$9.03		
Exercised	(413,248)	$6.88		
Canceled/forfeited	(955,054)	$12.42		
Outstanding at December 31, 2016	11,091,196	$11.70	7.8	$9.4 million
Vested and expected to vest at December 31, 2016	11,091,196	$11.70	7.8	$9.4 million
Exercisable at December 31, 2016	4,230,638	$11.77	6.2	$4.7 million

The weighted average grant date fair values of options granted during the years ended December 31, 2016, 2015 and 2014 were $5.36 per share, $9.60 per share and $8.13 per share, respectively. The total intrinsic value of options exercised during the years ended December 31, 2016, 2015 and 2014 was approximately $1.4 million , $16.2 million and $8.1 million , respectively. Cash received from stock option exercises for the years ended December 31, 2016, 2015 and 2014 was approximately $2.8 million , $14.4 million and $7.8 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,		
	2016	2015	2014
Expected volatility	67.5-71.9%	66.2-67.4%	66.6-71.8%
Average expected term (in years)	5.4	5.6	5.7
Risk-free interest rate	1.00-1.90%	1.34-1.92%	1.73-2.04%
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 . 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 the Board of Directors typically vest in approximately one year.

The following table summarizes our RSA activity during the years ended December 31, 2016, 2015 and 2014 :

	Number of Shares	Weighted Average Grant Date Fair Value
Unvested at January 1, 2014	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
Granted	968,652	$8.41
Vested	(296,831)	$12.76
Forfeited	(180,198)	$10.33
Unvested at December 31, 2016	1,303,103	$10.09

The estimated fair value of the RSAs was based on the closing 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, 2016, 2015 and 2014 was approximately $3.8 million , $7.3 million and $2.2 million , respectively. The fair value of RSAs vested during the years ended December 31, 2016, 2015 and 2014 , was approximately $2.5 million , $13.9 million and $3.0 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, 2016, 2015 and 2014 :

	Number of Shares	Weighted Average Grant Date Fair Value	Weighted Average Remaining Contractual Term (yrs)	Aggregate Intrinsic Value
Unvested at January 1, 2014	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		
Granted	796,582	$8.17		
Vested	(218,279)	$12.74		
Forfeited	(77,948)	$10.99		
Outstanding at December 31, 2016	1,166,569	$10.16	1.4	$11.5 million

The estimated fair value of the RSUs was based on the closing 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, 2016, 2015 and 2014 was approximately $2.8 million , $1.5 million and $1.8 million , respectively. The fair value of RSUs vested during the years ended December 31, 2016, 2015 and 2014 was approximately $2.1 million , $1.8 million and $2.6 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, 2016, 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		
Granted	—	$ —		
Vested	(30,037)	$ 9.49		
Forfeited	(79,415)	$ 9.44		
Outstanding at December 31, 2016	200,255	$ 9.49	0.3	$2.0 million

The estimated fair value of the PRSUs was based on the closing 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 years ended December 31, 2016, 2015 and 2014 was approximately $0.3 million , $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 $0.4 million and $0.8 million as of December 31, 2016 and 2015, 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, 2016 and 2015.

Additionally, we lease certain office equipment under operating leases. Total rent expense was approximately $2.2 million , $1.9 million and $1.9 million for the years ended December 31, 2016, 2015 and 2014 , respectively.

Approximate annual future minimum operating lease payments as of December 31, 2016 are as follows (in thousands):

Year:	Operating Leases
2017	$ 2,622
2018	522
2019	425
2020	426
2021	36
Total minimum lease payments	$ 4,031

Other Commitments

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, 2016 , we had a $13.0 million minimum purchase obligation in connection with this agreement.

In June 2011, we entered into a services agreement with Patheon for the technology transfer and manufacture of *Hylenex* recombinant. At December 31, 2016 , we had a $0.7 million minimum purchase obligation in connection with this agreement.

In 2013 and 2014, we entered into service agreements with two third party manufacturers for the manufacturing of PEGPH20. At December 31, 2016, we had a $1.6 million and a $5.4 million minimum purchase obligation in connection with each of these agreements.

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 $8.0 million over the life of this agreement in addition to royalties on sales of the affected products. 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

Total income (loss) before income taxes summarized by region were as follows (in thousands):

	Year Ended December 31,		
	2016	2015	2014
United States	$ 6,384	$ 11,724	$ (30,885)
Foreign	(108,245)	(43,955)	(37,490)
Net loss before income taxes	$ (101,861)	$ (32,231)	$ (68,375)

Significant components of our net deferred tax assets/(liabilities) were as follows (in thousands).

	December 31,	
	2016	2015
Deferred tax assets:		
Net operating loss carryforwards	$ 103,296	$ 104,505
Deferred revenue	15,354	16,344
Research and development and orphan drug credits	73,701	54,846
Share-based compensation	8,844	6,286
Other, net	2,515	906
	203,710	182,887
Valuation allowance for deferred tax assets	(203,370)	(182,507)
Deferred tax assets, net of valuation	340	380
Deferred tax liabilities:		
Depreciation	(340)	(380)
Total deferred tax liabilities	(340)	(380)
Net deferred tax asset (liability)	$ —	$ —

A valuation allowance of $203.4 million and $182.5 million has been established to offset the net deferred tax assets as of December 31, 2016 and 2015 , respectively, as realization of such assets is uncertain.

Income tax expense was comprised of the following components (in thousands):

	Year Ended December 31,		
	2016	2015	2014
Current federal	$ 1,145	$ —	$ —
Current state	17	—	—
	$ 1,162	$ —	$ —

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):

	Year Ended December 31,		
	2016	2015	2014
Federal income tax benefit at 34%	$ (34,633)	$ (10,959)	$ (23,247)
State income tax benefit, net of federal income tax impact	(653)	5,524	(1,761)
Increase in valuation allowance	11,252	4,045	16,998
Foreign income subject to tax at other than federal statutory rate	36,803	14,945	12,747
Shared-based compensation	3,735	(4,990)	(529)
Non-deductible expenses and other	698	6,457	1,069
Research and development credits, net	(1,084)	(3,861)	(5,277)
Orphan drug credits, net of federal add back	(14,956)	(11,161)	—
	$ 1,162	$ —	$ —

At December 31, 2016 , our unrecognized tax benefit was $12.8 million . Of this amount, $0.2 million would affect the effective tax rate and $12.6 million would affect the effective tax rate in the event the valuation allowance was removed. Of the unrecognized tax benefits, we do not expect any significant changes to occur in the next 12 months. 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, 2016, 2015 and 2014 , we recognized no interest or penalties.

The following table summarizes the activity related to our unrecognized tax benefits (in thousands):

	Year Ended December 31,		
	2016	2015	2014
Gross unrecognized tax benefits at beginning of period	$ 4,898	$ —	$ —
Increases in tax positions for prior years	5,615	—	—
Decreases in tax positions for prior years	(4,898)	—	—
Increases in tax positions for current year	7,184	4,898	—
Gross unrecognized tax benefits at end of period	$ 12,799	$ 4,898	$ —

At December 31, 2016 , we had federal, California and other state tax net operating loss carryforwards of approximately $268.7 million , $249.8 million and $30.0 million , respectively.

The following table shows key expiration dates of the federal and California net operating loss carryforwards (in thousands):

		Expires in:		
	Net Operating Loss	2017	2021 and beyond	2028 and beyond
Federal	$ 268,703	$ —	$ 268,703	$ —
California	$ 249,783	$ 10,434	$ —	$ 239,349

At December 31, 2016 , we had federal and California research and development tax credit carryforwards of approximately $28.0 million and $16.1 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 $43.8 million which will begin to expire in 2035 .

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.

We do not provide for U.S. income taxes on the undistributed earnings of our foreign subsidiaries as it is our intention to utilize those earnings in the foreign operations for an indefinite period of time. At December 31, 2016 and 2015, there were no undistributed earnings in foreign subsidiaries.

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 $1.0 million , $0.7 million and $0.7 million for the years ended December 31, 2016, 2015 and 2014 , respectively.

12. 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.

13. Summary of Unaudited Quarterly Financial Information

The following is a summary of our unaudited quarterly results for the years ended December 31, 2016 and 2015 (in thousands):

	Quarter Ended			
2016 (Unaudited):	**March 31,**	**June 30,**	**September 30,**	**December 31,**
Total revenues	$ 42,499	$ 33,336	$ 31,853	$ 39,003
Gross profit on product sales	$ 5,178	$ 5,391	$ 4,197	$ 5,420
Total operating expenses	$ 58,668	$ 55,059	$ 54,596	$ 61,578
Net loss	$ (19,816)	$ (26,875)	$ (28,946)	$ (27,386)
Net loss per share, basic and diluted	$ (0.16)	$ (0.21)	$ (0.23)	$ (0.21)
Shares used in computing basic and diluted net loss per share	127,615	127,958	128,154	128,185

	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

(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.

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, 2016				
Accounts receivable allowances [1]	$ 967	$ 4,795	$ (5,203)	$ 559
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

(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	Bylaws, as amended		8-K	001-32335	12/19/2016
3.3	Certificate of Elimination of the Series A Preferred Stock of Halozyme Therapeutics, Inc.		8-K	001-32335	5/6/2016
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. 2011 Stock Plan (as amended through May 4, 2016)		DEF-14A	001-32335	3/23/2016
10.13#	Form of Stock Option Agreement (2011 Stock Plan)		8-K	001-32335	5/6/2011
10.14#	Form of Stock Option Agreement for Executive Officers (2011 Stock Plan)		8-K	001-32335	5/6/2011
10.15#	Form of Restricted Stock Units Agreement for Officers (2011 Stock Plan)		10-Q	001-32335	8/10/2015
10.16#	Form of Restricted Stock Award Agreement for Officers (2011 Stock Plan)		10-Q	001-32335	8/10/2015
10.17#	Form of Restricted Stock Units Agreement (2011 Stock Plan)		8-K	001-32335	5/6/2011
10.18#	Form of Restricted Stock Award Agreement (2011 Stock Plan)		8-K	001-32335	5/6/2011
10.19#	Form of Stock Option Agreement (2011 Stock Plan -grants made on or after 11/4/2015)		10-Q	001-32335	11/9/2015

Exhibit Number	Exhibit Title	Filed Herewith	Incorporated by Reference		
			Form	File No.	Date Filed
10.20#	Form of Restricted Stock Units Agreement (2011 Stock Plan - grants made on or after 11/4/2015)		10-Q	001-32335	11/9/2015
10.21#	Form of Restricted Stock Award Agreement (2011 Stock Plan - grants made on or after 11/4/2015)		10-Q	001-32335	11/9/2015
10.22#	Form of Restricted Stock Units Agreement (2011 Plan - grants made on or after 2/22/2017)	X			
10.23#	Form of Indemnity Agreement for Directors and Executive Officers		8-K	001-32335	12/20/2007
10.24#	Severance Policy		10-Q	001-32335	5/9/2008
10.25#	Form of Amended and Restated Change In Control Agreement with Officer		10-Q	001-32335	11/9/2015
10.26	Lease (11404 and 11408 Sorrento Valley Road)		8-K	001-32335	6/16/2011
10.27	Amended and Restated Lease (11388 Sorrento Valley Road), effective as of June 10, 2011		8-K	001-32335	6/16/2011
10.28	Lease (11436 Sorrento Valley Road), effective as of April 2013		10-K	001-32335	2/28/2013
10.29	First modification to Lease (11436 Sorrento Valley Road)		10-Q	001-32335	5/8/2013
10.30*	Credit Agreement, dated December 30, 2015		10-K	001-32335	2/29/2016
10.31	Halozyme Therapeutics, Inc. Executive Incentive Plan		DEF-14A	001-32335	3/23/2016
10.32	Loan and Security Agreement, dated June 7, 2016		10-Q	001-32335	8/9/2016
10.33	Consent, Release, and First Amendment to Loan and Security Agreement, dated December 21, 2016	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			

Exhibit Number	Exhibit Title	Filed Herewith	Incorporated by Reference		
			Form	File No.	Date Filed
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.

Exhibit 10.22

HALOZYME THERAPEUTICS, INC.

RESTRICTED STOCK UNITS AGREEMENT
UNDER THE
HALOZYME THERAPEUTICS, INC.
2011 STOCK PLAN

1. Terminology . Unless otherwise provided in this Award Agreement, capitalized terms used herein are defined in the Glossary at the end of this Award Agreement, the Notice, or the Plan.

2. Vesting . All of the Restricted Stock Units are nonvested and forfeitable as of the Grant Date. So long as your Service is continuous from the Grant Date through the applicable date upon which vesting is scheduled to occur, the Restricted Stock Units will become vested and nonforfeitable in accordance with the vesting schedule set forth in the Notice. Except for the circumstances, if any, described in the Notice or herein, none of the Restricted Stock Units will become vested and nonforfeitable after your Service ceases.

3. Termination of Employment or Service . Unless otherwise provided herein or in the Notice, if your Service with the Company or its successor ceases for any reason, all Restricted Stock Units that are not then vested and nonforfeitable will be forfeited to the Company immediately and automatically upon such cessation without payment of any consideration therefor and you will have no further right, title or interest in or to such Restricted Stock Units or the underlying shares of Stock. Notwithstanding the foregoing, however, if your Service terminates as a result of a Qualifying Termination, then all outstanding Restricted Stock Units that are not then vested and nonforfeitable shall, effective as of the date on which your Service terminates, become 100% vested and nonforfeitable.

4. Restrictions on Transfer . Neither this Award Agreement nor any of the Restricted Stock Units may be assigned, transferred, pledged, hypothecated or disposed of in any way, whether by operation of law or otherwise, and the Restricted Stock Units shall not be subject to execution, attachment or similar process. All rights with respect to this Award Agreement and the Restricted Stock Units shall be exercisable during your lifetime only by you or your guardian or legal representative.

5. Dividend Equivalent Payments . On each dividend payment date for each cash dividend (regular or extraordinary) on the Stock, the Company will credit your equity award account with dividend equivalents in the form of additional Restricted Stock Units. All such additional Restricted Stock Units shall be subject to the same vesting requirements applicable to the Restricted Stock Units in respect of which they were credited and shall be settled in accordance with, and at the time of, settlement of the vested Restricted Stock Units to which they are related. The number of Restricted Stock Units to be credited shall equal the quotient, rounded to such fraction as determined by the Committee, calculated by dividing (a) by (b), where "(a)" is the product of (i) the cash dividend payable per share of Stock, multiplied by (ii) the number of Restricted Stock Units credited to your account as of the record date, and "(b)" is the Fair Market Value of a share of Stock on the dividend payment date. If your vested Restricted Stock Units have been settled after the record date but prior to the dividend payment date, any Restricted Stock Units that would be credited pursuant to the preceding sentence shall be settled on or as soon as practicable after the dividend payment date. Nothing herein shall preclude the Committee from exercising its discretion under the Plan to determine whether to eliminate fractional units or credit fractional units to accounts, and the manner in which fractional units will be credited.

6. Settlement of Restricted Stock Units .

(a) Manner of Settlement . You are not required to make any monetary payment (other than applicable tax withholding, if required) as a condition to settlement of the Restricted Stock Units, the consideration for which shall be services rendered to the Company or for its benefit. The Company will issue to you, in settlement of your Restricted Stock Units and subject to the provisions of Section 7 below, the number of whole shares of Stock that equals the number of whole Restricted Stock Units that become vested, and such vested Restricted Stock Units will terminate and cease to be outstanding upon such issuance of the shares. Upon issuance of such shares, the Company will determine the form of delivery (e.g., a stock certificate or electronic entry evidencing such shares) and may deliver such shares on your behalf electronically to the Company's designated stock plan administrator or such other broker-dealer as the Company may choose at its sole discretion, within reason.

(b) Timing of Settlement . Your Restricted Stock Units will be settled by the Company, via the issuance of Stock as described herein, on the date that the Restricted Stock Units become vested and nonforfeitable. However, if a scheduled issuance date falls on a Saturday, Sunday or federal holiday, such issuance date shall instead fall on the next following day that the principal executive offices of the Company are open for business. In all cases, the issuance and delivery of shares under this Award Agreement is intended to comply with Treasury Regulation Section 1.409A-1(b)(4) and shall be construed and administered in such a manner. If you die after vesting but before settlement, your Restricted Stock Units shall be paid to your estate.

7. Tax Withholding .

(a) On or before the time you receive a distribution of the shares subject to your Restricted Stock Units, or at any time thereafter as requested by the Company, you may satisfy any federal, state, local or foreign tax withholding obligation relating to your Restricted Stock Units by any of the following means, which you must elect in advance by making an appropriate election via the account established under your name with E*TRADE Financial or such other brokerage firm selected by the Company (the " ***Brokerage Account*** "), or by such other method acceptable to the Committee if you do not have a Brokerage Account, at such time or times specified by the Committee: (i) tendering a cash payment that covers your tax withholding obligation by depositing such cash payment into your Brokerage Account or providing it directly to the Company on or before the date your Restricted Stock Units vest; or (ii) authorizing a sell-to-cover transaction, which involves the automatic sale by E*TRADE Financial or such other brokerage firm selected by the Company, through one or more block trades, of the number of Restricted Stock Units that vest with the value necessary to satisfy the tax withholding obligations, the assignment to the Company of the proceeds of the sale for subsequent payment to the relevant tax authorities, and the release or delivery to you of the remaining vested shares or if you are an executive officer of the Company at the time you receive such distribution of the shares subject to your Restricted Stock Units, authorizing a net share settlement transaction under which the Company will withhold from the shares otherwise issuable to you in connection with your Restricted Stock Units a number of shares the Fair Market Value of which is sufficient to cover the tax withholding obligation and issuing to you the remaining shares in settlement of your Restricted Stock Units on the date your Restricted Stock Units vest. The Committee shall have discretion to allow any other method of satisfying tax withholding obligations as it may determine to be adequate.

(b) Notwithstanding anything to the contrary set forth herein, the Company will satisfy the tax withholding obligations relating to your Restricted Stock Units through a sell-to-cover transaction or, in the case of an executive officer, a net share settlement transaction (each such transaction as described above) on the date your Restricted Stock Units vest in the following circumstances: (i) you do not make an election in a form acceptable to the Committee on or prior to the date your Restricted Stock Units vest regarding the method of satisfaction of your tax withholding obligation; or (ii) you timely elect to satisfy your tax withholding obligation via tendering a cash payment as provided above, but as of the date your Restricted Stock Units vest there are insufficient funds in your Brokerage Account or received by the Company to cover the tax withholding obligation.

(c) Any shares of Stock withheld to satisfy any tax withholding obligations shall not exceed the amount determined by the applicable minimum statutory withholding rates.

(d) Unless the tax withholding obligations of the Company and/or any Affiliate are satisfied, the Company shall have no obligation to deliver to you any Stock. In the event the Company's obligation to withhold arises prior to the delivery to you of Stock or it is determined after the delivery of Stock to you that the amount of the Company's withholding obligation was greater than the amount withheld by the Company, you agree to indemnify and hold the Company harmless from any failure by the Company to withhold the proper amount.

8. Adjustments for Corporate Transactions and Other Events .

(a) Stock Dividend, Stock Split and Reverse Stock Split . Upon a stock dividend of, or stock split or reverse stock split affecting, the Stock, the number of outstanding Restricted Stock Units shall, without further action of the Committee, be adjusted to reflect such event; provided, however, that any fractional Restricted Stock Units resulting from any such adjustment shall be eliminated. Adjustments under this paragraph will be made by the Committee, whose determination as to what adjustments, if any, will be made and the extent thereof will be final, binding and conclusive.

(b) Treatment on Change in Control . Notwithstanding anything herein to the contrary, in connection with a Change in Control, the Board shall determine in its sole discretion, and shall, to the extent applicable, ensure that the definitive documentation setting forth the terms of the Change in Control provides, that either:

(i) the Company shall continue to maintain in effect, or the Company's successor shall assume, the Plan, this Award Agreement and all Restricted Stock Units outstanding hereunder (together with all other outstanding equity incentive plans, award agreements and awards of the Company), and such Restricted Stock Units shall continue to remain outstanding, with the number and kind of shares or units associated with such Restricted Stock Units adjusted to reflect the Change in Control in accordance with the terms of the Plan, and otherwise in accordance with and subject to their terms and conditions (including, without limitation, with respect to vesting, exercise, forfeiture, repurchase and restrictive covenants) as in effect immediately prior to the Change in Control; or

(ii) the Restricted Stock Units shall be cancelled immediately prior to and contingent upon the consummation of such Change in Control in exchange for a cash payment to you in respect thereof in an amount calculated based on the value of the Restricted Stock Units at the time of such Change in Control as determined by the Board in its sole discretion, in all cases, assuming the Award was fully vested and exercisable and/or not subject to forfeiture, as applicable. For avoidance of doubt: In respect of any outstanding Restricted Stock Unit, you shall be eligible to receive an amount in cash equal to the per-share consideration received by sellers of the class of shares subject to such Restricted Stock Unit generally in the Change in Control.

Payments described in this Section 8(b) shall be made on, or as soon as administratively practicable following, the Change in Control.

9. Non-Guarantee of Employment or Service Relationship . Nothing in the Plan or this Award Agreement shall alter your employment status or other service relationship with the Company, nor be construed as a contract of employment or service relationship between the Company and you, or as a contractual right of you to continue in the employ of, or in a service relationship with, the Company for any period of time, or as a limitation of the right of the Company to discharge you at any time with or without cause or notice and whether or not such discharge results in the forfeiture of any nonvested and forfeitable Restricted Stock Units or any other adverse effect on your interests under the Plan.

10. Rights as Stockholder . You shall not have any of the rights of a stockholder with respect to any shares of Stock that may be issued in settlement of the Restricted Stock Units until such shares of Stock have been issued to you. No adjustment shall be made for dividends, distributions, or other rights for which the record date is prior to the date such shares are issued, except as provided in Section 5 of this Award Agreement with respect to dividend equivalent payments or as otherwise permitted under the Plan.

11. The Company's Rights . The existence of the Restricted Stock Units shall not affect in any way the right or power of the Company or its stockholders to make or authorize any or all adjustments, recapitalizations, reorganizations, or other changes in the Company's capital structure or its business, or any merger or consolidation of the Company, or any issue of bonds, debentures, preferred or other stocks with preference ahead of or convertible into, or otherwise affecting the Stock or the rights thereof, or the dissolution or liquidation of the Company, or any sale or transfer of all or any part of the Company's assets or business, or any other corporate act or proceeding, whether of a similar character or otherwise.

12. Restrictions on Issuance of Shares . The issuance of shares of Stock upon settlement of the Restricted Stock Units shall be subject to and in compliance with all applicable requirements of federal, state, or foreign law with respect to such securities. No shares of Stock may be issued hereunder if the issuance of such shares would constitute a violation of any applicable federal, state, or foreign securities laws or other law or regulations or the requirements of any stock exchange or market system upon which the Stock may then be listed. The inability of the Company to obtain from any regulatory body having jurisdiction the authority, if any, deemed by the Company's legal counsel to be necessary to the lawful issuance of any shares subject to the Restricted Stock Units shall relieve the Company of any liability in respect of the failure to issue such shares as to which such requisite authority shall not have been obtained. As a condition to the settlement of the Restricted Stock Units, the Company may require you to satisfy any qualifications that may be necessary or appropriate, to evidence compliance with any applicable law or regulation, and to make any representation or warranty with respect thereto as may be requested by the Company.

13. Notices . All notices and other communications made or given pursuant to this Award Agreement shall be given in writing and shall be deemed effectively given upon receipt or, in the case of notices delivered by the Company to you, five (5) days after deposit in the United States mail, postage prepaid, addressed to you at the last address you provided to the Company, or in the case of notices delivered to the Company by you, addressed to the Committee, care of the Company for the attention of its Secretary at its principal executive office or, in either case, if the receiving party consents in advance, transmitted and received via telecopy or via such other electronic transmission mechanism as may be available to the parties. Notwithstanding the foregoing, the Company may, in its sole discretion, decide to deliver any documents related to participation in the Plan and this award of Restricted Stock Units by electronic means or to request your consent to participate in the Plan or accept this award of Restricted Stock Units by electronic means. You hereby consent to receive such documents by electronic delivery and, if requested, to agree to participate in the Plan through an on-line or electronic system established and maintained by the Company or another third party designated by the Company.

14. Entire Agreement . This Award Agreement, together with the relevant Notice and the Plan, contain the entire agreement between the parties with respect to the Restricted Stock Units granted hereunder. Any oral or written agreements, representations, warranties, written inducements, or other communications made prior to the execution of this Award Agreement with respect to the Restricted Stock Units granted hereunder shall be void and ineffective for all purposes.

15. Amendment . This Award Agreement may be amended from time to time by the Committee in its discretion; provided , however , that this Award Agreement may not be modified in a manner that would have a materially adverse effect on the Restricted Stock Units as determined in the discretion of the Committee, except as provided in the Plan or in a written document signed by each of the parties hereto.

16. 409A Savings Clause . This Award Agreement and the Restricted Stock Units granted hereunder are intended to fit within the "short-term deferral" exemption from Section 409A of the Code as set forth in Treasury Regulation Section 1.409A-1(b)(4). In administering this Award Agreement, the Company shall interpret this Award Agreement in a manner consistent with such exemption. Notwithstanding the foregoing, if it is determined that the Restricted Stock Units fail to satisfy the requirements of the short-term deferral rule and are otherwise deferred compensation subject to Section 409A, and if you are a "Specified Employee" (within the meaning set forth Section 409A(a)(2)(B)(i) of the Code) as of the date of your separation from service (within the meaning of Treasury Regulation Section 1.409A-1(h)), then the issuance of any shares that would otherwise be made upon the date of the separation from service or within the first six (6) months thereafter will not be made on the originally scheduled date(s) and will instead be issued in a lump sum on the date that is six (6) months and one day after the date of the separation from service, but if and only if such delay in the issuance of the shares is necessary to avoid the imposition of additional taxation on you in respect of the shares under Section 409A of the Code. Each installment of shares that vests is intended to constitute a "separate payment" for purposes of Section 409A of the Code and Treasury Regulation Section 1.409A-2(b)(2). For purposes of Section 409A of the Code, the payment of dividend equivalents under Section 5 of this Award Agreement shall be construed as earnings and the time and form of payment of such dividend equivalents shall be treated separately from the time and form of payment of the underlying Restricted Stock Units.

17. [Reserved.]

18. No Obligation to Minimize Taxes . The Company has no duty or obligation to minimize the tax consequences to you of this award of Restricted Stock Units and shall not be liable to you for any adverse tax consequences to you arising in connection with this award. You are hereby advised to consult with your own personal tax, financial and/or legal advisors regarding the tax consequences of this award and by signing the Notice, you have agreed that you have done so or knowingly and voluntarily declined to do so.

19. Conformity with Plan . This Award Agreement is intended to conform in all respects with, and is subject to all applicable provisions of, the Plan. Inconsistencies between this Award Agreement and the Plan shall be resolved in accordance with the terms of the Plan. In the event of any ambiguity in this Award Agreement or any matters as to which this Award Agreement is silent, the Plan shall govern. A copy of the Plan is available on the Company's intranet or upon written request to the Committee.

20. No Funding . This Award Agreement constitutes an unfunded and unsecured promise by the Company to issue shares of Stock in the future in accordance with its terms. You have the status of a general unsecured creditor of the Company as a result of receiving the grant of Restricted Stock Units.

21. Effect on Other Employee Benefit Plans . The value of the Restricted Stock Units subject to this Award Agreement shall not be included as compensation, earnings, salaries, or other similar terms used when calculating your benefits under any employee benefit plan sponsored by the Company or any Affiliate, except as such plan otherwise expressly provides. The Company expressly reserves its rights to amend, modify, or terminate any of the Company's or any Affiliate's employee benefit plans.

22. Governing Law . The validity, construction, and effect of this Award Agreement, and of any determinations or decisions made by the Committee relating to this Award Agreement, and the rights of any and all persons having or claiming to have any interest under this Award Agreement, shall be determined exclusively in accordance with the laws of the State of Delaware, without regard to its provisions concerning the applicability of laws of other jurisdictions. Any suit with respect hereto will be brought in the federal or state courts in the district which includes the city or town in which the Company's principal executive office is located, and you hereby agree and submit to the personal jurisdiction and venue thereof.

23. Headings . The headings in this Award Agreement are for reference purposes only and shall not affect the meaning or interpretation of this Award Agreement.

24. Electronic Delivery of Documents . By your signing the Notice, you (i) consent to the electronic delivery of this Award Agreement, all information with respect to the Plan and the Restricted Stock Units, and any reports of the Company provided generally to the Company's stockholders; (ii) acknowledge that you may receive from the Company a paper copy of any documents delivered electronically at no cost to you by contacting the Company by telephone or in writing; (iii) further acknowledge that you may revoke your consent to the electronic delivery of documents at any time by notifying the Company of such revoked consent by telephone, postal service or electronic mail; and (iv) further acknowledge that you understand that you are not required to consent to electronic delivery of documents.

25. No Future Entitlement . By your signing the Notice, you acknowledge and agree that: (i) the grant of a restricted stock unit award is a one-time benefit which does not create any contractual or other right to receive future grants of restricted stock units, or compensation in lieu of restricted stock units, even if restricted stock units have been granted repeatedly in the past; (ii) all determinations with respect to any such future grants and the terms thereof will be at the sole discretion of the Committee; (iii) the value of the restricted stock units is an extraordinary item of compensation which is outside the scope of your employment contract, if any; (iv) the value of the restricted stock units is not part of normal or expected compensation or salary for any purpose, including, but not limited to, calculating any termination, severance, resignation, redundancy, end of service payments or similar payments, or bonuses, long-service awards, pension or retirement benefits; (v) the vesting of the restricted stock units ceases upon termination of Service with the Company or transfer of employment from the Company, or other cessation of eligibility for any reason, except as may otherwise be explicitly provided in this Award Agreement; (vi) the Company does not guarantee any future value of the restricted stock units; and (vii) no claim or entitlement to compensation or damages arises if the restricted stock units decrease or do not increase in value and you irrevocably release the Company from any such claim that does arise.

26. Personal Data . For purposes of the implementation, administration and management of the restricted stock units or the effectuation of any acquisition, equity or debt financing, joint venture, merger, reorganization, consolidation, recapitalization, business combination, liquidation, dissolution, share exchange, sale of stock, sale of material assets or other similar corporate transaction involving the Company (a " ***Corporate Transaction*** "), you consent, by execution of the Notice, to the collection, receipt, use, retention and transfer, in electronic or other form, of your personal data by and among the Company and its third party vendors or any potential party to a potential Corporate Transaction. You understand that personal data (including but not limited to, name, home address, telephone number, employee number, employment status, social security number, tax identification number, date of birth, nationality, job and payroll location, data for tax withholding purposes and shares awarded, cancelled, vested and unvested) may be transferred to third parties assisting in the implementation, administration and management of the restricted stock units or the effectuation of a Corporate Transaction and you expressly authorize such transfer as well as the retention, use, and the subsequent transfer of the data by the recipient(s). You understand that these recipients may be located in your country or elsewhere, and that the recipient's country may have different data privacy laws and protections than your country. You understand that data will be held only as long as is necessary to implement, administer and manage the restricted stock units or effect a Corporate Transaction. You understand that you may, at any time, request a list with the names and addresses of any potential recipients of the personal data, view data, request additional information about the storage and processing of data, require any necessary amendments to data or refuse or withdraw the consents herein, in any case without cost, by contacting in writing the Company's Secretary. You understand, however, that refusing or withdrawing your consent may affect your ability to accept a restricted stock unit award.

27. Counterparts . The Notice may be executed in counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument.

{ *Glossary begins on next page* }

GLOSSARY

(a) " ***Affiliate*** " means any entity, whether now or hereafter existing, which controls, is controlled by, or is under common control with Halozyme Therapeutics, Inc. (including but not limited to joint ventures, limited liability companies, and partnerships). For this purpose, the term "control" (including the term "controlled by") means the possession, direct or indirect, of the power to direct or cause the direction of the management and policies of the relevant entity, whether through the ownership of voting securities, by contract or otherwise.

(b) " ***Award Agreement*** " means this document, as amended from time to time, together with the Plan which is incorporated herein by reference.

(c) " ***Cause*** " means, solely for purposes of this Award Agreement, a determination made in good faith by the Committee, which determination will be conclusive, that you have:

(i) been convicted of, or plead nolo contendere to, a felony or crime involving moral turpitude;

(ii) committed fraud with respect to, or misappropriated any funds or property of the Participating Company Group, or any customer or vendor;

(iii) illegally used or illegally distributed controlled substances;

(vi) willfully violated any material written rule, regulation, procedure or policy of the Participating Company applicable to you that results in demonstrable harm to the Company, as determined by the Committee in good faith; or

(v) materially breached any employment, nondisclosure, nonsolicitation or other similar material agreement executed by you for the benefit of the Company that results in demonstrable harm to the Company, as determined by the Committee in good faith.

(d) " ***Code*** " means the Internal Revenue Code of 1986, as amended, and the Treasury regulations and other guidance promulgated thereunder.

(e) " ***Committee*** " means the Compensation Committee or other committee of the Board of Directors of the Company duly appointed to administer the Plan and having such powers as shall be specified by the Board of Directors.

(f) " ***Company*** " means Halozyme Therapeutics, Inc. and its Affiliates, except where the context otherwise requires. For purposes of determining whether a Change in Control (as defined in the Plan) has occurred, Company shall mean only Halozyme Therapeutics, Inc.

(g) " ***Fair Market Value*** " has the meaning set forth in the Plan. The Plan generally defines Fair Market Value to mean the closing price per share of Stock on the relevant date on the principal exchange or market on which the Stock is then listed or admitted to trading or, if no sale is reported for that date, the last preceding business day on which a sale was reported.

(h) " ***Good Reason*** " means, solely for purposes of this Award Agreement, the occurrence of any of the following events without your consent:

(i) any diminution in your annual base salary or annual target bonus opportunity (expressed as a percentage of annual base salary); or

(ii) any requirement by the Participating Company that you physically relocate from your current work location to another work location 30 or more miles away.

(i) " ***Grant Date*** " means the effective date of a grant of Restricted Stock Units made to you as set forth in the relevant Notice.

(j) " ***Notice*** " means the statement, letter or other written notification provided to you by the Company setting forth the terms of a grant of Restricted Stock Units made to you.

(k) " ***Plan*** " means the Halozyme Therapeutics, Inc. 2011 Stock Incentive Plan, as amended from time to time.

(l) " ***Qualifying Termination*** " means the occurrence of any of the following events within two years following the occurrence of a Change in Control:

(i) termination by the Participating Company of your Service for any reason other than Cause; or

(ii) your voluntary resignation for Good Reason; or

(iii) a termination of your Service due to your death or Disability.

(m) " ***Restricted Stock Unit*** " means the Company's commitment to issue one share of Stock at a future date, subject to the terms of the Award Agreement and the Plan.

(n) " ***Service*** " means your employment, service as a non-executive director, or other service relationship with the Company and its Affiliates. Your Service will be considered to have ceased with the Company and its Affiliates if, immediately after a sale, merger, or other corporate transaction, the trade, business, or entity with which you are employed or otherwise have a service relationship is not Halozyme Therapeutics, Inc. or its successor or an Affiliate of Halozyme Therapeutics, Inc. or its successor.

(o) " ***Stock*** " means the common stock, US$0.001 par value per share, of Halozyme Therapeutics, Inc., as adjusted from time to time in accordance with Section 4.2 of the Plan.

(p) " ***You*** " or " ***Your*** " means the recipient of the Restricted Stock Units as reflected on the applicable Notice. Whenever the word "you" or "your" is used in any provision of this Award Agreement under circumstances where the provision should logically be construed, as determined by the Committee, to apply to the estate, personal representative, or beneficiary to whom the Restricted Stock Units may be transferred by will or by the laws of descent and distribution, the words "you" and "your" shall be deemed to include such person.

{ *End of Agreement* }

Exhibit 10.33

CONSENT, RELEASE, AND FIRST AMENDMENT TO
LOAN AND SECURITY AGREEMENT

This CONSENT, RELEASE, AND FIRST AMENDMENT to Loan and Security Agreement (this " **Amendment** ") is entered into as of December 21, 2016, by and among **OXFORD FINANCE LLC** ("Oxford") as collateral agent (in such capacity, the " **Collateral Agent** "), the Lenders listed on Schedule 1.1 of the Loan Agreement or otherwise a party thereto from time to time including, without limitation, Oxford in its capacity as a Lender, and **SILICON VALLEY BANK** (in such capacity, each a "Lender" and collectively, 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 Loan and Security Agreement dated as of June 7, 2016 (as the same may from time to time be amended, modified, supplemented or restated, the " **Loan Agreement** "). Lenders have extended credit to Borrower for the purposes permitted in the Loan Agreement.

B. Collateral Agent and Lenders have previously consented to the formation of Halozyme Switzerland GmbH by Borrower's Swiss counsel, which is intended to be a wholly-owned, direct Subsidiary of Halozyme, under the laws of Switzerland (the " **Swiss Subsidiary** "), pursuant to that certain Consent Agreement dated as of September 23, 2016, among Collateral Agent, Lenders and Borrower (the " **Prior Consent** ").

C. Borrower intends to (i) cause Borrower's Swiss counsel to transfer all of the issued and outstanding capital stock, membership units or other securities in the Swiss Subsidiary to Halozyme (the " **Swiss Equity Transfer** "), (ii) transfer all of the issued and outstanding capital stock, membership units or other securities owned or held of record by Halozyme in the Bermuda Subsidiary (the " **Applicable Assets** ") to the Swiss Subsidiary (the " **Bermuda Equity Transfer** "), (iii) make Investments in the Swiss Subsidiary from time to time hereafter, and (iv) make a one-time Investment in the Bermuda Subsidiary prior to consummating the Bermuda Equity Transfer.

D. Borrower has requested that Collateral Agent and Lenders (i) consent to the Swiss Equity Transfer and the Bermuda Equity Transfer, (ii) release Collateral Agent's Lien on the Applicable Assets, (iii) amend the Loan Agreement to permit periodic Investments in the Swiss Subsidiary and a one-time Investment in the Bermuda Subsidiary prior to consummating the Bermuda Equity Transfer, and (iv) make certain other revisions to the Loan Agreement as more fully set forth herein.

E. Collateral Agent and Lenders have agreed to so consent to the transactions set forth above, release Collateral Agent's Lien on the Applicable Assets, and 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 11 below, and so long as Borrower pledges, assigns and grants a security interest in the Shares of the Swiss Subsidiary to Collateral Agent pursuant to, and to the extent required by, the terms of the Loan Agreement (as amended by this Amendment) and that certain Quota Pledge Agreement,

substantially in the form attached hereto as Exhibit A (the " **Pledge Agreement** "), Collateral Agent and Lenders hereby consent to (a) the Swiss Equity Transfer, and (b) the Bermuda Equity Transfer. Collateral Agent and Lenders hereby agree that the transactions described in clauses (a) and (b) above shall not constitute an "Event of Default" under the Loan Agreement.

3. Release . Subject to the terms of Section 11 below and effective only upon the consummation of the Bermuda Equity Transfer, 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 Bermuda Equity Transfer, 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 of Security Interest . Except to the extent the Applicable Assets are released pursuant to Section 3 above, Borrower hereby reaffirms its grant to Collateral Agent of a continuing security interest in the Collateral.

5. Amendment to Loan Agreement .

5.1 Section 6.12 (Creation/Acquisition of Subsidiaries) . Section 6.12 is hereby amended by the deleting the last sentence thereof and replacing it with the following:

Notwithstanding the foregoing, none of Swiss Subsidiary, Bermuda Subsidiary, or LLC shall be required to become a co-Borrower hereunder or guarantee the Obligations of Borrower under the Loan Documents and none of the foregoing entities shall be required to grant any Liens on any of its assets in favor of Collateral Agent or Lenders.

5.2 Section 7.1 (**Dispositions**). Section 7.1(i) is hereby amended by deleting it in its entirety and replacing it with the following:

(i) an exclusive license of certain of Borrower's and the Bermuda Subsidiary's Intellectual Property to the Bermuda Subsidiary and the Swiss Subsidiary, respectively, pursuant to the Bermuda License and, for the avoidance of doubt, any Transfer of Borrower's and the Bermuda Subsidiary's Intellectual Property to the Bermuda Subsidiary and the Swiss Subsidiary, respectively, pursuant to the R&D Agreement;

5.3 Section 7.8 (**Transactions with Affiliates**). Section 7.8(d) is hereby amended to delete the reference to "between Borrower and Bermuda Subsidiary" therein and replace it with "among Borrower, the Swiss Subsidiary and/or the Bermuda Subsidiary".

5.4 Section 7.15 (**Swiss Subsidiary Assets**). The following new Section 7.15 is hereby added to Section 7:

7.15 Swiss Subsidiary Assets . Permit the Swiss Subsidiary to hold (a) any assets in an aggregate amount not to exceed Six Million Dollars ($6,000,000) (other than the issued and outstanding capital stock, membership units or other securities of the Bermuda Subsidiary, but including any cash and Cash Equivalents) at any time; or (b) more than twenty percent (20.00%) of the total consolidated cash and Cash Equivalents of Borrower and its Subsidiaries at any time; provided , however, for purposes of the foregoing calculation in clause (b), any Cash or Cash Equivalents held by the Swiss Subsidiary for no longer than ten (10) days for the sole purpose of making payments pursuant to the R&D Agreement with the Bermuda Subsidiary shall be excluded from such calculation.

5.5 Section 13.1 (Definitions) . The following definitions are hereby added to Section 13.1 in their appropriate alphabetical order:

" **First Amendment Date** " means December 21, 2016.

" **Swiss Share Pledge Documents** " means that certain Quota Pledge Agreement by Halozyme and the Swiss Subsidiary in favor of Collateral Agent, for the ratable benefit of the Lenders, in form and substance reasonably satisfactory to Collateral Agent and the Lenders, and any other documents, instruments, and undertakings necessary and reasonably required by Collateral Agent and the Lenders to be executed in connection therewith.

" **Swiss Subsidiary** " is Halozyme Switzerland GmbH, a wholly-owned Subsidiary of Halozyme formed under the laws of Switzerland.

5.6 Section 13.1(Definitions) . The following terms and their definitions in Section 13.1 are hereby amended by deleting them in their entirety and replacing them with the following:

" **Bermuda License** " means, collectively, (a) that certain Technology License Agreement dated on or about June 10, 2014, by and between Halozyme and the Bermuda Subsidiary, and (b) that certain Technology License Agreement dated on or about December 21, 2016, by and among Halozyme, the Swiss Subsidiary, and the Bermuda Subsidiary.

" **Bermuda Subsidiary** " is Halozyme Holdings, Ltd., a wholly-owned Subsidiary of the Borrower formed under the laws of Bermuda.

" **Loan Documents** " are, collectively, this Agreement, the Swiss Share Pledge Documents, the Perfection Certificates, each Compliance Certificate, each Disbursement Letter, each Loan Payment/Advance Request Form and any Bank Services Agreement, the Post-Closing Letter, each Control Agreement, each landlord and bailee agreement, any subordination agreements, any note, or notes or guaranties executed by Borrower or any other Person, and any other present or future agreement entered into by Borrower, any Guarantor or any other Person for the benefit of the Lenders and Collateral Agent in connection with this Agreement or the Original Agreement; all as amended, restated, or otherwise modified.

" **R&D Agreement** " means, collectively, (a) that certain Research and Development Services Agreement dated on or about June 10, 2014, by and between Halozyme and the Bermuda Subsidiary, and (b) that certain Research and Development Services Agreement dated on or about December 21, 2016, by and among Halozyme, the Swiss Subsidiary, and the Bermuda Subsidiary.

5.7 Section 13.1 (**Definitions**). Clauses (d) and (m) of the definition of "Permitted Investments" in Section 13.1 are amended in their entirety and replaced with the following:

(d) (i) Investments of Parent in Halozyme, (ii) Investments of Borrower in any domestic Subsidiary which has joined this Agreement as a co-borrower hereunder; provided that Borrower and such Subsidiary shall have complied in all respects with Section 6.12 and taken all action necessary to perfect Collateral Agent's Lien in the Collateral of such Subsidiary, (iii) so long as no Event of Default has occurred and is continuing, Investments by the Swiss Subsidiary in the Bermuda Subsidiary, provided that in each case, the proceeds of such Investments shall be used by the Bermuda Subsidiary solely to make payments to Halozyme under the R&D Agreement within ten (10) days of the making of each such Investment, (iv) so long as no Event of Default has occurred and is continuing, Investments by Halozyme in the Swiss Subsidiary, provided that the proceeds of such Investments shall be invested by the Swiss Subsidiary in the Bermuda Subsidiary in accordance with clause (iii) of this clause (d) of the definition of Permitted Investments, (v) so long as no Event of Default has occurred and is continuing, Investments in the Swiss Subsidiary not to exceed Six Million Dollars ($6,000,000.00) in the aggregate in any fiscal quarter (excluding any Investments described in clause (iv) of this clause (d) of the definition of Permitted Investments), and (vi) a one-time Investment by

Halozyme in the Bermuda Subsidiary not to exceed Twenty-Five Million Dollars ($25,000,000.00) occurring on or about the First Amendment Date, provided that all of the proceeds of any Investment under this clause (vi) shall be used solely to make payments to Halozyme under the R&D Agreement by no later than January 31, 2017;

(m) Deposit Accounts and Securities Accounts of (i) the Bermuda Subsidiary, so long as the deposits held in such accounts comply with the terms of Section 7.12, and (ii) the Swiss Subsidiary so long as the deposits held in such accounts comply with the terms of Section 7.15.

5.8 Section 13.1 (**Definitions**). The following term and its respective definition in Section 13.1 are hereby deleted in their entirety:

" **Bermuda Share Pledge Documents** "

6. Limitation of Amendments.

6.1 The amendments set forth in Section 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 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. Integration . This Amendment and the Loan Documents represent the entire agreement about this subject matter and supersede prior negotiations or agreements. All prior agreements, understandings, representations, warranties, and negotiations between the parties about the subject matter of this Amendment and the Loan Documents merge into this Amendment and the Loan Documents.

9. Prior Agreement . Except as expressly provided for in this Amendment, the Loan Documents are hereby ratified and reaffirmed and shall remain in full force and effect. This Amendment is not a novation and the terms and conditions of this Amendment shall be in addition to and supplemental to all terms and conditions set forth in the Loan Documents. In the event of any conflict or inconsistency between this Amendment and the terms of such documents, the terms of this Amendment shall be controlling, but such document shall not otherwise be affected or the rights therein impaired.

10. 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.

11. Effectiveness. This Amendment shall be deemed effective upon (a) the due execution and delivery to Collateral Agent and Lenders of this Amendment and the Swiss Share Pledge Documents; (b) the delivery to Collateral Agent of the certificates (if any) for the Shares of the Swiss Subsidiary required to be pledged under the Loan Agreement (as amended by this Amendment), accompanied by an instrument of assignment duly executed in blank by Halozyme for each such certificate (if any), (c) the due execution and delivery to Collateral Agent of a Collateral Assignment, in substantially the form attached hereto as Exhibit B , for each of (i) the R&D Agreement, (ii) the Bermuda License, (iii) that certain General and Administrative Services Agreement dated on or about December 21, 2016, by and between Halozyme and the Bermuda Subsidiary, and (iv) that certain General and Administrative Services Agreement dated on or about December 21, 2016, by and between Halozyme and the Swiss Subsidiary; (d) evidence that the Swiss Equity Transfer has occurred, and (e) payment of Collateral Agent's and Lenders' legal fees and expenses in connection with the negotiation and preparation of this Amendment.

12. Covenant. Borrower shall deliver to Collateral Agent on or before January 31, 2017 (or such later date as Collateral Agent and Required Lenders may agree to in their sole discretion), the certified excerpt from the commercial register (*Handelsregister*) relating to the Swiss Subsidiary, evidencing that Halozyme is the sole owner of all Quotas, the foregoing to be in form and substance reasonably satisfactory to Lenders' Swiss counsel. Notwithstanding anything to the contrary contained in the Loan Documents, any breach of the covenant set forth in this Section 12 shall be an immediate Event of Default and not subject to any cure period, including without limitation the cure period set forth in Section 8.2(b) of the Loan Agreement.

13. Governing Law. This Amendment and the rights and obligations of the parties hereto shall be governed by and construed in accordance with the laws of the State of California.

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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/ Mark Davis
Name: Mark Davis
Title: Vice President of Finance

LENDERS:

OXFORD FINANCE LLC

By: /s/ Mark Davis
Name: Mark Davis
Title: Vice President of Finance

SILICON VALLEY BANK

By: /s/ Anthony Flores
Name: Anthony Flores
Title: Director

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

EXHIBIT A

Quota Pledge Agreement

[see attached]

EXHIBIT B

Collateral Assignment

[see attached]

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%
Halozyme Switzerland GmbH, a wholly owned subsidiary of Halozyme, Inc.	Switzerland	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-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.,

(2) 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.,

(3) 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.,

(4) Registration Statement (Form S-8 No. 333-174013) pertaining to the Halozyme Therapeutics, Inc. 2011 Stock Plan of Halozyme Therapeutics, Inc.,

(5) Registration Statement (Form S-8 No. 333-188997) pertaining to the Halozyme Therapeutics, Inc. Amended and Restated 2011 Stock Plan of Halozyme Therapeutics, Inc.;

(6) Registration Statement (Form S-8 No. 333-206279) pertaining to the Halozyme Therapeutics, Inc. 2011 Stock Plan of Halozyme Therapeutics, Inc., and

(7) Registration Statement (Form S-8 No. 333-211244) pertaining to Halozyme Therapeutics, Inc. 2011 Stock Plan of Halozyme Therapeutics, Inc.

of our reports dated February 28, 2017 , 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, 2016 .

/s/ Ernst & Young LLP

San Diego, California
February 28, 2017

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 28, 2017

/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 28, 2017

/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, 2016 , 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 28, 2017

/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, 2016 , 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 28, 2017

/s/ Laurie D. Stelzer

Laurie D. Stelzer

Senior Vice President and Chief Financial Officer