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

FORM 10-K

(Mark One)

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

For the fiscal year ended December 31, 2019

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 No. 001-38800

Harpoon Therapeutics, Inc.
(Exact name of registrant as specified in its charter)

Delaware	**47-3458693**
(State or other jurisdiction of incorporation or organization)	**(I.R.S. Employer Identification Number)**

131 Oyster Point Blvd, Suite 300
South San Francisco, CA 94080
(Address of principal executive offices)
Registrant's telephone number, including area code: (650) 443-7400

SECURITIES REGISTERED PURSUANT TO SECTION 12(b) OF THE ACT:

Title of Each Class	Trading Symbol(s)	Name of Each Exchange On Which Registered
Common Stock, par value $0.0001 per share	**HARP**	**NASDAQ Global Select Market**

SECURITIES REGISTERED PURSUANT TO SECTION 12(g) OF THE ACT: NONE

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes ☐ No ☒
Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes ☐ No ☒
Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☐ No ☒
Indicate by check mark whether the registrant has submitted electronically, every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§ 232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes ☒ No ☐

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

Large accelerated filer	☐	Accelerated filer	☐
Non-accelerated filer	☒	Smaller reporting company	☒
Emerging growth company	☒		

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

Indicate by check mark whether the Registrant 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, based on the closing price of the shares of common stock on The Nasdaq Stock Market on June 28, 2019, was $125,747,037.

The number of outstanding shares of the Registrant's common stock, par value $0.0001, as of February 29, 2020 was 24,944,089.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the definitive proxy statement, or the Proxy Statement, for the 2020 Annual Meeting of Stockholders of the registrant are incorporated by reference into Part III of this Annual Report on Form 10-K. The Proxy Statement will be filed with the Securities and Exchange Commission within 120 days of the registrant's fiscal year ended December 31, 2019

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SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This Annual Report on Form 10-K contains forward-looking statements that involve risks and uncertainties. All statements other than statements of historical facts contained in this Annual Report on Form 10-K are forward-looking statements. In some cases, you can identify forward-looking statements by words such as “anticipate,” “believe,” “contemplate,” “continue,” “could,” “estimate,” “expect,” “intend,” “may,” “plan,” “potential,” “predict,” “project,” “seek,” “should,” “target,” “will” or “would,” or the negative of these words or other comparable terminology. These forward-looking statements include, but are not limited to, statements about:

- the timing of the initiation, progress and expected results of our preclinical studies, clinical trials and our research and development programs;
- our ability to advance product candidates into, and successfully complete, preclinical studies and clinical trials;
- the timing or likelihood of regulatory filings and approvals;
- the commercialization of our product candidates, if approved;
- the pricing, coverage and reimbursement of our product candidates, if approved;
- the implementation of our business model, strategic plans for our business and product candidates;
- the scope of protection we are able to establish and maintain for intellectual property rights covering our technology platforms, including TriTAC and ProTriTAC, and product candidates, including the projected terms of patent protection;
- our ability to enter into strategic arrangements and/or collaborations and the potential benefits of such arrangements;
- our ability to retain the continued service of our key executives and to identify, hire and retain additional qualified professionals;
- our estimates regarding the market opportunity for our product candidates;
- our estimates regarding expenses, capital requirements and needs for additional financing and our ability to obtain additional capital;
- our financial performance; and
- developments relating to our competitors and our industry, including competing therapies.

These forward-looking statements are based on our management’s current expectations, estimates, forecasts and projections about our business and the industry in which we operate, and management’s beliefs and assumptions and are not guarantees of future performance or development. These forward-looking statements are subject to a number of risks, uncertainties and assumptions, including those described under “Risk Factors” and elsewhere in this Annual Report on Form 10-K. Moreover, we operate in a very competitive and rapidly changing environment, and new risks emerge from time to time. It is not possible for our management to predict all risks, nor can we assess the impact of all factors on our business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in any forward-looking statements we may make. In light of these risks, uncertainties and assumptions, the forward-looking events and circumstances discussed in this annual report may not occur and actual results could differ materially and adversely from those anticipated or implied in the forward-looking statements.

In addition, statements that “we believe” and similar statements reflect our beliefs and opinions on the relevant subject. These statements are based on information available to us as of the date of this report. While we believe that information provides a reasonable basis for these statements, that information may be limited or incomplete. Our statements should not be read to indicate that we have conducted an exhaustive inquiry into, or review of, all relevant information.

You should not rely upon forward-looking statements as predictions of future events. Although we believe that the expectations reflected in the forward-looking statements are reasonable, we cannot guarantee that the future results, levels of activity, performance, or events and circumstances reflected in the forward-looking statements will be achieved or occur. We undertake no obligation to update publicly any forward-looking statements for any reason after the date of this report to conform these statements to new information, actual results or changes in our expectations, except as required by law.

Unless the context otherwise requires, references in this Annual Report on Form 10-K to the “company,” “Harpoon,” “we,” “us” and “our” refer to Harpoon Therapeutics, Inc.“TriTAC” is a registered trademark and “Harpoon Therapeutics,” “Harpoon,” the Harpoon logo and ProTriTAC are trademarks, all owned by Harpoon Therapeutics, Inc. This report also contains trademarks and trade names that are property of their respective owners.

PART I

Item 1. Business

Overview

We are a clinical-stage immunotherapy company developing a novel class of T cell engagers that harness the power of the body's immune system to treat patients suffering from cancer and other diseases. T cell engagers are engineered proteins that direct a patient's own T cells to kill target cells that express specific proteins, or antigens, carried by the target cells. Using our proprietary Tri-specific T cell Activating Construct, or TriTAC, platform, we are developing a pipeline of novel T cell engagers, or TriTACs, initially focused on the treatment of solid tumors and hematologic malignancies. Since commencing operations in 2015, we have created four TriTAC product candidates, two of which are in the clinic and two of which we expect to begin clinical development in 2020.

A summary of our four TriTAC product candidates is as follows:

- HPN424, currently in the dose-escalation portion of a Phase 1 clinical trial for the treatment of metastatic castration-resistant prostate cancer, or mCRPC. We expect to present interim dose-escalation data at the American Society of Clinical Oncology Meeting, also known as ASCO, at the end of May 2020.
- HPN536, currently in the dose-escalation portion of a Phase 1/2a clinical trial for the treatment of ovarian and pancreatic cancers and other mesothelin-, or MSLN-, expressing solid tumors. We anticipate providing interim data from this trial in the second half of 2020.
- HPN217, for which in November 2019 we submitted an IND to the U.S. Food and Drug Administration, or FDA, for the treatment of multiple myeloma, as well as entered into a Development and Option Agreement with AbbVie Biotechnology Ltd., or AbbVie. Under our agreement with AbbVie, we have already received an upfront payment of $30 million and anticipate receiving a cash milestone payment of up to $50 million upon dosing the first patient in the Phase 1/2 clinical trial for HPN217 within a specified time period, which we expect to occur in the first half of 2020. Additionally, we are eligible to receive future payments totaling up to $430 million upon AbbVie's exercise of an exclusive license option and achievement of certain development, regulatory, and commercial milestones, in addition to receipt of royalties on commercial sales. We are responsible for conducting the Phase 1/2 clinical trial of HPN217 under our agreement with AbbVie.
- HPN328, currently in preclinical development to initially treat small cell lung cancer, or SCLC, a DLL3-expressing tumor. We anticipate filing an IND for HPN328 by mid-year 2020 and initiating a Phase 1/2a clinical trial in the second half of 2020.

Our TriTACs are designed to advance the therapeutic potential of T cell engagers, a therapeutic approach with an established and proven mechanism of action. The first bi-specific T cell engager, or BiTE, to be approved by the FDA was Amgen's Blincyto. Blincyto was approved in 2014 as a monotherapy for the treatment of acute lymphoblastic leukemia. Since then, other BiTEs have shown promising therapeutic potential in clinical trials. We developed our proprietary TriTAC platform to incorporate the strengths of BiTEs and improve upon their critical shortcomings, such as a short half-life. We believe our TriTAC platform offers the following features for the discovery and development of novel immunotherapies to treat a wide array of diseases, including cancer:

- ***Active at Low Levels of Target Expression.*** We designed TriTACs to be active at low levels of antigen expression where other treatment modalities lose efficacy. In our preclinical studies, TriTACs did not require high levels of target antigen expression to engage T cells to kill disease cells.
- ***MHC Independence.*** We designed TriTACs to specifically direct T cells to kill target cells independent of major histocompatibility complex, or MHC expression. Tumor cells frequently acquire mutations that change the MHC molecule or reduce the level of MHC expressed on their surfaces, thus making the tumor cells less susceptible to being killed by either endogenous T cells or engineered T cells that require MHC recognition. We believe that because TriTACs do not require a T cell clone with specific T cell receptor or MHC recognition to kill tumor cells, they will be able to generate greater and more durable therapeutic responses than MHC dependent approaches.
- ***Extended Half-Life and Stability.*** We designed TriTACs to be stable in the bloodstream and to have a long-serum half-life in order to achieve efficacy without requiring the continuous IV administration that is a limiting requirement of other T cell engagers, such as BiTEs.
- ***Small Size and Tissue Penetration.*** TriTACs are small in size, and we believe this is critical for their efficient penetration of, and diffusion within, solid tumors.
- ***Modularity.*** The TriTAC structure is modular and its antigen binding domain can easily be switched out to enable the rapid discovery and development of new TriTAC product candidates across a wide variety of targets.

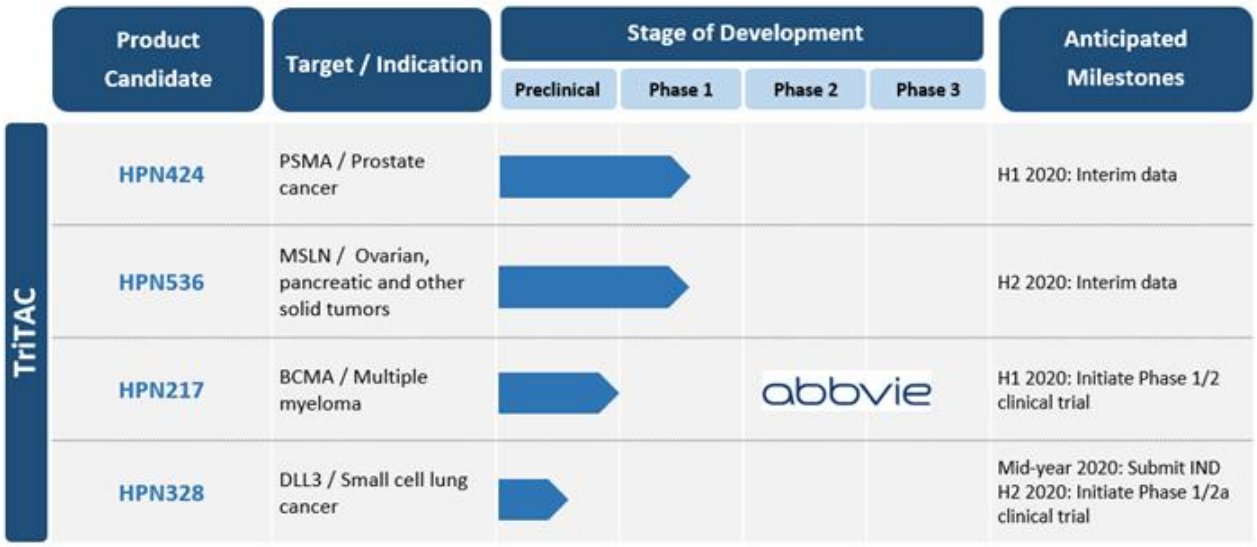
- ***Safety Design Elements.*** We designed TriTACs to enable T cell engagement while minimizing off-target toxicity and the potential for CRS, which is a potentially lethal reaction of the body to the hypersecretion of inflammatory cytokines.
- ***Conventional Manufacturing.*** TriTACs are "off-the-shelf" therapies, the manufacturing of which is significantly less complex than that of personalized or cell-based therapies.

We seek to selectively collaborate with leading biopharmaceutical companies to leverage our technology platforms. For example, in November 2019 we entered into a Development and Option Agreement with AbbVie, pursuant to which we granted to AbbVie an option to license worldwide exclusive rights to HPN217. We will be responsible for developing HPN217 through a Phase 1/2 clinical trial. Upon exercise of the option, which AbbVie may exercise following delivery by the Company of a specified data package arising from the Phase 1/2 trial, AbbVie would be responsible for all future clinical development, manufacturing and commercialization activities. The Development and Option Agreement represents a potential transaction value of up to $510 million in upfront, option and milestone payments, of which $30 million has been received to date, plus royalties on potential global commercial sales.

In addition, in November 2019, we expanded our existing collaboration with AbbVie by entering into an Amended and Restated Discovery Collaboration and License Agreement, or the Restated Collaboration Agreement, which agreement amends and restates the Discovery Collaboration and License Agreement we had entered into with AbbVie in October 2017, or the Original Collaboration Agreement. The expansion of the collaboration grants to AbbVie the right to select two additional targets and an option to select up to four further targets, in addition to the two targets previously selected by AbbVie under the Collaboration Agreement. Consistent with the Collaboration Agreement, we and AbbVie will conduct certain initial research and discovery activities for each designated target, after which AbbVie will be solely responsible for further development and commercialization efforts. We have received a total of $37 million of upfront payments under this collaboration to date. In addition, we are eligible to receive up to an aggregate of $2.4 billion in potential development, regulatory and commercial milestone payments under the Restated Collaboration Agreement, plus royalties on global commercial sales.

Our Pipeline

We are leveraging our proprietary TriTAC and ProTriTAC platforms to discover and develop product candidates to treat cancer and other diseases. The following table summarizes key information about our product candidates to date, all of which were developed using our TriTAC platform. We own the intellectual property rights to both our TriTAC and ProTriTAC platforms and the underlying critical components of our product candidates.



Our Strategy

Our strategy is to harness innovations in immunotherapy and protein engineering to rapidly advance our novel TriTAC product candidates through clinical development, regulatory approval and commercialization, with an initial focus on cancer. This strategy encompasses the following key elements:

- ***Advance our TriTAC product candidates directed at clinically validated targets from discovery through clinical development and regulatory approval.*** We have developed a robust and efficient internal research effort that is focused on advancing a portfolio of therapeutic product candidates from initial discovery through clinical development, and ultimately, to treat patients suffering from cancer. We have discovered and advanced four product candidates to treat solid and hematologic malignancies, two of which are currently in the clinic. We expect to advance our third and fourth programs into the clinic in 2020. These programs are directed against targets that are both clinically validated and which are ideally suited for our TriTAC platform due to limited expression on healthy tissue.
- ***Expand the pipeline of oncology candidates for our TriTAC technology platform and develop other novel platforms.*** Our current research efforts are focused on evaluating potential new product candidates based on our TriTAC technology. In addition, we are actively exploring new technologies, which may improve the safety of certain therapeutic approaches or expand our ability to address therapeutic targets with increased specificity to diseased tissues.
- ***Leverage our novel technology platforms to target a broad range of disease.*** Our TriTAC and other platforms may have the ability to address disease targets outside of oncology. We intend to evaluate opportunities to expand our research to other therapeutic areas, such as autoimmune diseases and anti-infectives either internally or through strategic partnerships.
- ***Selectively collaborate with leading biopharmaceutical companies to leverage our platforms, expand our portfolio, advance our product candidates and maximize their commercial potential.*** While we intend to retain significant ownership of our current pipeline product candidates, we recognize the benefits of collaborations. We seek collaborations that can:

    1) Broaden the reach of our technology platforms to other novel targets in oncology or other areas that are not a focus for our company. For example, we entered into a collaboration with AbbVie in October 2017, which was expanded in November 2019, that widens the utility for our TriTAC platform by developing candidates against novel soluble T cell receptor, or TCR, and antibody targets for the treatment of cancer.

    2) Provide us with strategic access to clinical and commercial capabilities, particularly in geographic areas we are unlikely to pursue on our own. For example, multiple myeloma is an indication with several therapeutic approaches competing both clinically and commercially. AbbVie has an extensive presence in hematologic malignancies, including multiple myeloma, which can benefit us as we develop a clinical plan that best positions HPN217 for commercial success.

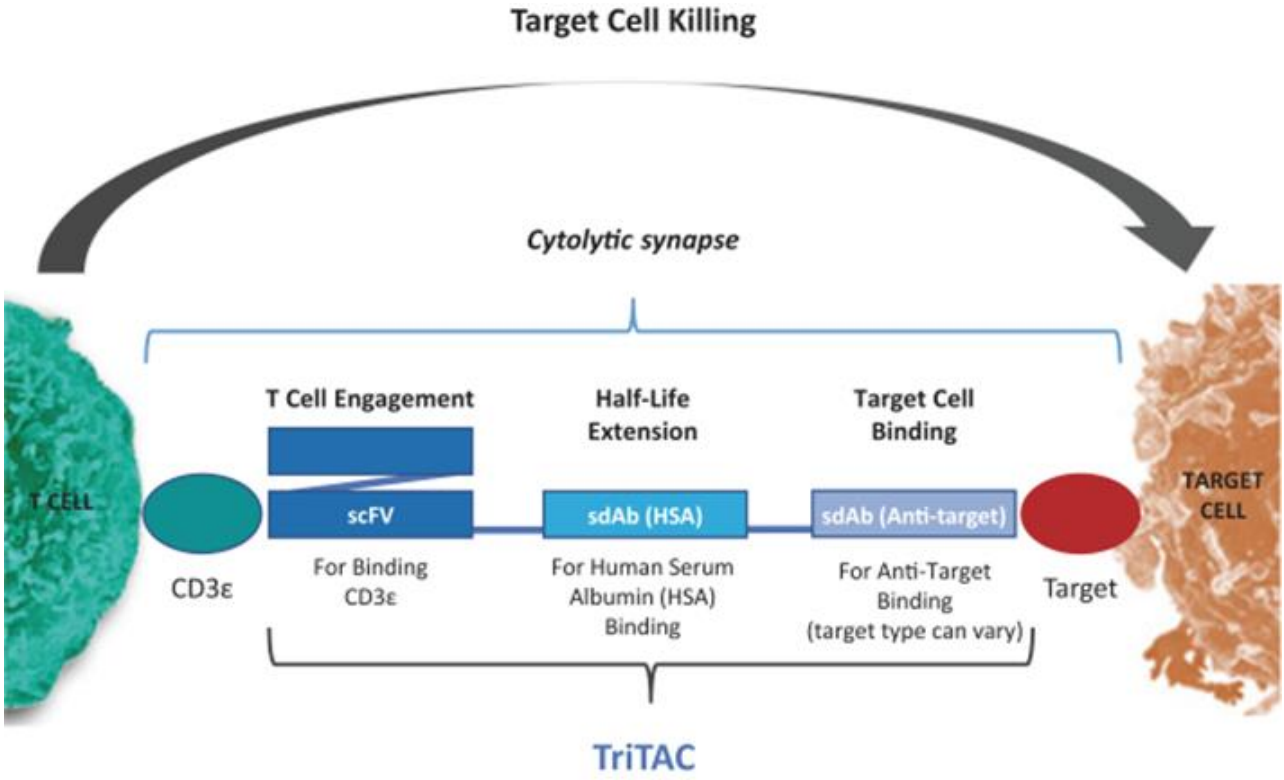
    3) Expedite commercial presence and distribution of our products, if approved. Utilizing an existing commercial marketing and distribution organization may be more cost effective in certain indications and geographies we are pursuing, rather than building our own commercial infrastructure.

Our TriTAC Platform

Our proprietary TriTAC platform offers the potential to develop drugs that could dramatically change the way in which we combat a variety of diseases. It is well accepted that the immune system can be harnessed to eradicate and prevent the proliferation of cancer cells. Recent successes using immunologic approaches have revealed methods of modulating a cancer patient's immune system to battle the growth and spread of tumors. In most cases, T cells have been central to this approach, and the pathways to unleash the tumor-killing properties of T cells have resulted in multiple recent drug approvals.

We believe our TriTACs represent the evolution of a validated cancer-killing modality that engages T cells to kill tumors. The first approved T cell engager, a BiTE developed by Amgen and marketed as Blincyto, was approved in 2014 for the treatment of acute lymphoblastic leukemia. With our TriTAC platform, we set out to design a T cell engager that incorporates the strengths of BiTEs (including small size and activity at low levels of antigen expression) and improves upon their critical shortcomings (including short half-life and limited stability).

We designed our TriTAC product candidates with three primary components: a CD3 binding domain for T cell engagement, a proprietary half-life extension domain and an antigen-bonding domain. TriTACs consist of a single-chain polypeptide designed to bind to a cancer surface antigen, human serum albumin and the CD3 epsilon subunit of the TCR. Tumor-targeting and albumin-binding are achieved by single domain antibodies, or sdAbs, while CD3 is bound by a single-chain variable fragment, or scFv. When TriTACs simultaneously bind cell surface antigens and T cells, they induce the formation of a cytolytic synapse that mimics the natural interaction between TCRs and MHCs. This interaction activates T cells to kill target cells, as demonstrated in the figure below.



Our TriTAC Product Candidates

HPN424: PSMA-targeting TriTAC

We are developing our lead TriTAC product candidate, HPN424, for the treatment of prostate cancer. HPN424 targets PSMA, a protein for which expression is largely restricted to both normal and malignant prostate-derived cells. HPN424 provides a differentiated mechanism of action compared to the current standard of care, as this targeted approach is designed to safely engage and direct T cells to kill cancer cells. In April 2019, data presented at the American Society of Clinical Oncology demonstrated the encouraging clinical responses of Amgen's BiTE targeting PSMA in mCRPC patients. However, this product candidate, AMG212, requires continuous IV infusion, which could limit its adoption and accessibility.

In January 2019, we announced preliminary data from seven patients who had been enrolled in our Phase 1 clinical trial of HPN424, our lead TriTAC product candidate, as of December 31, 2018, which preliminary data supports the proposed mechanism of action of HPN424. We expect to present interim dose-escalation data at ASCO, at the end of May 2020, and expect to initiate an expansion cohort in 2020.

Market Opportunity

The Surveillance, Epidemiology and End Results Program of the National Cancer Institute, or SEER, estimates that there will be over 175,000 new diagnoses and over 32,000 deaths as a result of prostate cancer in the United States in 2019. Prostate cancer is expected to have the third-highest cancer incidence rate in 2019 and is the second leading cause of male cancer death in the United States.

While the five-year survival rate of local and regional prostate cancer is nearly 98%, more aggressive forms of the disease, of which approximately 23% are initially diagnosed, have a five-year survival rate of approximately 30%. While these more aggressive forms of prostate cancer can initially be treated, nearly all of these patients experience a recurrence in tumor growth that results in the subsequent development of mCRPC. Nearly all prostate cancer-specific deaths occur after patients develop mCRPC, for which the median overall survival period is only 13 months. Later-generation anti-androgen drugs such as Johnson & Johnson's Zytiga and Pfizer's/Astellas' Xtandi have widely become the standard of care and generated combined global sales of over $5 billion in 2017. While these therapies have addressed a portion of the population, there remains a significant need for treatments that offer a novel mechanism of action with the potential to modify or cure the disease.

Clinical Development Plan

In August 2018, we initiated a Phase 1, multicenter, open-label dose escalation and dose expansion trial of the safety, tolerability and pharmacokinetics of HPN424 in mCRPC patients. Eligible patients must have mCRPC, have received at least two prior treatment regiments for mCRPC and have evidence of disease progression on the most recent systemic treatment regimen. The dose escalation phase is currently using a 3+3 design with dose cohorts that enroll three to six patients per cohort. The trial is designed to determine the maximum tolerated dose and a recommended Phase 2 dose. Our primary objective is to assess safety and tolerability at increasing dose levels. Our secondary objectives include pharmacokinetics and pharmacodynamics, as well as preliminary potential anti-tumor activity and biomarker data. We continue to enroll patients in the dose-escalation portion of the clinical trial. We expect to present interim dose-escalation data at ASCO, at the end of May 2020. In addition, we plan to initiate an expansion cohort in 2020.

Phase 1 Preliminary Results

In January 2019, we announced preliminary data from seven patients in our ongoing dose escalation study, treated at doses ranging from 1.3 to 24 ng/kg, as of December 31, 2018, which supports the proposed mechanism of action of HPN424. All seven patients were treated previously with a second-generation anti-androgen therapy. From those seven patients, we noted preliminary pharmacokinetic analysis supports weekly dosing, T cell engagement via transient and dose-dependent increases in peripheral cytokines and chemokines and a reduction in circulating tumor cells, or CTC, in several of the evaluable patients. Adverse events were consistent with the expected mechanism of action, with three patients reporting grade 2 rigors or fevers that were manageable. One patient from the fourth cohort experienced what was initially categorized as a grade 3 CRS event (rigors and hypotension), which resolved within eight hours of dosing. This patient was re-administered HPN424 consistent with protocol guidelines. The patient experienced no further reactions. No dose limiting toxicities had been observed, with four dose levels tested. In August 2019, we provided an update on our HPN424 trial that focused on our experience in managing cytokine-related events. Consistent with the TriTAC mechanism of action, we had observed adverse events associated with T cell activation and cytokine induction, which prompted us to explore the use of dexamethasone as a premedication to limit potential adverse events. We had found that the addition of weekly dexamethasone premedication, tapered over several weeks, had successfully limited adverse events. Several patients had completed the scheduled taper and had successfully continued treatment with HPN424 in the absence of dexamethasone.

HPN536: MSLN-Targeting TriTAC

We are developing HPN536 for the treatment of ovarian cancer and other MSLN-expressing tumors, which include mesothelioma, pancreatic carcinoma, non-small cell lung carcinoma, or NSCLC, and triple-negative breast cancer, or TNBC, among others. HPN536 targets MSLN, a cell-surface protein whose normal expression is largely restricted to mesothelial cell layers lining certain organs. MSLN is attractive for target-based therapeutics because it is expressed on a wide variety of tumor cells but has limited expression in normal tissue. Early signs of clinical efficacy generated by other treatment modalities have validated MSLN as an attractive tumor target, but therapies with improved efficacy are required to treat MSLN-expressing tumors. In 2018, we completed an IND-enabling, multi-dose GLP toxicology study in animals. HPN536, which has been observed to bind to cynomolgus monkey MSLN with comparable affinities as human MSLN, delivered clear histological evidence of target engagement. In April 2019, we initiated a Phase 1/2a, multicenter, open-label dose escalation and dose expansion trial of the safety, tolerability and pharmacokinetics of HPN536 and are actively recruiting patients with ovarian and pancreatic cancer in the dose-escalation portion of the trial. We expect to present interim data from this trial in the second half of 2020.

Market Opportunity

MSLN-expressing tumors include ovarian cancer, NSCLC, pancreatic carcinoma, mesothelioma and TNBC, among others. While MSLN is found in approximately 30% of all cancers, these specific cancers have particularly high levels of MSLN expression. The following table shows the MSLN expression level of, and the number of patients diagnosed in the United States in 2019 with, each of these cancers:

Cancer Type	New Patients Diagnosed in the United States		MSLN Expression Level (%)
Ovarian Cancer	22,500		60-65
Non-Small Cell Lung Cancer	200,000	***	60-65 *
Pancreatic Carcinoma	57,000		80-85
Mesothelioma	2,600		85-90
Triple Negative Breast Cancer	40,000	**	34-42

* Represents MSLN expression levels across all lung cancer types.
** Calculated as 15% of SEER-estimated breast cancer incidence.
*** Calculated as 80-85% of SEER-estimated lung cancer incidence

Ovarian cancer is the fifth leading cause of cancer-related death among women in the United States and is the deadliest of gynecologic cancers with more than 70% of patients diagnosed with an advanced stage and over 14,000 patients dying from the disease each year. According to SEER, the five-year survival rate for women diagnosed with ovarian cancer is approximately 47%. NSCLC is the most common type of lung cancer, estimated to comprise 80-85% of all lung cancer diagnoses. The five-year survival rate for late-stage NSCLC is about 10%. Pancreatic cancer is one of the most fatal cancers in the world. In 2016, the seven major markets (the United States, France, Germany, Italy, Spain, the United Kingdom and Japan) saw 149,780 new cases of pancreatic cancer and in 2019, there were approximately 57,000 new cases in the United States. SEER estimates that fewer than 9% of patients diagnosed with pancreatic cancer survive five years. Mesothelioma is a rare and aggressive cancer that affects the lining or membrane that covers and protects certain organs in the body. Effective treatment options for patients with mesothelioma are very limited. TNBC is referred to as “triple-negative” because it is ER-, PR- and HER2-, and is unlikely respond to hormonal or HER2-targeted therapies. TNBC accounts for 10-20% of all breast cancers and is more aggressive and likely to recur compared to receptor-positive breast cancers. The five-year survival rate for TNBC is 77% as compared to 93% for other types of breast cancers.

Clinical Development Plan

In April 2019, we initiated a Phase 1/2a, multicenter, open-label dose escalation and dose expansion trial of the safety, tolerability and pharmacokinetics of HPN536 and are actively recruiting patients with ovarian and pancreatic cancer. The study consists of two phases, an initial dose escalation phase with ovarian and pancreatic cancer patients, followed by an expansion phase of up to three additional parallel cohorts of 20 patients each with ovarian, pancreatic and mesothelioma cancer. We are collecting data to evaluate the safety, tolerability, pharmacokinetics, pharmacodynamics and preliminary clinical activity of HPN536. The dose escalation phase is designed to determine the maximum tolerated dose and a recommended Phase 2 dose. Once a recommended Phase 2 dose is determined, we expect to initiate the dose expansion phase with three parallel 20-patient cohorts, conducted according to a Simon 2-stage design. The cohorts will be indication-specific, and we expect to enroll patients with ovarian cancer, mesothelioma and pancreatic carcinoma. We expect to present interim data from the dose escalation portion of this trial in the second half of 2020.

HPN217: BCMA-Targeting TriTAC

We are developing HPN217 for the treatment of multiple myeloma. HPN217 targets BCMA, a clinically validated target. BCMA is a tumor necrosis factor receptor super family member and is a receptor protein expressed on nearly all multiple myeloma cells. Early data from CAR-T and ADC have clinically validated the target.

In November 2019, we entered into an exclusive worldwide Development and Option Agreement with AbbVie for HPN217. Under the terms of the agreement, we granted to AbbVie an option to license worldwide exclusive rights to HPN217. We will be responsible for agreed-upon development activities of HPN217 through an initial Phase 1/2 clinical trial. Upon exercise of the option, AbbVie will be responsible for all future clinical development, manufacturing and commercialization activities. AbbVie may exercise its license option at any time during a period commencing on the effective date of the agreement and expiring after a specified period following delivery by us of a specified data package arising from the first Phase 1/2 trial for the HPN217 product. AbbVie paid an upfront payment of $30 million and we expect to receive a development milestone payment of up to $50 million upon dosing the first patient in the Phase 1/2 clinical trial within a specified time period, which we expect to occur in the first half of 2020. If AbbVie exercises its option, AbbVie will pay us an option exercise fee of $200 million, and potential future payments of $230 million for the achievement of certain development, regulatory and commercial sales milestones for HPN217 Product along with high single-digit to very low double-digit royalties on commercial sales.

Market Opportunity

Multiple myeloma is a type of blood cancer formed by the accumulation of malignant plasma cells in the bone marrow, crowding out normal plasma cells that play an important role in the immune system. Multiple myeloma is the second most prevalent blood cancer after Non-Hodgkin's lymphoma. There are approximately 229,000 people living with myeloma worldwide, with 114,000 new cases diagnosed and 87,000 deaths each year. The American Cancer Society estimates that approximately 32,000 new cases will be diagnosed and approximately 13,000 deaths are expected to occur from multiple myeloma in the United States in 2020. Despite advances in the treatment of multiple myeloma over the past decade, we believe there remains a significant unmet need as the five-year survival rate is only approximately 50%.

HPN328: DLL3-Targeting TriTAC

We are developing HPN328 for the treatment of SCLC. DLL3 is a protein highly expressed in a majority of SCLC tumors and cancer stem cells, but not expressed in normal tissue. This selective expression makes DLL3 an attractive drug target for T cell engagers. We are currently conducting IND-enabling studies and expect to file an IND for HPN328 by mid-year 2020 and to initiate a Phase 1/2a clinical trial of HPN328 in the second half of 2020.

Market Opportunity

Approximately 30,000 patients are diagnosed with SCLC annually in the United States, representing 10-15% of lung cancer diagnoses. The five-year relative survival rate for patients with Stage I, II, III and IV SCLC is approximately 31%, 19%, 8% and 2%, respectively. The recent approval of Opdivo, a T cell-targeting checkpoint inhibitor developed by BMS, supports immunotherapy as a new treatment alternative for SCLC. We believe there is still a significant unmet need remains for new therapies for these patients.

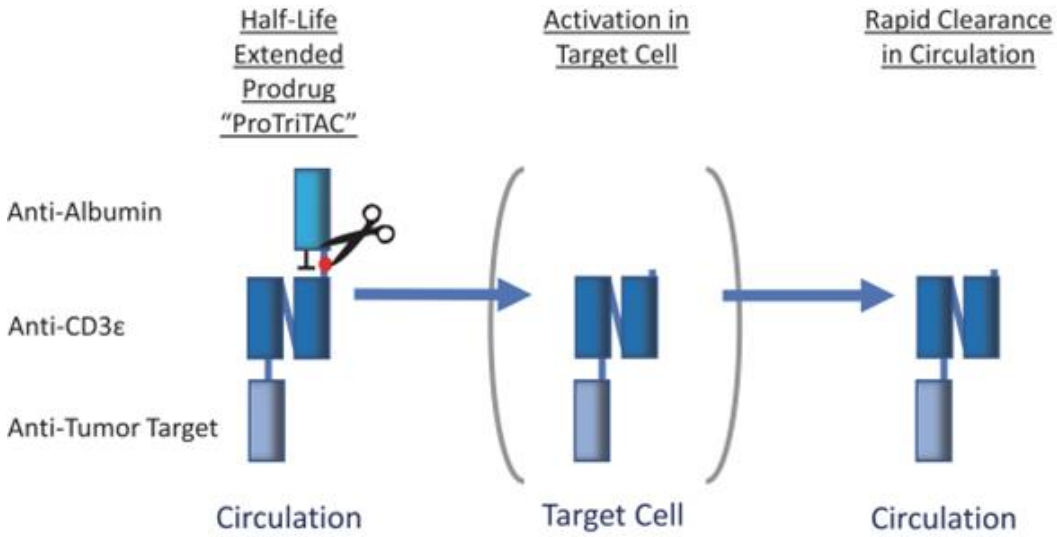
Preclinical Data

In October 2019, we presented data on HPN328 for the treatment of small cell lung cancer at the AACR-NCI-EORTC International Conference on Molecular Targets and Cancer Therapeutics. HPN328 was well-tolerated in cynomolgus monkeys at 1 and 10 mg/kg and pharmacokinetic data support the potential for once-weekly dosing.

Our ProTriTAC Platform

ProTriTAC—An Expansion of TriTAC's Capabilities

In order to expand the universe of addressable targets and indications, we are actively developing our proprietary ProTriTAC platform. Our ProTriTAC platform applies a prodrug concept to create a therapeutic T cell engager that remains inactive until it reaches the tumor. ProTriTACs therefore have the potential for additional tumor specificity and enhanced safety profiles because they are designed to have limited interaction with their molecular targets in healthy tissue, allowing us to target tumor-associated antigens that may be more broadly expressed. When a ProTriTAC penetrates a tumor, tumor-associated proteases cleave off the blocking domain of the ProTriTAC, thereby enabling the engagement of T cells to subsequently kill tumor cells. This activation process also diminishes the half-life of the resulting T cell engager so active molecules that leave the tumor are rapidly eliminated from circulation without causing off-tissue side effects.



Collaboration and License Agreements

Development and Option Agreement with AbbVie Biotechnology

On November 20, 2019, we entered into a Development and Option Agreement with AbbVie in connection with our HPN217 program, which targets B cell maturation antigen, or BCMA. Pursuant to such Agreement, we granted to AbbVie an option to a worldwide, exclusive license under our patents and know-how applicable to the HPN217 program to develop, manufacture and commercialize products arising from the HPN217 program targeting BCMA, or HPN217 Products. Under the Development and Option Agreement, we will file an IND for HPN217 and conduct development activities pursuant to a mutually-agreed development plan, including conducting a Phase 1/2 clinical trial of HPN217, in order for AbbVie to determine whether it wishes to exercise its option to take a worldwide, exclusive license to such HPN217 program.

Under the Development and Option Agreement, AbbVie may exercise its license option at any time during a period commencing on the effective date of the agreement, and expiring after a specified period, following delivery by us of a specified data package arising from the first Phase 1/2 trial for the HPN217 Product. Following AbbVie's exercise of its option, and except for completion of certain development activities by us under the development plan, AbbVie will be solely responsible, at its cost, for the development, manufacture and commercialization of HPN217 Product. AbbVie is required to use commercially reasonable efforts to develop and obtain regulatory approval for one HPN217 product, for at least one indication, for use in each Major Market (as defined in the Development and Option Agreement).

AbbVie paid an upfront payment of $30 million, and we expect to receive a development milestone payment of up to $50 million, upon dosing the first patient in the Phase 1/2 clinical trial within a specified time period, which we expect to occur in the first half of 2020. If AbbVie exercises its option, AbbVie will pay us an option exercise fee of $200 million. Following option exercise, AbbVie will be required to make further payments to us of up to $230 million in the aggregate for the achievement of specified development, regulatory and commercial sales milestones for HPN217 Products. We will also receive tiered royalties on net sales by AbbVie, its affiliates and sublicensees of HPN217 Products at percentages ranging from the high single digits to the very low double digits, subject to specified offsets and reductions. Royalties will be payable under the Development and Option Agreement on a product-by-product and country-by-country basis commencing on the date of first commercial sale of each HPN217 Product, and ending on the later of expiration of all valid claims of specified licensed patents in such country, expiration of regulatory exclusivity in such country, or ten years following first commercial sale of such HPN217 Product in such country.

The Development and Option Agreement will terminate upon the date of the expiration of all AbbVie's royalty payment obligations in all countries, or upon expiration of the license option period and the failure of AbbVie to exercise its license option. The Development and Option Agreement may be terminated by either party immediately for the insolvency of the other party or on 90 days' written notice for an uncured material breach of the Development and Option Agreement by the other party. AbbVie may also terminate the Development and Option Agreement in its entirety or on a country-by-country basis for any reason on 90 days' written notice to us.

Amended and Restated Discovery Collaboration Agreement with AbbVie Biotechnology

On November 20, 2019, we entered into an Amended and Restated Discovery Collaboration and License Agreement, or the Restated Collaboration Agreement, with AbbVie, which agreement amends and restates the Discovery Collaboration and License Agreement entered into between us and AbbVie, dated October 10, 2017 and amended April 3, 2019, or the Original Collaboration Agreement. Pursuant to the Original Collaboration Agreement, we granted to AbbVie worldwide exclusive rights to develop and commercialize products that incorporate our proprietary TriTAC technology together with soluble TCRs provided by AbbVie that bind to targets accepted by the parties. Under the terms of the Original Collaboration Agreement, AbbVie had the right to designate up to two targets for development of TriTAC constructs, which it selected in 2017 and 2019, respectively. Pursuant to the Restated Collaboration Agreement, the worldwide, exclusive license granted to AbbVie under the Original Collaboration Agreement to develop and commercialize products that incorporate our proprietary Tri-specific T-cell Activating Construct, or TriTAC, platform technology together with soluble T cell receptors, or TCRs, provided by AbbVie has been expanded to cover products that incorporate antibodies provided by AbbVie or by us. The expansion of the collaboration also allows AbbVie to designate up to six additional targets, selected during a specified period following the effective date, to be the subject of activities under the collaboration. During a period of up to four years following the date of AbbVie's designation of each target for the products, and confirmation of target availability, we and AbbVie will conduct certain research and discovery activities under a mutually agreed discovery and research plan in connection with the creation and evaluation of constructs comprising our proprietary TriTAC technology, in conjunction with the soluble TCR or antibody sequences directed at the agreed upon targets of interest. We may not, including through any third party, develop or commercialize any competing product that binds to any of the included targets. As was the case under the Original Collaboration Agreement, following the discovery phase, AbbVie will be solely responsible, at its cost, for the development, manufacture and commercialization of the products that arise from the activities under the discovery plan. AbbVie is required to use commercially reasonable efforts to develop and commercialize one such product directed to each target for which the discovery activities were completed in each Major Market (as defined in the Restated Collaboration Agreement).

In addition to the upfront payment of $17 million already paid under the Original Collaboration Agreement, under the Restated Collaboration Agreement, we received an upfront payment of $20 million for AbbVie's right to select two additional targets and an option to select up to four further targets. AbbVie will be required to make payments to us, upon target selection, of $10 million for each target, up to four further targets selected by AbbVie. For each of the up to eight targets selected, we will receive up to $300 million in the aggregate for the achievement of specified development, regulatory and commercial sales milestones for licensed products indicated for human therapeutic or prophylactic use, totaling up to $2.4 billion in the aggregate, if such licensed products are successfully progressed against all-included targets and indications. We will also be eligible to receive tiered royalties on net sales by AbbVie, its affiliates and sublicensees of licensed products at percentages in the mid-single digits, subject to specified offsets and reductions. Royalties will be payable under the Restated Collaboration Agreement on a product-by-product and country-by-country basis commencing on the date of first commercial sale of each product, and ending on the later of expiration of all valid claims of specified licensed patents in such country, expiration of regulatory exclusivity in such country or ten years following first commercial sale of such product in such country. If licensed products are developed and commercialized for diagnostic or veterinary use, or certain screening or monitoring uses, the parties have agreed to negotiate an appropriate reduction in the economic terms applicable to such non-therapeutic and prophylactic applications.

The Restated Collaboration Agreement will terminate upon the date of the expiration of all AbbVie's royalty payment obligations in all countries. The Restated Collaboration Agreement may be terminated by either party immediately for the insolvency of the other party or on 90 days' written notice for an uncured material breach of such agreement by the other party. AbbVie may also terminate the Restated Collaboration Agreement in its entirety or on a target-by-target or country-by-country basis for any reason on 30 days' written notice to the Company. In addition, AbbVie may terminate the Restated Collaboration Agreement immediately in its entirety or on a target-by-target basis if AbbVie considers in good faith that there has been a failure of the discovery or development efforts with respect to such target, or that further development or commercialization of products directed to such target is not advisable as a result of a serious safety issue.

License Agreement with Werewolf Therapeutics, Inc.

In March 2018, we entered into an assignment and license agreement, or the Werewolf Agreement, with Werewolf Therapeutics, Inc., or Werewolf, a portfolio company of MPM Capital, Inc., a holder of more than 5% of our capital stock. Dr. Luke Evnin, the Chairman of our Board, is also the Chairman of the board of directors of Werewolf. Under the Werewolf Agreement, we assigned certain patents that relate to certain inducible polypeptides (and binding moiety for conditional activation of certain polypeptides) to Werewolf and granted to Werewolf a non-exclusive, royalty-bearing, sublicenseable license under certain other patents owned by us and relating to certain proteins, to make, use and commercialize products that are covered by such patents in the field of molecules comprising a certain polypeptide. Werewolf assigned certain patents to us relating to adoptive cell therapies and binding moieties for conditional activation of immunoglobulin and non-immunoglobulin molecules. Under the Werewolf Agreement, Werewolf paid us an upfront fee of $0.5 million. If Werewolf commercializes products covered by the licensed patents, then beginning on the first sale of such products, Werewolf will be obligated to pay to us a royalty on net sales of such products by Werewolf, its affiliates and licensees at a percentage in the low single digits, subject to an obligation to make a minimum annual royalty payment at an amount in the low hundreds of thousands of dollars.

In December 2019, we and Werewolf amended the Werewolf Agreement by entering into a Second Amended and Restated Assignment and License Agreement, or the Amended Werewolf Agreement, to include the grant to Werewolf of an exclusive, royalty-bearing, sublicensable license under certain patents owned by us and relating to certain proteins, to make, use, and commercialize products that are covered by such patents in the field of molecules comprising a certain protein. This license provides Werewolf with certain rights to enforce and defend these licensed patents. If Werewolf commercializes products covered by these licensed patents, then beginning on the first sale of such products, Werewolf will be obligated to pay to us a royalty on net sales of such products by Werewolf, its affiliates and licensees at a percentage in the low single digits, and this royalty cannot be added to any other royalty owed to us under the Amended Werewolf Agreement. In addition, each party granted to the other a non-exclusive, royalty-free, sublicensable, perpetual license under certain other patents relating to a certain binding domain of a certain protein, to make, use, and commercialize products that are covered by such patents in a field defined by a certain type of molecule for each party. The Amended Werewolf Agreement also includes a mutual release of claims regarding certain patent prosecution matters.

Royalties on net sales will be recognized when the underlying sales occur. No royalty revenue was recognized under the Werewolf Agreement as of December 31, 2019.

Asset Transfer Agreement with Maverick Therapeutics, Inc.

In December 2016, we entered into an asset transfer agreement, or the Asset Transfer Agreement, with Maverick Therapeutics, Inc., or Maverick. Under the Asset Transfer Agreement, we transferred one provisional patent application (and any subsequently filed patent applications that claim priority to the provisional patent application) and certain know-how to Maverick solely for use in connection with a specific type of conditionally active T cell engagers having an activation mechanism that we believe is not used by the T cell engagers that are incorporated in the products that we are developing (such permitted use by Maverick, the Maverick Field), and Maverick assumed liabilities from us relating to this transferred intellectual property and other transferred assets. Maverick granted back to us a royalty-free, non-exclusive, sublicenseable license under this transferred intellectual property for use in all fields outside of the Maverick Field, which include all fields in which we are developing products. We further granted Maverick royalty-free, exclusive and non-exclusive licenses to certain other patents that we own, in all cases solely for use in the Maverick Field. In consideration for our transfer and license of such intellectual property, Maverick issued a promissory note to us in the amount of $6.8 million, which we collected in full in January 2017, and all of its outstanding capital stock, which we then spun-off to our stockholders (such distribution, the "Distribution"). The Asset Transfer Agreement includes a covenant not to compete, which provides that we will not directly or indirectly research, develop, manufacture or commercialize products in the Maverick Field until December 2020. The Asset Transfer Agreement is not terminable and all rights transferred or licensed by a party to the other party under the Asset Transfer Agreement are irrevocable.

We are involved in significant litigation with Maverick regarding a dispute relating to our ProTriTAC program that arose under the Asset Transfer Agreement. For more information, see "Item 3. Legal Proceedings" elsewhere in this Form 10-K.

Agreements with AGC Biologics, Inc.

In October 2015, we entered into the AGC License Agreement with AGC, pursuant to which AGC granted us a non-exclusive, worldwide license under its proprietary Chinese hamster EF-1 protein expression technology, or the CHEF1 Technology, which is used in connection with the manufacturing process for HPN424, HPN536 and our other current preclinical product candidates, or collectively, the Products, for use in connection with our development of the Products, including our clinical trials. Subsequently, in July 2016, we entered into a development and manufacturing services agreement with AGC, or the Manufacturing Agreement, under which AGC conducts cGMP manufacturing of the Products utilizing the CHEF1 Technology. Under the terms of the AGC License Agreement, we have an option, exercisable for each Product, to be granted a non-exclusive license to use the CHEF1 Technology in connection with the commercialization of such Product for human therapeutics or diagnostics. If we exercise such option during a specified period, we will make a one-time upfront payment in the mid tens of thousands of dollars to AGC (solely in connection with the first Product) for such commercial license for the first Product, or if we exercise such commercial option after the expiration of such period, our commercial license will be subject to the payment of a higher option exercise fee.

We retain the right, at any time, to manufacture the Products using the CHEF1 Technology ourselves, or through an affiliate or third-party manufacturer for development purposes, and subject to exercising our commercial option, for commercialization purposes.

Under the terms of our agreements with AGC, so long as AGC is the exclusive manufacturer of our Products, we will not owe AGC any milestone or royalty payments to AGC under the AGC License Agreement for the use of the CHEF1 Technology. However, if AGC is no longer our exclusive manufacturer for the Products, and we still use the CHEF1 Technology, we will owe AGC specified development and regulatory milestones of up to $350,000 per Product, and a royalty on net sales of Products of less than 1%, payable for the longer of ten years from first commercial sale of such Product, or the expiration of the patent rights in the CHEF1 Technology covering such Product in the relevant country, subject to a reduction in the event of no patent coverage. If we are not using AGC as our exclusive manufacturer of a given Product, such that we owe a royalty to AGC, we have an option, exercisable at any time prior to the end of the first royalty period in which a royalty is due for such Product, to buy out our royalty obligations in lieu of an ongoing royalty payment, by making a one-time payment to AGC in a dollar amount in the mid-single digit millions.

The Manufacturing Agreement can be terminated by either party in the event of an uncured material breach by the other party, or in the event of insolvency. We have the right to terminate the Manufacturing Agreement or any portion of the services at any time on 60 business days' notice, and AGC has the right to terminate the agreement on 60 business days' notice if it reasonably concludes that the services are not scientifically or technically feasible despite its commercially reasonable efforts and after we and AGC attempt to resolve the scientific or technical problem in good faith. The AGC License Agreement expires on the later of the expiration of all licensed patents or our use of trade secrets relating to the CHEF1 Technology or manufacture of Products. The AGC License Agreement terminates immediately in the event of either party's insolvency, and AGC may terminate the AGC License Agreement for our material breach on 30 days' notice to us.

Manufacturing and Supply

We do not own or operate, and currently have no plans to establish, any GMP manufacturing facilities. We rely, and expect to continue to rely, on third parties for the manufacture of our product candidates for preclinical and clinical testing, as well as for commercial manufacture if any of our product candidates obtain marketing approval. We also rely, and expect to continue to rely, on third parties to package, label, store and distribute our investigational product candidates and, if marketing approval is obtained, our commercial products. We believe this strategy allows us to maintain a more efficient infrastructure by eliminating the need for us to invest in our own manufacturing facilities, equipment and personnel while also enabling us to focus our expertise and resources on the development of new product candidates.

To date, we have obtained bulk drug substance, or BDS, for HPN424, HPN536 and HPN217 from a single-source third-party contract manufacturer, AGC. While any reduction or halt in supply of BDS from this contract manufacturer could limit our ability to develop our product candidates until a replacement contract manufacturer is found and qualified, we believe that we have sufficient BDS to support our current clinical trial programs. We have obtained final drug product for these product candidates from one of two engaged third-party contract manufacturers. We are in the process of developing our supply chain for each of our product candidates and intend to put in place agreements under which our third-party contract manufacturers will generally provide us with necessary quantities of BDS and drug product on a project-by-project basis based on our development and commercial supply needs.

All of our TriTACs and ProTriTACs are or will be manufactured from a vial of a master cell bank of that product's production cell line. We have or intend to have one master cell bank for each TriTAC and ProTriTAC that was or will be produced and tested in accordance with current good manufacturing practice, or cGMP, and applicable regulations. Each master cell bank is or will be stored in two independent locations, and we intend to produce working cell banks for each product candidate later in product development. It is possible that we could lose multiple cell banks from multiple locations and have our manufacturing severely impacted by the need to replace the cell banks. However, we believe we have adequate backup should any particular cell bank be lost in a catastrophic event.

Competition

The pharmaceutical and biotechnology industries are characterized by rapidly advancing technologies, intense competition and a strong emphasis on proprietary products. While we believe that our technology, development experience and scientific knowledge provide us with competitive advantages, we face potential competition from many different sources, including large pharmaceutical and biotechnology companies, academic institutions, government agencies and other public and private research organizations that conduct research, seek patent protection and establish collaborative arrangements for the research, development, manufacturing and commercialization of cancer immunotherapies. Any product candidates that we successfully develop and commercialize will compete with new immunotherapies that may become available in the future.

We compete in the segments of the pharmaceutical, biotechnology and other related markets that develop immuno-oncology treatments. There are many other companies that have commercialized and/or are developing immuno-oncology treatments for cancer including large pharmaceutical and biotechnology companies, such as AbbVie, Amgen, AstraZeneca/MedImmune, Bristol-Myers Squibb, Johnson & Johnson, Merck, Novartis, Pfizer and Roche/Genentech.

We face significant competition from pharmaceutical and biotechnology companies that target specific tumor-associated antigens using immune cells or other cytotoxic modalities. These generally include immune cell redirecting therapeutics (*e.g.*, T cell engagers), adoptive cellular therapies (*e.g.*, CAR-Ts), antibody drug conjugates, targeted radiopharmaceuticals, targeted immunotoxin and targeted cancer vaccines.

With respect to HPN424, we are aware of other competing PSMA-targeting clinical stage therapeutics, which include, but are not limited to: T cell engagers from Amgen Inc. and Regeneron Pharmaceuticals, Inc.; CAR-Ts from Poseida Therapeutics, Inc., Sorrento Therapeutics, Inc. and Tmunity Therapeutics, Inc.; and radiopharmaceuticals from Endocyte Inc./Novartis AG and Bayer.

With respect to HPN536, we are aware of other competing MSLN-targeting clinical stage therapeutics, which include, but are not limited to: CAR-T from Novartis AG, Atara Inc. and TCR2; antibody drug conjugates from Bayer AG and Bristol-Myers Squibb Company; and other modalities from AbbVie Inc., Bayer AG and Selecta Biosciences Inc.

With respect to HPN217, we are aware of other competing BCMA-targeting clinical stage therapeutics, which include, but are not limited to: T cell engagers from Amgen Inc., Pfizer Inc., Janssen Pharmaceuticals, Inc., Bristol-Myers Squibb Company, TeneoBio, Inc. and Regeneron Pharmaceuticals, Inc.; CAR-Ts from Autolus Therapeutics PLC, bluebird bio, Bristol-Myers Squibb Company, Legend Biotech/Janssen Pharmaceuticals, Inc. and Novartis AG, and Allogene Therapeutics; antibody drug conjugates from GlaxoSmithKline PLC and AstraZeneca/MedImmune LLC; and other modalities from Affimed N.V. and Unum Therapeutics Inc./Seattle Genetics Inc.

With respect to our earlier stage pipeline DLL3-targeting TriTAC product candidate, HPN328 we are aware of other competing DLL3-targeting clinical stage therapeutics. These include, but are not limited to: T cell engagers from Amgen Inc.; and CAR-T from Amgen Inc. and Boehringer Ingelheim; and Allogene Therapeutics.

We are also currently developing a pipeline of ProTriTACs and other protease-activated therapeutics that face increasing competition from other biologic prodrug developers, which include, but are not limited to, Akrevia Therapeutics Inc., Amunix Pharmaceuticals, Inc., Bayer AG, BioAtla, LLC, Chugai Pharmaceutical Co., Ltd., CytomX Therapeutics, Inc., Genentech, Inc., Nektar Therapeutics, Pandion Therapeutics, Inc., Revitope Oncology, Inc., Roche Holding AG and Seattle Genetics Inc.

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

We could see a reduction or elimination of our commercial opportunity if our competitors develop and commercialize products that are safer, more effective, have fewer or less severe side effects, are more convenient or are less expensive than any products that we or our collaborators may develop. Our competitors also may obtain FDA or foreign regulatory approval for their products more rapidly than we may obtain approval for ours, which could result in our competitors establishing a strong market position before we or our collaborators are able to enter the market. The key competitive factors affecting the success of all our product candidates, if approved, are likely to be their efficacy, safety, convenience, price, the effectiveness of companion diagnostics, if required, the level of biosimilar or generic competition and the availability of reimbursement from government and other third-party payors.

Intellectual Property

The proprietary nature and protection of our platforms, product candidates and discovery programs, as well as our processes and know-how, are important to our business. We have sought patent protection in the United States and internationally for our TriTAC platform, binding domains and related TriTAC product candidates, as well as the proprietary technology in our ProTriTAC platform and any other inventions to which we have rights, where available and when appropriate. For our product candidates, we generally pursue patent protection covering compositions of matter, methods of use and manufacture. Our policy is to pursue, maintain and defend patent rights in strategic areas, whether developed internally or licensed from third parties, and to protect the technology, inventions and improvements that are commercially important to the development of our business. We may also rely on trade secrets that may be important to the development of our business.

To date, we have spent considerable effort securing intellectual property rights, including rights related to our TriTAC and ProTriTAC platforms, binding domains and specific targets pertaining to our product candidates. Below is a summary of how we view our protections and ongoing prosecution efforts.

TriTAC Platform

For our TriTAC platform, as of December 31, 2019 we own one patent family directed to composition-of-matter coverage and method of use of our core TriTAC platform technology. This family includes one issued U.S. patent, one U.S. non-provisional patent application and over ten foreign application counterparts. The issued patent in this family is projected to expire in 2036, not including any patent term adjustments and any patent term extensions.

In addition to patent protection on our core TriTAC platform technology, as of December 31, 2019, we owned two patent families that relate to the CD3 and albumin binding domains of the TriTAC platform. Specifically, these two families are directed to composition-of-matter, method of use and sequence coverage to our anti-CD3 single-variable fragment, scFv, and anti-albumin single domain antibody, sdAb, binding domains. These patent families include three issued U.S. patents, two U.S. non-provisional patent applications and over twenty foreign application counterparts. The issued patents in these two patent families are projected to expire in 2037, not including any patent term adjustments and extensions.

HPN424

For our lead TriTAC product candidate, HPN424, as of December 31, 2019, we owned two patent families directed to composition-of-matter coverage of HPN424, its PSMA binding domain and related molecules, as well as methods of use for prostate cancer. These patent families include two U.S. non-provisional patent applications and over twenty foreign application counterparts. Any patents issuing from these two patent families are projected to expire in 2037, not including any patent term adjustments and extensions. In addition to these two patent families, our patents on our core TriTAC platform technology and our anti-CD3 and albumin binding domains, provide additional patent coverage on HPN424.

HPN536

For our second TriTAC product candidate, HPN536, as of December 31, 2019, we owned two patent families directed to composition-of-matter coverage of HPN536, its MSLN-binding domain and related molecules, as well as methods of use for cancers. These patent families include two U.S. non-provisional patent applications and over twenty foreign application counterparts. Any patents issuing from these two patent families are projected to expire in 2038, not including any patent term adjustments and extensions. In addition to these two patent families, our patents on our core TriTAC platform technology and our anti-CD3 and albumin binding domains provide additional patent coverage on HPN536.

HPN217

For our pipeline BCMA-Targeting TriTAC product candidate HPN217, as of December 31, 2019, we owned two patent families directed to composition-of-matter coverage of HPN217, its BCMA binding domain and related molecules, as well as methods of use for cancers. These patent families include two U.S. non-provisional patent applications and two PCT international applications. Any patents issuing from these two patent families are projected to expire in 2038, not including any patent term adjustments and extensions. In addition to these two patent families, our patents on our anti-CD3 and albumin binding domains provide additional patent coverage on HPN217.

HPN328

For our pipeline DLL3-targeting TriTAC, HPN328, as of December 31, 2019, we owned two patent families directed to composition-of-matter coverage of this TriTAC, its DLL3 binding domain and related molecules, as well as methods of use for cancers. These patent families include two non-expired U.S. provisional patent applications. Any patents issuing from these two patent families are projected to expire in 2039, not including any patent term adjustments and extensions. In addition to these two patent families, our patents on our anti-CD3 and albumin binding domains provide additional patent coverage on this TriTAC.

ProTriTAC Platform

Our patent portfolio for our ProTriTAC platform is at an early stage, with no issued patents as of December 31, 2019, and includes six patent families directed to composition-of-matter coverage of the ProTriTAC binding moieties, applications in various protein and cellular therapy formats and methods of use thereof. These patent families include eight non-expired U.S. provisional patent applications. Any patents issuing from these six patent families are projected to expire in 2039, not including any patent term adjustments and extensions.

We are involved in a significant litigation with Maverick Therapeutics, Inc. regarding an intellectual property-based dispute relating to our ProTriTAC program. For more information, see “Item 3. Legal Proceedings” elsewhere in this Form 10-K.

Our commercial success will depend in part on obtaining and maintaining patent protection and trade secret protection of our current and future product candidates and the methods used to develop and manufacture them, as well as successfully defending these patents against any third-party challenges. Our ability to stop third parties from making, using, selling, offering to sell or importing our product candidates depends on the extent to which we have rights under valid and enforceable patents or trade secrets that cover these activities. We cannot be sure that patents will be granted with respect to any of our pending patent applications or with respect to any patent applications filed by us in the future, nor can we be sure that any of our existing patents or any patents that may be granted to us in the future will be commercially useful in protecting our product candidates, discovery programs and processes.

The term of individual patents depends upon the legal term of the patents in the countries in which they are obtained. In most countries in which we file, the patent term is 20 years from the earliest date of filing a non-provisional patent application. In the United States, the patent term of a patent that covers an FDA-approved drug may also be eligible for patent term extension, which permits patent term restoration as compensation for the patent term lost during the FDA regulatory review process. The Hatch-Waxman Amendments permit a patent term extension of up to five years beyond the expiration of the patent. The length of the patent term extension is related to the length of time the drug is under regulatory review. Patent term extension cannot extend the remaining term of a patent beyond a total of 14 years from the date of product approval, only one patent applicable to an approved drug may be extended and only those claims covering the approved drug, a method for using it or a method for manufacturing it may be extended. Similar provisions are available in foreign jurisdictions to extend the term of a patent that covers an approved drug. In the future, if and when our product candidates receive FDA approval, we expect to apply for patent term extensions on patents covering those products. While we plan to seek patent term extensions on any of our issued patents in any jurisdiction where these are available, there is no guarantee that the applicable authorities, including the FDA in the United States, will agree with our assessment of whether such extensions should be granted and, if granted, the length of such extensions.

In addition to patent protection, we also rely on trademark registration, trade secrets, know how, other proprietary information and continuing technological innovation to develop and maintain our competitive position. We seek to protect and maintain the confidentiality of proprietary information to protect aspects of our business that are not amenable to, or that we do not consider appropriate for, patent protection. Although we take steps to protect our proprietary information and trade secrets, including through contractual means with our employees and consultants, third parties may independently develop substantially equivalent proprietary information and techniques or otherwise gain access to our trade secrets or disclose our technology. We may therefore not be able to meaningfully protect our trade secrets. It is our policy to require our employees, consultants, outside scientific collaborators, sponsored researchers and other advisors to execute confidentiality agreements upon the commencement of employment or consulting relationships with us. These agreements provide that all confidential information concerning our business or financial affairs developed or made known to the individual during the course of the individual's relationship with us is to be kept confidential and not disclosed to third parties except in specified circumstances. Our agreements with employees also provide that all inventions conceived by the employee in the course of employment with us or from the employee's use of our confidential information are our exclusive property. However, such confidentiality agreements and invention assignment agreements can be breached and we may not have adequate remedies for any such breach.

The patent positions of biotechnology companies like ours are generally uncertain and involve complex legal, scientific and factual questions. Our commercial success will also depend in part on not infringing upon the proprietary rights of third parties. It is uncertain whether the issuance of any third-party patent would require us to alter our development, commercial strategies, drugs or processes, or to obtain licenses or cease certain activities. Our breach of any license agreements or our failure to obtain a license to proprietary rights required to develop or commercialize our future products may have a material adverse impact on us. If third parties prepare and file patent applications in the United States that also claim technology to which we have rights, we may have to participate in interference or derivation proceedings in the USPTO to determine priority of invention.

For more information on these risks and other comprehensive risks related to our intellectual property, see "Risk Factors—Risks Relating to Our Intellectual Property."

Government Regulation

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

U.S. Biologics Regulation

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

- completion of preclinical laboratory tests and animal studies performed in accordance with the FDA's current Good Laboratory Practices, or GLP, regulation;
- submission to the FDA of an IND, which must become effective before clinical trials may begin and must be updated annually or when significant changes are made;
- approval by an independent IRB or ethics committee at each clinical site before the trial is commenced;
- performance of adequate and well-controlled human clinical trials to establish the safety, purity and potency of the proposed biologic product candidate for its intended purpose;
- preparation of and submission to the FDA of a BLA after completion of all pivotal clinical trials;
- a determination by the FDA within 60 days of its receipt of a BLA to file the application for review;
- satisfactory completion of an FDA Advisory Committee review, if applicable;
- satisfactory completion of an FDA pre-approval inspection of the manufacturing facility or facilities at which the proposed product is produced to assess compliance with current good manufacturing practices, or cGMPs, and to assure that the facilities, methods and controls are adequate to preserve the biological product's continued safety, purity and potency, and of selected clinical investigation sites to assess compliance with GCPs; and
- FDA review and approval of a BLA to permit commercial marketing of the product for particular indications for use in the United States.

Preclinical and Clinical Development

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

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

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

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

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

BLA Submission and Review

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

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

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

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

Expedited Development and Review Programs

The FDA offers a number of expedited development and review programs for qualifying product candidates. The fast track program is intended to expedite or facilitate the process for reviewing new products that meet certain criteria. Specifically, new products are eligible for fast track designation if they are intended to treat a serious or life-threatening disease or condition and demonstrate the potential to address unmet medical needs for the disease or condition. Fast track designation applies to the combination of the product and the specific indication for which it is being studied. The sponsor of a fast track product has opportunities for frequent interactions with the review team during product development and, once a BLA is submitted, the product may be eligible for priority review. A fast track product may also be eligible for rolling review, where the FDA may consider for review sections of the BLA on a rolling basis before the complete application is submitted, if the sponsor provides a schedule for the submission of the sections of the BLA, the FDA agrees to accept sections of the BLA and determines that the schedule is acceptable, and the sponsor pays any required user fees upon submission of the first section of the BLA.

A product intended to treat a serious or life-threatening disease or condition may also be eligible for breakthrough therapy designation to expedite its development and review. A product can receive breakthrough therapy designation if preliminary clinical evidence indicates that the product, alone or in combination with one or more other drugs or biologics, may demonstrate substantial improvement over existing therapies on one or more clinically significant endpoints, such as substantial treatment effects observed early in clinical development. The designation includes all of the fast track program features, as well as more intensive FDA interaction and guidance beginning as early as Phase 1 and an organizational commitment to expedite the development and review of the product, including involvement of senior managers.

Any marketing application for a biologic submitted to the FDA for approval, including a product with a fast track designation and/or breakthrough therapy designation, may be eligible for other types of FDA programs intended to expedite the FDA review and approval process, such as priority review and accelerated approval. A product is eligible for priority review if it has the potential to provide a significant improvement in the treatment, diagnosis or prevention of a serious disease or condition. For original BLAs, priority review designation means the FDA's goal is to take action on the marketing application within six months of the 60-day filing date (as compared to ten months under standard review).

Additionally, products studied for their safety and effectiveness in treating serious or life-threatening diseases or conditions may receive accelerated approval upon a determination that the product has an effect on a surrogate endpoint that is reasonably likely to predict clinical benefit, or on a clinical endpoint that can be measured earlier than irreversible morbidity or mortality, that is reasonably likely to predict an effect on irreversible morbidity or mortality or other clinical benefit, taking into account the severity, rarity, or prevalence of the condition and the availability or lack of alternative treatments. As a condition of accelerated approval, the FDA will generally require the sponsor to perform adequate and well-controlled post-marketing clinical studies to verify and describe the anticipated effect on irreversible morbidity or mortality or other clinical benefit. In addition, the FDA currently requires as a condition for accelerated approval pre-approval of promotional materials, which could adversely impact the timing of the commercial launch of the product.

A regenerative medicine advanced therapy, or RMAT, designation is intended to facilitate an efficient development program for, and expedited review of, any drug that meets the following criteria: (i) the drug qualifies as a RMAT, which is defined as a cell therapy, therapeutic tissue engineering product, human cell and tissue product, or any combination product using such therapies or products, with limited exceptions; (ii) the drug is intended to treat, modify, reverse, or cure a serious or life-threatening disease or condition; and (iii) preliminary clinical evidence indicates that the drug has the potential to address unmet medical needs for such a disease or condition. Like breakthrough therapy designation, RMAT designation provides potential benefits that include more frequent meetings with the FDA to discuss the development plan for the product candidate and eligibility for rolling review and priority review. Products granted RMAT designation may also be eligible for accelerated approval on the basis of a surrogate or intermediate endpoint reasonably likely to predict long-term clinical benefit, or reliance upon data obtained from a meaningful number of sites, including through expansion to additional sites. Once approved, when appropriate, the FDA can permit fulfillment of post-approval requirements under accelerated approval through: the submission of clinical evidence, preclinical studies, clinical trials, patient registries or other sources of real world evidence such as electronic health records; the collection of larger confirmatory datasets; or post-approval monitoring of all patients treated with the therapy prior to approval.

Fast track designation, breakthrough therapy designation, priority review and RMAT designation do not change the standards for approval but may expedite the development or approval process. Even if a product qualifies for one or more of these programs, the FDA may later decide that the product no longer meets the conditions for qualification or decide that the time period for FDA review or approval will not be shortened.

Orphan Drug Designation

Under the Orphan Drug Act, the FDA may grant orphan designation to a drug or biologic intended to treat a rare disease or condition, which is a disease or condition that affects fewer than 200,000 individuals in the United States, or more than 200,000 individuals in the United States for which there is no reasonable expectation that the cost of developing and making available in the United States a drug or biologic for this type of disease or condition will be recovered from sales in the United States for that drug or biologic. Orphan drug designation must be requested before submitting a BLA. After the FDA grants orphan drug designation, the generic identity of the therapeutic agent and its potential orphan use are disclosed publicly by the FDA. The orphan drug designation does not convey any advantage in, or shorten the duration of, the regulatory review or approval process.

If a product that has orphan drug designation subsequently receives the first FDA approval for the disease for which it has such designation, the product is entitled to orphan drug exclusive approval (or exclusivity), which means that the FDA may not approve any other applications, including a full BLA, to market the same biologic for the same indication for seven years, except in limited circumstances, such as a showing of clinical superiority to the product with orphan drug exclusivity or if the FDA finds that the holder of the orphan drug exclusivity has not shown that it can assure the availability of sufficient quantities of the orphan drug to meet the needs of patients with the disease or condition for which the drug was designated. Orphan drug exclusivity does not prevent the FDA from approving a different drug or biologic for the same disease or condition, or the same drug or biologic for a different disease or condition. Among the other benefits of orphan drug designation are tax credits for certain research and a waiver of the BLA application fee.

A designated orphan drug may not receive orphan drug exclusivity if it is approved for a use that is broader than the indication for which it received orphan designation. In addition, exclusive marketing rights in the United States may be lost if the FDA later determines that the request for designation was materially defective or if the manufacturer is unable to assure sufficient quantities of the product to meet the needs of patients with the rare disease or condition.

Post-Approval Requirements

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

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

- restrictions on the marketing or manufacturing of a product, complete withdrawal of the product from the market or product recalls;
- fines, warning letters or holds on post-approval clinical studies;
- refusal of the FDA to approve pending applications or supplements to approved applications, or suspension or revocation of existing product approvals;
- product seizure or detention, or refusal of the FDA to permit the import or export of products;
- consent decrees, corporate integrity agreements, debarment or exclusion from federal healthcare programs;
- mandated modification of promotional materials and labeling and the issuance of corrective information;
- the issuance of safety alerts, Dear Healthcare Provider letters, press releases and other communications containing warnings or other safety information about the product; or
- injunctions or the imposition of civil or criminal penalties.

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

Regulation of Companion Diagnostic Tests

We expect that our product candidates may require use of a diagnostic to identify appropriate patient population. These diagnostics, often referred to as companion diagnostics, are medical devices, often in vitro devices, which provide information that is essential for the safe and effective use of a corresponding drug. In the United States, the FDCA and its implementing regulations, and other federal and state statutes and regulations govern, among other things, medical device design and development, preclinical and clinical testing, premarket clearance or approval, registration and listing, manufacturing, labeling, storage, advertising and promotion, sales and distribution, export and import, and post-market surveillance. Unless an exemption applies, diagnostic tests require marketing clearance or approval from the FDA prior to commercial distribution. The two primary types of FDA marketing authorization applicable to a medical device are premarket notification, also called 510(k) clearance, and premarket approval, or PMA approval. We expect that any companion diagnostic developed for use with our product candidates will utilize the PMA pathway.

PMA applications must be supported by valid scientific evidence, which typically requires extensive data, including technical, preclinical, clinical and manufacturing data, to demonstrate to the FDA's satisfaction the safety and effectiveness of the device. For diagnostic tests, a PMA application typically includes data regarding analytical and clinical validation studies. As part of its review of the PMA, the FDA will conduct a pre-approval inspection of the manufacturing facility or facilities to ensure compliance with the Quality System Regulation, or QSR, which requires manufacturers to follow design, testing, control, documentation and other quality assurance procedures. FDA review of an initial PMA may require several years to complete. If the FDA evaluations of both the PMA application and the manufacturing facilities are favorable, the FDA will either issue an approval letter or an approvable letter, which usually contains a number of conditions that must be met in order to secure the final approval of the PMA. If the FDA's evaluation of the PMA or manufacturing facilities is not favorable, the FDA will deny approval of the PMA or issue a not approvable letter. A not approvable letter will outline the deficiencies in the application and, where practical, will identify what is necessary to make the PMA approvable. The FDA may also determine that additional clinical trials are necessary, in which case the PMA approval may be delayed for several months or years while the trials are conducted and then the data submitted in an amendment to the PMA. Once granted, PMA approval may be withdrawn by the FDA if compliance with post approval requirements, conditions of approval or other regulatory standards is not maintained or problems are identified following initial marketing.

On August 6, 2014, the FDA issued a final guidance document addressing the development and approval process for "In Vitro Companion Diagnostic Devices." According to the guidance, a companion diagnostic device and its corresponding drug should be approved or cleared contemporaneously by the FDA for the use indicated in the therapeutic product labeling. The guidance also explains that a companion diagnostic device used to make treatment decisions in clinical trials generally will be considered an investigational device, unless it is employed for an intended use for which the device is already approved or cleared. If used to make critical treatment decisions, such as patient selection, the diagnostic device generally will be considered a significant risk device under the FDA's Investigational Device Exemption, or IDE, regulations. Thus, the sponsor of the diagnostic device will be required to comply with the IDE regulations. According to the guidance, if a diagnostic device and therapeutic are to be studied together to support their respective approvals, both products can be studied in the same investigational study, if the study meets both the requirements of the IDE regulations and the IND regulations. The guidance provides that depending on the details of the study plan and subjects, a sponsor may seek to submit an IND alone, or both an IND and an IDE.

Biosimilars and Reference Product Exclusivity

The ACA includes a subtitle called the BPCIA, which created an abbreviated approval pathway for biological products that are biosimilar to or interchangeable with an FDA-approved reference biological product.

Biosimilarity, which requires that there be no clinically meaningful differences between the biological product and the reference product in terms of safety, purity, and potency, can be shown through analytical studies, animal studies, and a clinical study or studies. Interchangeability requires that a product is biosimilar to the reference product and the product must demonstrate that it can be expected to produce the same clinical results as the reference product in any given patient and, for products that are administered multiple times to an individual, the biologic and the reference biologic may be alternated or switched after one has been previously administered without increasing safety risks or risks of diminished efficacy relative to exclusive use of the reference biologic.

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

The BPCIA is complex and continues to be interpreted and implemented by the FDA. In addition, government proposals have sought to reduce the 12-year reference product exclusivity period. Other aspects of the BPCIA, some of which may impact the BPCIA exclusivity provisions, have also been the subject of recent litigation. As a result, the ultimate impact, implementation, and impact of the BPCIA is subject to significant uncertainty.

Other Healthcare Laws and Compliance Requirements

Pharmaceutical companies are subject to additional healthcare regulation and enforcement by the federal government and by authorities in the states and foreign jurisdictions in which they conduct their business. Such laws include, without limitation: the federal Anti-Kickback Statute, the federal False Claims Act, HIPAA and similar foreign, federal and state fraud and abuse, transparency and privacy laws.

The federal Anti-Kickback Statute prohibits, among other things, persons and entities from knowingly and willfully soliciting, receiving, offering or paying remuneration, to induce, or in return for, either the referral of an individual, or the purchase or recommendation of an item or service for which payment may be made under any federal healthcare program. The term remuneration has been interpreted broadly to include anything of value, including stock options. The federal Anti-Kickback Statute has been interpreted to apply to arrangements between pharmaceutical manufacturers on one hand and prescribers, purchasers on the other. There are a number of statutory exceptions and regulatory safe harbors protecting some common activities from prosecution, but they are drawn narrowly and practices that involve remuneration, such as consulting agreements, that may be alleged to be intended to induce prescribing, purchasing or recommending may be subject to scrutiny if they do not qualify for an exception or safe harbor. Failure to meet all of the requirements of a particular applicable statutory exception or regulatory safe harbor does not make the conduct per se illegal under the federal Anti-Kickback Statute. Instead, the legality of the arrangement will be evaluated on a case-by-case basis based on a cumulative review of all of its facts and circumstances. Our practices may not in all cases meet all of the criteria for protection under a statutory exception or regulatory safe harbor. A person or entity does not need to have actual knowledge of the statute or specific intent to violate it in order to have committed a violation. In addition, a claim including items or services resulting from a violation of the federal Anti-Kickback Statute constitutes a false or fraudulent claim for purposes of the federal False Claims Act.

Civil and criminal false claims laws, including the federal False Claims Act, which can be enforced through civil whistleblower or qui tam actions, and civil monetary penalty laws, prohibit, among other things, individuals or entities from knowingly presenting, or causing to be presented, claims for payment to the federal government, including federal healthcare programs, that are false or fraudulent. For example, the federal False Claims Act prohibits any person or entity from knowingly presenting, or causing to be presented, a false claim for payment to the federal government or knowingly making, using or causing to be made or used a false record or statement material to a false or fraudulent claim to the federal government. A claim includes “any request or demand” for money or property presented to the U.S. government. Several pharmaceutical and other healthcare companies have been prosecuted under these laws for allegedly providing free product to customers with the expectation that the customers would bill federal programs for the product.

HIPAA created additional federal criminal statutes that prohibit, among other things, executing a scheme to defraud any healthcare benefit program, including private third-party payors, and making false statements relating to healthcare matters. In addition, HIPAA, as amended by HITECH, and their implementing regulations, impose certain requirements on HIPAA covered entities, which include certain healthcare providers, healthcare clearing houses and health plans, and individuals and entities that provide services on their behalf that involves individually identifiable health information, known as business associates, relating to the privacy, security and transmission of individually identifiable health information.

The U.S. federal Physician Payments Sunshine Act requires certain manufacturers of drugs, devices, biologics and medical supplies for which payment is available under Medicare, Medicaid or the Children’s Health Insurance Program, with specific exceptions, to annually report to CMS information related to payments or other transfers of value made to physicians, as defined by such law, and teaching hospitals, as well as ownership and investment interests held by physicians and their immediate family members.

We are also subject to additional similar U.S. state and foreign law equivalents of each of the above federal laws, which, in some cases, differ from each other in significant ways, and may not have the same effect, thus complicating compliance efforts. If our operations are found to be in violation of any of such laws or any other governmental regulations that apply, we may be subject to penalties, including, without limitation, significant civil, criminal and administrative penalties, damages, fines, exclusion from government-funded healthcare programs, such as Medicare and Medicaid or similar programs in other countries or jurisdictions, integrity oversight and reporting obligations to resolve allegations of non-compliance, disgorgement, individual imprisonment, contractual damages, reputational harm, diminished profits and the curtailment or restructuring of our operations.

Coverage and Reimbursement

Significant uncertainty exists as to the coverage and reimbursement status of any pharmaceutical or biological product for which we obtain regulatory approval. Sales of any product, if approved, depend, in part, on the extent to which such product will be covered by third-party payors, such as federal, state, and foreign government healthcare programs, commercial insurance and managed healthcare organizations, and the level of reimbursement, if any, for such product by third-party payors. Decisions regarding whether to cover any of our product candidates, if approved, the extent of coverage and amount of reimbursement to be provided are made on a plan-by-plan basis. Further, no uniform policy for coverage and reimbursement exists in the United States, and coverage and reimbursement can differ significantly from payor to payor. Third-party payors often rely upon Medicare coverage policy and payment limitations in setting their own reimbursement rates, but also have their own methods and approval process apart from Medicare determinations. As a result, the coverage determination process is often a time-consuming and costly process that will require us to provide scientific and clinical support for the use of our product candidates to each payor separately, with no assurance that coverage and adequate reimbursement will be applied consistently or obtained in the first instance.

For products administered under the supervision of a physician, obtaining coverage and adequate reimbursement may be particularly difficult because of the higher prices often associated with such drugs. Additionally, separate reimbursement for the product itself or the treatment or procedure in which the product is used may not be available, which may impact physician utilization. In addition, companion diagnostic tests require coverage and reimbursement separate and apart from the coverage and reimbursement for their companion pharmaceutical or biological products. Similar challenges to obtaining coverage and reimbursement, applicable to pharmaceutical or biological products, will apply to companion diagnostics.

In addition, the U.S. government, state legislatures and foreign governments have continued implementing cost-containment programs, including price controls, restrictions on coverage and reimbursement and requirements for substitution of generic products. Third-party payors are increasingly challenging the prices charged for medical products and services, examining the medical necessity and reviewing the cost effectiveness of pharmaceutical or biological products, medical devices and medical services, in addition to questioning safety and efficacy. Adoption of price controls and cost-containment measures, and adoption of more restrictive policies in jurisdictions with existing controls and measures, could further limit sales of any product that receives approval. Decreases in third-party reimbursement for any product or a decision by a third-party not to cover a product could reduce physician usage and patient demand for the product. No regulatory authority has granted approval for a personalized cancer immunotherapy based on a vaccine approach, and there is no model for reimbursement of this type of product.

Healthcare Reform

The United States and some foreign jurisdictions are considering or have enacted a number of reform proposals to change the healthcare system. There is significant interest in promoting changes in healthcare systems with the stated goals of containing healthcare costs, improving quality or expanding access. In the United States, the pharmaceutical industry has been a particular focus of these efforts and has been significantly affected by federal and state legislative initiatives, including those designed to limit the pricing, coverage, and reimbursement of pharmaceutical and biopharmaceutical products, especially under government-funded health care programs, and increased governmental control of drug pricing.

The ACA, which was enacted in March 2010, substantially changed the way healthcare is financed by both governmental and private insurers in the United States, and significantly affected the pharmaceutical industry. The ACA contains a number of provisions of particular import to the pharmaceutical and biotechnology industries, including, but not limited to, those governing enrollment in federal healthcare programs, a new methodology by which rebates owed by manufacturers under the Medicaid Drug Rebate Program are calculated for drugs that are inhaled, infused, instilled, implanted or injected, and annual fees based on pharmaceutical companies' share of sales to federal health care programs. There remain judicial and Congressional challenges to certain aspects of the ACA, as well as efforts by the Trump administration to repeal or replace certain aspects of the ACA. For example, the Tax Act was enacted, which, among other things, removes penalties for not complying with ACA's requirement to carry health insurance, known as the "individual mandate", effective January 1, 2019. Since the enactment of the Tax Act, there have been additional amendments to certain provisions of the ACA. On December 14, 2018, a Texas U.S. District Court Judge ruled that the ACA is unconstitutional in its entirety because the "individual mandate" was repealed by Congress as part of the Tax Act. Additionally, on December 18, 2019, the U.S. Court of Appeals for the 5th Circuit upheld the District Court ruling that the individual mandate was unconstitutional and remanded the case back to the District Court to determine whether the remaining provisions of the ACA are invalid as well. It is unclear how this decision, future decisions, subsequent appeals, and other efforts to repeal and replace the ACA will impact the ACA.

Other legislative changes have been proposed and adopted since the ACA was enacted, including aggregate reductions of Medicare payments to providers of 2% per fiscal year and reduced payments to several types of Medicare providers. These reductions went into effect in April 2013 and, due to subsequent legislative amendments to the statute, will remain in effect through 2029 unless additional action is taken by Congress.

Moreover, there has recently been heightened governmental scrutiny over the manner in which manufacturers set prices for their marketed products, which has resulted in several Congressional inquiries and proposed and enacted federal and state legislation designed to, among other things, bring more transparency to product pricing, review the relationship between pricing and manufacturer patient programs, and reform government program reimbursement methodologies for drug products. At the federal level, the Trump administration's budget proposal for fiscal year 2020 contains further drug price control measures that could be enacted during the budget process or in other future legislation, including, for example, measures to permit Medicare Part D plans to negotiate the price of certain drugs under Medicare Part B, to allow some states to negotiate drug prices under Medicaid, and to eliminate cost sharing for generic drugs for low-income patients. Further, the Trump administration released a "Blueprint" to lower drug prices and reduce out of pocket costs of drugs that contains additional proposals to increase manufacturer competition, increase the negotiating power of certain federal healthcare programs, incentivize manufacturers to lower the list price of their products and reduce the out of pocket costs of drug products paid by consumers. The U.S. Department of Health and Human Services has solicited feedback on certain of these measures and has implemented others under its existing authority. For example, in May 2019, CMS issued a final rule to allow Medicare Advantage plans the option to use step therapy for Part B drugs beginning January 1, 2020. This final rule codified CMS's policy change that was effective January 1, 2019. Although a number of these and other measures may require additional authorization become effective, Congress and the Trump administration have each indicated that it will continue to seek new legislative and/or administrative measures to control drug costs At the state level, legislatures have increasingly passed legislation and implemented regulations designed to control pharmaceutical product pricing, including price or patient reimbursement constraints, discounts, restrictions on certain product access and marketing cost disclosure and transparency measures, and, in some cases, designed to encourage importation from other countries and bulk purchasing.

Employees

As of February 29, 2020, we had 61 full time employees, 47 of whom were engaged in research and development activities and 14 of whom were engaged in general and administrative activities. None of our employees are represented by labor unions or covered by collective bargaining agreements. We consider our relationship with our employees to be good.

Corporate Information

We were incorporated as a Delaware corporation in March 2015. Our principal executive offices are located at 131 Oyster Point Blvd, Suite 300, South San Francisco, California 94080, and our telephone number is (650) 443-7400. Our website address is www.harpoontx.com. The information contained on, or that can be accessed through, our website is not incorporated by reference into this Annual Report on Form 10-K, and you should not consider any information contained on, or that can be accessed through, our website as part of this Annual Report on Form 10-K.

"Harpoon Therapeutics," "Harpoon," the Harpoon logo, TriTAC, ProTriTAC and our other registered or common law trademarks, trade names or service marks appearing in this report are owned by us. This report contains references to our trademarks and to trademarks belonging to other entities. Solely for convenience, trademarks and trade names referred to in this report, including logos, artwork and other visual displays, generally appear without the ® or TM symbols, but such references are not intended to indicate, in any way, that we will not assert, to the fullest extent under applicable law, our rights or the rights of the applicable licensor to these trademarks and trade names. We do not intend our use or display of other companies' trade names or trademarks to imply a relationship with, or endorsement or sponsorship of us by, any other companies.

Item 1A. Risk Factors

Risks Related to the Development and Clinical Testing of Our Product Candidates

All of our product candidates are in preclinical or early-stage clinical development. Clinical drug development is a lengthy and expensive process with uncertain timelines and uncertain outcomes. If clinical trials of our product candidates are prolonged or delayed, we or any collaborators may be unable to obtain required regulatory approvals, and therefore be unable to commercialize our product candidates on a timely basis or at all.

To obtain the requisite regulatory approvals to market and sell any of our product candidates, we or any collaborator for such candidates must demonstrate through extensive preclinical studies and clinical trials that our product candidates are safe and effective in humans. Clinical testing is expensive and can take many years to complete, and its outcome is inherently uncertain. Failure can occur at any time during the clinical trial process. The results of preclinical studies and early-stage clinical trials of our product candidates may not be predictive of the results of later-stage clinical trials. Product candidates in later stages of clinical trials may fail to show the desired safety and efficacy traits despite having progressed through preclinical studies and initial clinical trials. A number of companies in the biopharmaceutical industry have suffered significant setbacks in advanced clinical trials due to lack of efficacy or adverse safety profiles, notwithstanding promising results in earlier trials. Our future clinical trial results may not be successful.

To date, we have not completed any clinical trials required for the approval of any of our product candidates. Although we are conducting early stage clinical trials and are conducting preclinical studies for other product candidates, we may experience delays in our ongoing clinical trials, and we do not know whether planned clinical trials will begin on time, need to be redesigned, enroll patients on time or be completed on schedule, if at all. Clinical trials can be delayed, suspended, or terminated for a variety of reasons, including the following:

- delays in or failure to reach agreement on acceptable terms with prospective CROs and clinical trial sites, the terms of which can be subject to extensive negotiation and may vary significantly among different CROs and trial sites;
- difficulty in recruiting clinical trial investigators of appropriate competencies and experience;
- delays in establishing the appropriate dosage levels in clinical trials;
- delays in or failure to recruit and enroll suitable patients to participate in a trial;
- the difficulty in certain countries in identifying the sub-populations that we are trying to treat in a particular trial, which may delay enrollment and reduce the power of a clinical trial to detect statistically significant results;
- lower than anticipated retention rates of patients in clinical trials;
- failure to have patients complete a trial or return for post-treatment follow-up;
- clinical sites deviating from trial protocol or dropping out of a trial;
- adding new clinical trial sites;
- safety or tolerability concerns could cause us or our collaborators or governmental authorities, as applicable, to suspend or terminate a trial if it is found that the participants are being exposed to unacceptable health risks;
- delays in or failure to obtain regulatory approval to commence a trial;
- delays in or failure to obtain institutional review board, or IRB, approval at each site;
- our third-party research contractors failing to comply with regulatory requirements or meet their contractual obligations to us in a timely manner, or at all;
- changes in regulatory requirements, policies and guidelines;
- manufacturing sufficient quantities of a product candidate for use in clinical trials;
- the quality or stability of a product candidate falling below acceptable standards;
- changes in the treatment landscape for our target indications that may make our product candidates no longer relevant;

- third-party actions claiming infringement by our product candidates in clinical trials outside the United States and obtaining injunctions interfering with our progress;
- the impact of public health epidemics, such as the coronavirus disease (COVID-19) currently impacting multiple jurisdictions worldwide, including the United States; and
- business interruptions resulting from geo-political actions, including war and terrorism, or natural disasters including earthquakes, typhoons, floods and fires.

We could encounter delays if a clinical trial is suspended or terminated by us, by the IRBs or Ethics Committees of the institutions in which such trials are being conducted, by the Data Review Committee or Data Safety Monitoring Board for such trial or by the FDA, or other regulatory authorities. Such authorities may impose such a suspension or termination due to a number of factors, including failure to conduct the clinical trial in accordance with regulatory requirements or our clinical protocols, inspection of the clinical trial operations or trial site by the FDA or other regulatory authorities resulting in the imposition of a clinical hold, unforeseen safety issues or adverse side effects, failure to demonstrate a benefit from using a drug, changes in governmental regulations or administrative actions or lack of adequate funding to continue the clinical trial.

If we experience delays in the completion of, or termination of, any clinical trial of our product candidates, the commercial prospects of our product candidates will be harmed, and our ability to generate product revenues from any of these product candidates will be delayed. In addition, any delays in completing our clinical trials will increase our costs, slow down our product candidate development and approval process and jeopardize our ability to commence product sales and generate revenues. Significant clinical trial delays could also allow our competitors to bring products to market before we do or shorten any periods during which we have the exclusive right to commercialize our product candidates and impair our ability to commercialize our product candidates and may harm our business and results of operations.

Any of these occurrences may harm our business, financial condition and prospects significantly. In addition, many of the factors that cause, or lead to, a delay in the commencement or completion of clinical trials may also ultimately lead to the denial of regulatory approval of our product candidates.

Clinical trials must be conducted in accordance with the FDA and other applicable regulatory authorities' legal requirements, regulations or guidelines, and are subject to oversight by these governmental agencies and Ethics Committees or IRBs at the medical institutions where the clinical trials are conducted. In addition, clinical trials must be conducted with supplies of our product candidates produced under cGMP requirements and other regulations. Furthermore, we rely on CROs and clinical trial sites to ensure the proper and timely conduct of our clinical trials and while we have agreements governing their committed activities, we have limited influence over their actual performance. We depend on our collaborators and on medical institutions and CROs to conduct our clinical trials in compliance with good clinical practice, or GCP, requirements. To the extent our collaborators or the CROs fail to enroll participants for our clinical trials, fail to conduct the study to GCP standards or are delayed for a significant time in the execution of trials, including achieving full enrollment, we may be affected by increased costs, program delays or both, which may harm our business. In addition, clinical trials that are conducted in countries outside the United States may subject us to further delays and expenses as a result of increased shipment costs, additional regulatory requirements and the engagement of non-U.S. CROs, as well as expose us to risks associated with clinical investigators who are unknown to the FDA, and different standards of diagnosis, screening and medical care.

Interim, topline or preliminary data from our clinical trials that we announce or publish from time to time may change as more patient data become available and are subject to audit and verification procedures that could result in material changes in the final data.

From time to time, we may publicly disclose preliminary or topline or data from our preclinical studies and clinical trials, which is based on a preliminary analysis of then-available data, and the results and related findings and conclusions are subject to change following a more comprehensive review of the data related to the particular study or trial. We also make assumptions, estimations, calculations and conclusions as part of our analyses of data, and we may not have received or had the opportunity to fully and carefully evaluate all data. As a result, the topline results that we report may differ from future results of the same studies, or different conclusions or considerations may qualify such results, once additional data have been received and fully evaluated. Topline data also remain subject to audit and verification procedures that may result in the final data being materially different from the preliminary data we previously published. As a result, topline data should be viewed with caution until the final data are available. From time to time, we may also disclose interim data from our clinical trials. Interim data from clinical trials that we may complete are subject to the risk that one or more of the clinical outcomes may materially change as patient enrollment continues and more patient data become available. As a result, any interim/or preliminary data should be viewed with caution until final data is available. Material adverse changes in the final data could result in significant harm to our business prospects. Adverse differences between preliminary or interim data and final data could significantly harm our business prospects. Further, disclosure of interim data by us or by our competitors could result in volatility in the price of our common stock.

Further, others, including regulatory agencies, may not accept or agree with our assumptions, estimates, calculations, conclusions or analyses or may interpret or weigh the importance of data differently, which could impact the value of the particular program, the approvability or commercialization of the particular product candidate or product and our company in general.

If the interim, topline, or preliminary data that we report differ from actual results, or if others, including regulatory authorities, disagree with the conclusions reached, our ability to obtain approval for, and commercialize, our product candidates may be harmed, which could harm our business, operating results, prospects or financial condition.

Our TriTAC and ProTriTAC platforms are unproven, novel classes of T cell engagers and may not result in approvable or marketable products, which exposes us to unforeseen risks and makes it difficult for us to predict the time and cost of product development and potential for regulatory approval.

We have not received regulatory approval for a TriTAC or ProTriTAC product candidates. We cannot be certain that our approach will lead to the development of approvable or marketable products, alone or in combination with other therapies. In addition, our TriTACs and ProTriTACs may have different effectiveness rates in various indications. Our approach involves using biologics to improve efficacy against solid tumors, which is unproven and may not be successful. Further, our TriTAC and ProTriTAC technology could have less efficacy in tumor types with fewer T cells, such as pancreatic cancer. While we believe TriTAC and ProTriTAC T cell engagers will demonstrate potent single-agent activity and therapeutic effect, immunotherapy companies and standard of care continue to evolve toward the use of combination therapies and we may be unsuccessful in developing any of our product candidates as monotherapies. With our TriTAC and ProTriTAC platforms, we have designed T cell engagers that incorporate the strengths of BiTEs and improve upon their critical shortcomings. However, only one BiTE (Amgen's Blincyto) has been approved for the treatment of cancer, and leveraging BiTE technology may not result in approved therapies or be as successful as other forms of therapies. Finally, the FDA or other regulatory agencies may lack experience in evaluating the safety and efficacy of our TriTACs or ProTriTACs, which could result in a longer than expected regulatory review process, increase our expected development costs and delay or prevent commercialization of our product candidates.

Results of earlier preclinical studies of our product candidates may not be predictive of future trial results.

Success in preclinical studies does not ensure that later clinical trials will be successful. A number of companies in the biotechnology and pharmaceutical industries have suffered significant setbacks in clinical trials, even after positive results in earlier preclinical studies. These setbacks have been caused by, among other things, preclinical findings made while clinical trials were underway and safety or efficacy observations made in clinical trials, including previously unreported adverse events. Notwithstanding any potential promising results in earlier studies, we cannot be certain that we will not face similar setbacks. In addition, the results of our preclinical animal studies, including our non-human primate studies, may not be predictive of the results of outcomes in human clinical trials. For example, while we did not observe unacceptable safety events in our preclinical testing of HPN536, given the expression of MSLN on both normal and cancerous cells, we may observe unacceptable levels of toxicity when HPN536 is tested in humans. Product candidates in later stages of clinical trials may fail to show the desired pharmacological properties or safety and efficacy traits despite having progressed through preclinical studies.

We depend on enrollment of patients in our clinical trials for our product candidates. If we experience delays or difficulties enrolling in our clinical trials, our research and development efforts and business, financial condition and results of operations could be materially adversely affected.

Successful and timely completion of clinical trials will require that we enroll a sufficient number of patient candidates. These trials and other trials we conduct may be subject to delays as a result of patient enrollment taking longer than anticipated, patient withdrawal or adverse events. For example, we have multiple ongoing Phase 1/2 clinical trials, which could generate adverse events that may cause us to delay these trials or halt further development. While adverse events to date related to our clinical trials have not had a material impact on patient enrollment, our experience to date may differ from future outcomes.

Our clinical trials will likely compete with other clinical trials that are in the same therapeutic areas as our product candidates, and this competition may reduce the number and types of patients available to us, because some patients who might have opted to enroll in our trials may instead opt to enroll in a trial being conducted by one of our competitors. Because the number of qualified clinical investigators and clinical trial sites is limited, we may conduct some of our clinical trials at the same clinical trial sites that some of our competitors use, which could reduce the number of patients who are available for our clinical trials at such clinical trial sites.

Patient enrollment depends on many factors, including the size and nature of the patient population, the severity of the disease under investigation, eligibility criteria for the trial, the proximity of patients to clinical sites, the design of the clinical protocol, the ability to obtain and maintain patient consents, the ability to recruit clinical trial investigators with the appropriate competencies and experience, the risk that patients enrolled in clinical trials will drop out of the trials before the administration of our product candidates or trial completion, the availability of competing clinical trials, the availability of new drugs approved for the indication the clinical trial is investigating, and clinicians' and patients' perceptions as to the potential advantages of the drug being studied in relation to other available therapies. These factors may make it difficult for us to enroll enough patients to complete our clinical trials in a timely and cost-effective manner. Delays in the completion of any clinical trial of our product candidates will increase our costs, slow down our product candidate development and approval process and delay or potentially jeopardize our ability to commence product sales and generate revenue. In addition, some of the factors that cause, or lead to, a delay in the commencement or completion of clinical trials may also ultimately lead to the denial of regulatory approval of our product candidates.

Our product candidates may have serious adverse, undesirable or unacceptable side effects or other properties which may delay or prevent marketing approval. If such side effects are identified during the development of our product candidates or following approval, if any, we may need to abandon our development of such product candidates, the commercial profile of any approved label may be limited, or we may be subject to other significant negative consequences following marketing approval, if any.

Undesirable side effects that may be caused by our product candidates could cause us or regulatory authorities to interrupt, delay or halt clinical trials and could result in a more restrictive label or the delay or denial of regulatory approval by the FDA or other comparable foreign authorities. Our product candidates target protein expression on tumor cells, which expression may also be present on healthy cells. Accordingly, our product candidates may result in high or unacceptable levels of toxicity when tested in humans. Results of our trials could reveal a high and unacceptable severity and prevalence of these or other side effects. In such an event, our trials could be suspended or terminated and the FDA or comparable foreign regulatory authorities could order us to cease further development of or deny approval of our product candidates for any or all targeted indications. The drug-related side effects could affect patient recruitment or the ability of enrolled patients to complete the trial or result in potential product liability claims. Any of these occurrences may harm our business, financial condition and prospects significantly. Additionally, if any of our product candidates receives marketing approval and we or others later identify undesirable or unacceptable side effects caused by such products, a number of potentially significant negative consequences could result, including:

- regulatory authorities may withdraw or limit approvals of such products and require us to take our approved product off the market;
- regulatory authorities may require the addition of labeling statements, specific warnings, a contraindication or field alerts to physicians and pharmacies, or issue other communications containing warnings or other safety information about the product;
- regulatory authorities may require a medication guide outlining the risks of such side effects for distribution to patients, or that we implement a risk evaluation and mitigation strategy, plan to ensure that the benefits of the product outweigh its risks;
- we may be required to change the dose or the way the product is administered, conduct additional clinical trials or change the labeling of the product;
- we may be subject to limitations on how we may promote or manufacture the product;
- sales of the product may decrease significantly;
- we may be subject to litigation or product liability claims; and
- our reputation may suffer.

Any of these events could prevent us, our collaborators or our potential future partners from achieving or maintaining market acceptance of the affected product or could substantially increase commercialization costs and expenses, which in turn could delay or prevent us from generating significant revenue from the sale of any products.

Monitoring safety of patients receiving our product candidates is challenging, which could adversely affect our ability to obtain regulatory approval and commercialize.

For our ongoing clinical trial and planned clinical trials, we have and expect to contract with academic medical centers and hospitals experienced in the assessment and management of toxicities arising during clinical trials. Nonetheless, these centers and hospitals may have difficulty observing patients and treating toxicities, which may be more challenging due to personnel changes, inexperience, shift changes, house staff coverage or related issues. This could lead to more severe or prolonged toxicities or even patient deaths, which could result in us or the FDA delaying, suspending or terminating one or more of our clinical trials, and which could jeopardize regulatory approval. We also expect the centers using our product candidates, if approved, on a commercial basis could similarly have difficulty in managing adverse events. Medicines used at centers to help manage adverse side effects of our product candidates may not adequately control the side effects and/or may have a detrimental impact on the efficacy of the treatment. Use of these medicines may increase with new physicians and centers administering our product candidates.

We may not be successful in our efforts to use and expand our technology platforms, including TriTAC and ProTriTAC, to build a pipeline of product candidates.

A key element of our strategy is to use and expand our technology platforms, including TriTAC and ProTriTAC, to build a pipeline of product candidates and progress these product candidates through clinical development for the treatment of a variety of different types of diseases. Although our research and development efforts to date have resulted in a pipeline of product candidates directed at various cancers, we may not be able to develop product candidates that are safe and effective. Even if we are successful in continuing to build our pipeline, the potential product candidates that we identify may not be suitable for clinical development, including as a result of being shown to have harmful side effects or other characteristics that indicate that they are unlikely to be products that will receive marketing approval and achieve market acceptance. If we do not continue to successfully develop and begin to commercialize product candidates, we will face difficulty in obtaining product revenues in future periods, which could result in significant harm to our financial position and adversely affect our share price.

Risks Related to Our Financial Condition and Need for Additional Capital

We are an early clinical-stage company and have incurred significant losses since our inception. We expect to incur losses for the foreseeable future and may never achieve or maintain profitability.

We are an early clinical-stage immunotherapy company with a limited operating history. We have incurred net losses of $55.6 million, $27.4 million, and $16.8 million for the years ended December 31, 2019, 2018, and 2017, respectively. As of December 31, 2019, we had an accumulated loss of $118.2 million. Our losses have resulted principally from expenses incurred in research and development of our product candidates and from management and administrative costs and other expenses that we have incurred while building our business infrastructure. We expect to continue to incur significant operating losses for the foreseeable future as we continue our research and development efforts and seek to obtain regulatory approval and commercialization of our product candidates. We anticipate that our expenses will increase substantially as we:

- conduct our ongoing Phase 1 trial of HPN424 for the treatment of metastatic castration-resistant prostate cancer, or mCRPC;
- conduct our ongoing Phase 1/2a trial of HPN536 for the treatment of ovarian cancer and other MSLN-expressing tumors;
- initiate a Phase 1/2 trial of HPN217 for the treatment of multiple myeloma;
- initiate a clinical trial of HPN328 for the treatment of small cell lung cancer;
- continue the research and development of our other product candidates;
- continue the development of our product candidates beyond Phase 1 trials;
- seek to enhance our TriTAC and ProTriTAC platforms and discover and develop additional product candidates;
- apply for regulatory approvals for any product candidates that successfully complete clinical trials;
- potentially establish a manufacturing, sales, marketing and distribution infrastructure to produce and commercialize any products for which we may obtain regulatory approvals;
- maintain, expand and protect our intellectual property portfolio;
- add clinical, scientific, operational, financial and management information systems and personnel, including personnel to support our product development, potential future commercialization efforts and operations as a public company; and
- experience any delays or encounter any issues with any of the above, including but not limited to failed studies, complex results, manufacturing challenges, safety issues or other regulatory challenges.

We have financed our operations to date primarily through private financings, payments received under collaboration and licensing agreements, and the proceeds from our initial public offering, which was completed in February 2019. We have devoted a significant portion of our financial resources and efforts to developing our TriTAC and ProTriTAC platforms, identifying potential product candidates, conducting preclinical studies of a variety of product candidates, and preparing for and conducting clinical trials of product candidates. We are in the early stages of development of our product candidates, and we have not completed development and commercialization of any TriTAC or ProTriTAC product candidate.

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

Because of the numerous risks and uncertainties associated with pharmaceutical products and biological development, we are unable to accurately predict the timing or amount of increased expenses or when, or if, we will be able to achieve profitability. If we are required by the FDA or other regulatory authorities to perform studies in addition to those we currently anticipate, or if there are any delays in completing our clinical trials or the development of any of our product candidates, our expenses could increase and commercial revenue could be further delayed and more uncertain.

Even if we do generate product sales or royalties, we may never achieve or sustain profitability on a quarterly or annual basis. Our failure to sustain profitability would depress the market price of our common stock and could impair our ability to raise capital, expand our business, diversify our product offerings and continue our operations.

We will require additional funding in order to complete development of our product candidates and commercialize our products, if approved. If we are unable to raise capital when needed, we could be forced to delay, reduce or eliminate our product development programs or commercialization efforts.

We expect our expenses to increase in connection with our ongoing activities, particularly as we conduct our ongoing clinical trials of HPN424 and HPN536, and initial clinical development for HPN217 and HPN328, and as we continue to research and develop other potential technologies and product candidates.

In addition, if we obtain regulatory approval for any of our product candidates, we expect to incur significant commercialization expenses related to product manufacturing, marketing, sales and distribution. Furthermore, we will incur additional costs associated with operating as a public company. Accordingly, we will need to obtain substantial additional funding in connection with our continuing operations. If we are unable to raise capital when needed or on attractive terms, we could be forced to delay, reduce or eliminate our research and development programs or any future commercialization efforts.

Based on our current business plans, we believe that our existing cash and cash equivalents will be sufficient to fund our planned operations for at least the next 12 months from the date of this Annual Report. We have based this estimate on assumptions that may prove to be wrong, and we could use our capital resources sooner than we currently expect, requiring us to seek additional funds sooner than planned, through public or private equity or debt financings or other sources, such as strategic collaborations. Such financing may result in dilution to stockholders, the imposition of burdensome debt covenants and repayment obligations or other restrictions that may affect our business. If we raise additional funds through licensing or collaboration arrangements with third parties, we may have to relinquish valuable rights to our product candidates, or grant licenses on terms that are not favorable to us. In addition, we may seek additional capital due to favorable market conditions or strategic considerations even if we believe we have sufficient funds for our current or future operating plans. Attempting to secure additional financing may divert our management from our day-to-day activities, which may adversely affect our ability to develop our product candidates. Our future capital requirements will depend on many factors, including:

- the scope, progress, results and costs of developing our product candidates, and conducting preclinical studies and clinical trials, including our Phase 1 trial of HPN424 and Phase 1/2a trial of HPN536 and our planned clinical trials of HPN217 and HPN328;
- the costs, timing and outcome of regulatory review of any of our product candidates;
- the cost of manufacturing clinical supplies of our product candidates;
- the scope, progress, results and costs of preclinical development, laboratory testing and clinical trials for our product candidates;
- the costs and timing of future commercialization activities, including manufacturing, marketing, sales and distribution, for any of our product candidates for which we receive marketing approval;
- the timing and amount of any milestone, royalty or other payments we are required to make pursuant to any current or future collaboration or license agreements;
- the progress of our collaborations with AbbVie to develop product candidates;

- the costs and timing of preparing, filing and prosecuting patent applications, maintaining and enforcing our intellectual property rights and defending any intellectual property-related claims, including any claims by third parties that we are infringing upon their intellectual property rights;
- our ability to maintain existing, and establish new, strategic collaborations, licensing or other arrangements and the financial terms of any such agreements, including the timing and amount of any future milestone, royalty or other payments due under any such agreement;
- the cost of building a sales force in anticipation of product commercialization;
- the revenue, if any, received from commercial sales of our product candidates for which we receive marketing approval;
- the effect of competing technological and market developments; and
- the extent to which we acquire or invest in business, products and technologies, including our collaboration with AbbVie and any other licensing or collaboration arrangements for any of our product candidates.

Additional funds may not be available when we need them, on terms that are acceptable to us or at all. If adequate funds are not available to us on a timely basis, we could be required to:

- delay, limit, reduce or terminate preclinical studies, clinical trials or other research and development activities or eliminate one or more of our development programs altogether; or
- delay, limit, reduce or terminate our efforts to access manufacturing capacity, establish sales and marketing capabilities or other activities that may be necessary to commercialize our product candidates, or reduce our flexibility in developing or maintaining our sales and marketing strategy.

For related information, see "—Raising additional capital may cause dilution to our stockholders, restrict our operations or require us to relinquish rights to our technologies or product candidates" below.

We depend heavily on the success of our current product candidates, and we cannot guarantee that any of these product candidates will receive regulatory approval, which is necessary before they can be commercialized. If we, or any strategic partners we may enter into collaboration agreements with for the development and commercialization of our product candidates, are unable to commercialize our product candidates, or experience significant delays in doing so, our business, financial condition and results of operations will be materially adversely affected.

We have invested a significant portion of our efforts and financial resources in the development of our current product candidates. Our ability to generate product and royalty revenues, which we do not expect will occur for at least the next several years, if ever, will depend heavily on the successful development and eventual commercialization of these product candidates, which may never occur. We currently generate no revenues from sales of any products, and we may never be able to develop or commercialize a marketable product. Each of our product candidates will require significant clinical development, management of clinical, preclinical and manufacturing activities, regulatory approval in multiple jurisdictions, obtaining manufacturing supply, including commercial manufacturing supply, as well as requiring us to build a commercial organization, and make substantial investment and significant marketing efforts before we generate any revenues from product sales. We are not permitted to market or promote any of our product candidates before we receive regulatory approval from the FDA or comparable foreign regulatory authorities, and we may never receive such regulatory approval for any of our product candidates. The success of our product candidates will depend on several factors, including the following:

- for product candidates which we may license to others, the successful efforts of those parties in completing clinical trials of, receipt of regulatory approval for and commercialization of such product candidates;
- for product candidates to which we retain rights, completion of preclinical studies and clinical trials of, receipt of marketing approvals for, establishment of commercial manufacturing supplies of and successful commercialization of such product candidates; and
- for all of our product candidates, if and when approved, acceptance of such product candidates by patients, the medical community and third-party payors, effectively competing with other therapies, a continued acceptable safety profile following approval and qualifying for, maintaining, enforcing and defending our intellectual property rights and claims.

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

We have not previously submitted a Biologics License Application, or BLA, to the FDA or similar regulatory approval filings to comparable foreign authorities, for any product candidate, and we cannot be certain that any of our product candidates will be successful in clinical trials or receive regulatory approval. Further, our product candidates may not receive regulatory approval even if they are successful in clinical trials. If we do not receive regulatory approvals for our product candidates, we may not be able to continue our operations. Even if we successfully obtain regulatory approvals to market one or more of our product candidates, our revenues will be dependent, in part, upon the size of the markets in the territories for which we gain regulatory approval and have commercial rights. If the markets for patient subsets that we are targeting are not as significant as we estimate, we may not generate significant revenues from sales of such products, if approved.

We plan to seek regulatory approval to commercialize our product candidates in the United States and, potentially, in other countries. While the scope of regulatory approval is similar in other countries, to obtain separate regulatory approval in many other countries we must comply with the numerous and varying regulatory requirements of such countries regarding safety and efficacy and governing, among other things, clinical trials and commercial sales, pricing and distribution of our product candidates, and we cannot predict success in these jurisdictions.

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

Since commencing operations in 2015, we have devoted a significant portion of our resources to developing our product candidates, our other research and development efforts, building our intellectual property portfolio, raising capital and providing general and administrative support for these operations. While we have ongoing early stage clinical trials, we have not completed any clinical trials for any product candidate. We have not yet demonstrated our ability to successfully complete any clinical trials (including any Phase 3 or other pivotal clinical trials), obtain regulatory approvals, manufacture a commercial scale product or arrange for a third party to do so on our behalf or conduct sales and marketing activities necessary for successful product commercialization. Additionally, we expect our financial condition and operating results to continue to fluctuate significantly from period to period due to a variety of factors, many of which are beyond our control. Consequently, any predictions you make about our future success or viability may not be as accurate as they could be if we had a longer operating history.

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

Until such time, if ever, as we can generate substantial product revenues, we expect to finance our cash needs through equity or debt financings and upfront and milestone payments, if any, received under our collaborations with AbbVie and any other future licenses or collaborations, together with our existing cash and cash equivalents. In order to accomplish our business objectives and further develop our product pipeline, we will, however, need to seek additional funds. If we raise additional capital through the sale of equity or convertible debt securities, your ownership interest will be diluted, and the terms of these securities may include liquidation or other preferences that adversely affect your rights as a holder of our common stock. In addition, the possibility of such issuance may cause the market price of our common stock to decline. Debt financing, if available, may result in increased fixed payment obligations and involve agreements that include covenants limiting or restricting our ability to take specific actions, such as incurring additional debt, making capital expenditures, declaring dividends or acquiring, selling or licensing intellectual property rights, which could adversely impact our ability to conduct our business.

If we raise additional funds through collaborations, strategic alliances or marketing, distribution or licensing arrangements with third parties, we may have to relinquish valuable rights to our intellectual property, technologies, future revenue streams or product candidates or grant licenses on terms that may not be favorable to us. We could also be required to seek funds through arrangements with collaborators or others at an earlier stage than otherwise would be desirable. Any of these occurrences may have a material adverse effect on our business, operating results and prospects.

Any additional fundraising efforts may divert our management from their day-to-day activities, which may adversely affect our ability to develop and commercialize our product candidates. In addition, we cannot guarantee that future financing will be available in sufficient amounts or on terms acceptable to us, if at all. If we are unable to obtain funding on a timely basis, we may be required to significantly curtail, delay or discontinue one or more of our research or development programs or the commercialization of any of our product candidates, or be unable to expand our operations or otherwise capitalize on our business opportunities, as desired, which could materially affect our business, financial condition and results of operations.

Risks Related to Our Regulatory Environment

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

Healthcare providers, healthcare facilities and institutions, physicians and third-party payors in the United States and elsewhere will play a primary role in the recommendation and prescription of any product candidates for which we obtain marketing approval. Our current and future arrangements with healthcare professionals, healthcare facilities and institutions, principal investigators, consultants, customers and third-party payors may expose us to broadly applicable fraud and abuse and other healthcare laws, including, without limitation, the federal Anti-Kickback Statute and the federal False Claims Act, that may constrain the business or financial arrangements and relationships through which we sell, market and distribute any product candidates for which we obtain marketing approval. In addition, we may be subject to physician payment transparency laws and patient privacy and security regulation by the federal government and by the states and foreign jurisdictions in which we conduct our business. The applicable federal, state and foreign healthcare laws that affect our ability to operate include, but are not limited to, the following:

- the federal Anti-Kickback Statute, which prohibits, among other things, persons or entities from knowingly and willfully soliciting, offering, receiving or providing any remuneration (including any kickback, bribe, or certain rebate), directly or indirectly, overtly or covertly, in cash or in kind, to induce or reward, or in return for, either the referral of an individual for, or the purchase, lease, order or recommendation of, any good, facility, item or service, for which payment may be made, in whole or in part, under any U.S. federal healthcare program, such as Medicare and Medicaid. The term “remuneration” has been broadly interpreted to include anything of value, including stock options. The federal Anti-Kickback Statute has also been interpreted to apply to arrangements between pharmaceutical manufacturers on the one hand and prescribers, purchasers and formulary managers on the other the other hand. Any arrangements with prescribers must be for bona fide services and compensated at fair market value. A person or entity does not need to have actual knowledge of the statute or specific intent to violate it in order to have committed a violation;
- the U.S. federal civil and criminal false claims, including the False Claims Act, which prohibit, among other things, including through civil whistleblower or qui tam actions, and civil monetary penalties laws, including the civil False Claims Act, which prohibit, among other things, individuals or entities from knowingly presenting, or causing to be presented, to the U.S. federal government, claims for payment or approval that are false or fraudulent, knowingly making, using or causing to be made or used, a false record or statement material to a false or fraudulent claim, or from knowingly making a false statement to avoid, decrease or conceal an obligation to pay money to the U.S. federal government. Pharmaceutical manufacturers can cause false claims to be presented to the U.S. federal government by, among other things, engaging in impermissible marketing practices, such as the off-label promotion of a product for an indication for which it has not received FDA approval. In addition, the government may assert that a claim including items and services resulting from a violation of the federal Anti-Kickback Statute constitutes a false or fraudulent claim for purposes of the civil False Claims Act;
- the federal Health Insurance Portability and Accountability Act of 1996, or HIPAA, which imposes criminal and civil liability for, among other things, knowingly and willfully executing, or attempting to execute, a scheme to defraud any healthcare benefit program, or knowingly and willfully falsifying, concealing or covering up a material fact or making any materially false statement, in connection with the delivery of, or payment for, healthcare benefits, items or services. Similar to the federal Anti-Kickback Statute, a person or entity does not need to have actual knowledge of the healthcare fraud statute implemented under HIPAA or specific intent to violate it in order to have committed a violation;
- HIPAA, as amended by the Health Information Technology for Economic and Clinical Health Act of 2009, or HITECH, and their respective implementing regulations, which also imposes certain obligations, including mandatory contractual terms, with respect to safeguarding the privacy and security of individually identifiable health information of covered entities subject to the rule, such as health plans, healthcare clearinghouses and certain healthcare providers as well as their business associates, independent contractors of a covered entity that perform certain services involving the use or disclosure of individually identifiable health information on its behalf;
- the U.S. Federal Food, Drug, and Cosmetic Act, which prohibits, among other things, the adulteration or misbranding of drugs, biologics and medical devices;
- the U.S. Public Health Service Act, which prohibits, among other things, the introduction into interstate commerce of a biological product unless a biologics license is in effect for that product;

- the U.S. Physician Payments Sunshine Act and its implementing regulations, which requires, among other things, certain manufacturers of drugs, devices, biologics and medical supplies that are reimbursable under Medicare, Medicaid, or the Children's Health Insurance Program, with specific exceptions, to report annually to the Centers for Medicare and Medicaid Services, or CMS, information related to certain payments and other transfers of value to physicians, as defined by such law, and teaching hospitals, as well as ownership and investment interests held by physicians and their immediate family members;
- analogous U.S. state laws and regulations, including: state anti-kickback and false claims laws, which may apply to our business practices, including but not limited to, research, distribution, sales and marketing arrangements and claims involving healthcare items or services reimbursed by any third-party payor, including private insurers; state laws that require pharmaceutical companies to comply with the pharmaceutical industry's voluntary compliance guidelines and the relevant compliance guidance promulgated by the U.S. federal government, or otherwise restrict payments that may be made to healthcare providers and other potential referral sources; state laws and regulations that require drug manufacturers to file reports relating to pricing and marketing information, which requires tracking gifts and other remuneration and items of value provided to healthcare professionals and entities; state and local laws requiring the registration of pharmaceutical sales representatives; and state laws governing the privacy and security of health information in certain circumstances, many of which differ from each other in significant ways and often are not preempted by HIPAA, thus complicating compliance efforts; and
- similar healthcare laws and regulations in foreign jurisdictions, including reporting requirements detailing interactions with and payments to healthcare providers.

We may also be subject to federal consumer protection and unfair competition laws, which broadly regulate marketplace activities and activities that could potentially harm consumers.

Ensuring that our internal operations and future business arrangements with third parties comply with applicable healthcare laws and regulations will involve substantial costs. We have adopted a code of business conduct and ethics, but it is not always possible to identify and deter employee misconduct or business noncompliance, and the precautions we take to detect and prevent inappropriate conduct may not be effective in controlling unknown or unmanaged risks or losses or in protecting us from governmental investigations or other actions or lawsuits stemming from a failure to be in compliance with such laws or regulations. Efforts to ensure that our business arrangements will comply with applicable healthcare laws may involve substantial costs. We have entered into consulting and scientific advisory board arrangements with physicians and other healthcare providers, including some who could influence the use of our product candidates, if approved. Compensation under some of these arrangements includes the provision of stock or stock options in addition to cash consideration. Because of the complex and far-reaching nature of these laws, it is possible that governmental authorities could conclude that our payments to physicians may not be fair market value for bona fide services or that our business practices do not comply with current or future statutes, regulations, agency guidance or case law involving applicable fraud and abuse or other healthcare laws and regulations. If our operations are found to be in violation of any of the laws described above or any other governmental laws and regulations that may apply to us, we may be subject to significant penalties, including civil, criminal and administrative penalties, damages, fines, exclusion from government-funded healthcare programs, such as Medicare and Medicaid or similar programs in other countries or jurisdictions, integrity oversight and reporting obligations to resolve allegations of non-compliance, disgorgement, imprisonment, contractual damages, reputational harm, diminished profits and the curtailment or restructuring of our operations. If any of the physicians or other providers or entities with whom we expect to do business are found to not be in compliance with applicable laws, they may be subject to criminal, civil or administrative sanctions, including exclusions from government funded healthcare programs and imprisonment, which could affect our ability to operate our business. Further, defending against any such actions can be costly, time-consuming and may require significant personnel resources. Therefore, even if we are successful in defending against any such actions that may be brought against us, our business may be impaired.

The development and commercialization of biopharmaceutical products is subject to extensive regulation, and the regulatory approval processes of the FDA and comparable foreign authorities are lengthy, time consuming and inherently unpredictable. If we are ultimately unable to obtain regulatory approval for our product candidates on a timely basis if at all, our business will be substantially harmed.

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

FDA approval is not guaranteed, and the time required to obtain approval by the FDA and comparable foreign authorities is unpredictable but typically takes many years following the commencement of clinical trials and depends upon numerous factors, including the substantial discretion of the regulatory authorities. In addition, approval policies, regulations, or the type and amount of clinical data necessary to gain approval may change during the course of a product candidate's clinical development and may vary among jurisdictions. We have not obtained regulatory approval for any product candidate and it is possible that none of our existing product candidates or any product candidates we may seek to develop in the future will ever obtain regulatory approval.

Our product candidates could fail to receive regulatory approval for many reasons, including the following:

- the FDA or comparable foreign regulatory authorities may disagree with the design or implementation of our clinical trials;
- we may be unable to demonstrate to the satisfaction of the FDA or comparable foreign regulatory authorities that a product candidate is safe and effective for its proposed indication;
- the results of clinical trials may not meet the level of statistical significance required by the FDA or comparable foreign regulatory authorities for approval;
- we may be unable to demonstrate that a product candidate's clinical and other benefits outweigh its safety risks;
- the FDA or comparable foreign regulatory authorities may disagree with our interpretation of data from preclinical studies or clinical trials;
- the data collected from clinical trials of our product candidates may not be sufficient to support the submission of a BLA or other submission or to obtain regulatory approval in the United States or elsewhere, or regulatory authorities may not accept a submission due to, among other reasons, the content or formatting of the submission;
- the FDA or comparable foreign regulatory authorities may fail to approve the manufacturing processes or facilities of third-party manufacturers with which we contract for clinical and commercial supplies;
- the FDA or comparable foreign regulatory authorities may fail to approve the companion diagnostics we contemplate developing with collaborators; and
- the approval policies or regulations of the FDA or comparable foreign regulatory authorities may significantly change in a manner rendering our clinical data insufficient for approval.

This lengthy approval process, as well as the unpredictability of future clinical trial results, may result in our failing to obtain regulatory approval to market any of our product candidates, which would significantly harm our business, results of operations and prospects. The FDA and other regulatory authorities have substantial discretion in the approval process, and determining when or whether regulatory approval will be obtained for any of our product candidates. For example, regulatory authorities in various jurisdictions have in the past had, and may in the future have, differing requirements for, interpretations of and opinions on our preclinical and clinical data. As a result, we may be required to conduct additional preclinical studies, alter our proposed clinical trial designs or conduct additional clinical trials to satisfy the regulatory authorities in each of the jurisdictions in which we hope to conduct clinical trials and develop and market our products, if approved. Further, even if we believe the data collected from clinical trials of our product candidates are promising, such data may not be sufficient to support approval by the FDA or any other regulatory authority.

In addition, even if we were to obtain approval, regulatory authorities may approve any of our product candidates for fewer or more limited indications than we request, may not approve the price we intend to charge for our products, may grant approval contingent on the performance of costly post-marketing clinical trials, or may approve a product candidate with a label that does not include the labeling claims necessary or desirable for the successful commercialization of that product candidate. Any of the foregoing scenarios could materially harm the commercial prospects for our product candidates.

Even if our product candidates obtain regulatory approval, we will be subject to ongoing obligations and continued regulatory review, which may result in significant additional expense. Additionally, our product candidates, if approved, could be subject to labeling and other restrictions and market withdrawal and we may be subject to penalties if we fail to comply with regulatory requirements or experience unanticipated problems with our products.

If the FDA or a comparable foreign regulatory authority approves any of our product candidates, the manufacturing processes, labeling, packaging, distribution, import, export, adverse event reporting, storage, advertising, promotion and recordkeeping for the product will be subject to extensive and ongoing regulatory requirements. These requirements include submissions of safety and other post-marketing information and reports, registration, as well as continued compliance with cGMPs and GCPs for any clinical trials that we conduct post-approval, all of which may result in significant expense and limit our ability to commercialize such products. In addition, any regulatory approvals that we receive for our product candidates may also be subject to limitations on the approved indicated uses for which the product may be marketed or to the conditions of approval, or contain requirements for potentially costly post-marketing testing, including Phase 4 clinical trials, and surveillance to monitor the safety and efficacy of the product candidate.

Manufacturers and manufacturers' facilities are required to comply with extensive FDA and comparable foreign regulatory authority requirements, including ensuring that quality control and manufacturing procedures conform to cGMP regulations. As such, we and our contract manufacturers will be subject to continual review and inspections to assess compliance with cGMP and adherence to commitments made in any approved marketing application. Accordingly, we and others with whom we work must continue to expend time, money, and effort in all areas of regulatory compliance, including manufacturing, production, and quality control.

If there are changes in the application of legislation or regulatory policies, or if problems are discovered with a product or our manufacture of a product, or if we or one of our distributors, licensees or co-marketers fails to comply with regulatory requirements, the regulators could take various actions. These include imposing fines on us, imposing restrictions on the product or its manufacture and requiring us to recall or remove the product from the market. The regulators could also suspend or withdraw our marketing authorizations, requiring us to conduct additional clinical trials, change our product labeling or submit additional applications for marketing authorization. If any of these events occurs, our ability to sell such product may be impaired, and we may incur substantial additional expense to comply with regulatory requirements, which could materially adversely affect our business, financial condition and results of operations.

In addition, if we have any product candidate approved, our product labeling, advertising and promotion will be subject to regulatory requirements and continuing regulatory review. The FDA strictly regulates the promotional claims that may be made about pharmaceutical products. In particular, a product may not be promoted for uses that are not approved by the FDA as reflected in the product's approved labeling. If we receive marketing approval for a product candidate, physicians may nevertheless prescribe it to their patients in a manner that is inconsistent with the approved label. If we are found to have promoted such off-label uses, we may become subject to significant liability. The FDA and other agencies actively enforce the laws and regulations prohibiting the promotion of off-label uses, and a company that is found to have improperly promoted off-label uses may be subject to significant sanctions. The federal government has levied large civil and criminal fines against companies for alleged improper promotion and has enjoined several companies from engaging in off-label promotion. The FDA has also requested that companies enter into consent decrees or permanent injunctions under which specified promotional conduct is changed or curtailed.

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

- issue warning letters;
- impose civil or criminal penalties;
- suspend or withdraw regulatory approval;
- suspend any of our preclinical studies and clinical trials;
- refuse to approve pending applications or supplements to approved applications submitted by us;
- impose restrictions on our operations, including closing our contract manufacturers' facilities; or
- seize or detain products, or require a product recall.

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

Moreover, the policies of the FDA and of other regulatory authorities may change and additional government regulations may be enacted that could prevent, limit or delay regulatory approval of our product candidates. We cannot predict the likelihood, nature or extent of government regulation that may arise from future legislation or administrative or executive action, either in the United States or abroad. For example, certain policies of the Trump administration may impact our business and industry. Namely, the Trump administration has taken several executive actions, including the issuance of a number of Executive Orders, that could impose significant burdens on, or otherwise materially delay, the FDA's ability to engage in routine oversight activities such as implementing statutes through rulemaking, issuance of guidance, and review and approval of marketing applications. It is difficult to predict how these orders will be implemented, and the extent to which they will impact the FDA's ability to exercise its regulatory authority. If these executive actions impose restrictions on the FDA's ability to engage in oversight and implementation activities in the normal course, our business may be negatively impacted. In addition, if we are slow or unable to adapt to changes in existing requirements or the adoption of new requirements or policies, or if we are not able to maintain regulatory compliance, we may lose any marketing approval that we may have obtained and we may not achieve or sustain profitability.

We may pursue the development of our product candidates in combination with other approved therapeutics. If the FDA revokes approval of any such therapeutic, or if safety, efficacy, manufacturing or supply issues arise with any therapeutic that we use in combination with one of our product candidates in the future, we may be unable to further develop and/or market our product candidate or we may experience significant regulatory delays or supply shortages, and our business could be materially harmed.

We may pursue the development of our product candidates in combination with other approved therapeutics, and we may commence clinical trials of our product candidates in combination with other approved therapeutics, in the future. In such a case, we will not have developed or obtained regulatory approval for, nor will we manufacture or sell, any of these approved therapeutics. In addition, the combinations will likely not have been previously tested and may, among other things, fail to demonstrate synergistic activity, may fail to achieve superior outcomes relative to the use of single agents or other combination therapies, may exacerbate adverse events associated with one of our product candidates when used as monotherapy or may fail to demonstrate sufficient safety or efficacy traits in clinical trials to enable us to complete those clinical trials or obtain marketing approval for the combination therapy.

If the FDA revokes its approval of any combination therapeutic, we would not be able to continue clinical development of or market any product candidate in combination with such revoked therapeutic. If safety or efficacy issues were to arise with therapeutics that we seek to combine with, we could experience significant regulatory delays, and the FDA could require us to redesign or terminate the applicable clinical trials. In addition, we may need, for supply, data referencing or other purposes, to collaborate or otherwise engage with the companies who market these approved therapeutics. If we are unable to do so on a timely basis, on acceptable terms or at all, we may have to curtail the development of a product candidate or indication, reduce or delay its development program, delay its potential commercialization or reduce the scope of any sales or marketing activities.

Because we are subject to environmental, health and safety laws and regulations, we may become exposed to liability and substantial expenses in connection with environmental compliance or remediation activities which may adversely affect our business and financial condition.

Our operations, including our research, development, testing and manufacturing activities, are subject to numerous environmental, health and safety laws and regulations. These laws and regulations govern, among other things, the controlled use, handling, release and disposal of, and the maintenance of a registry for, hazardous materials and biological materials, such as chemical solvents, human cells, carcinogenic compounds, mutagenic compounds and compounds that have a toxic effect on reproduction, laboratory procedures and exposure to blood-borne pathogens. If we fail to comply with such laws and regulations, we could be subject to fines or other sanctions. Although we believe our procedures for using, handling, storing and disposing of these materials comply with legally prescribed standards, we cannot completely eliminate the risk of contamination or injury resulting from hazardous and biological materials. As a result of any such contamination or injury, we may incur liability or local, city, state or federal authorities may curtail the use of these materials and interrupt our business operations. In the event of an accident, we could be held liable for damages or penalized with fines, and the liability could exceed our resources.

As with other companies engaged in activities similar to ours, we face a risk of environmental liability inherent in our current and historical activities, including liability relating to releases of or exposure to hazardous or biological materials. Environmental, health and safety laws and regulations are becoming more stringent. We may be required to incur substantial expenses in connection with future environmental compliance or remediation activities, in which case, our production and development efforts may be interrupted or delayed and our financial condition and results of operations may be materially adversely affected.

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

We are exposed to the risk of employee fraud or other misconduct. Misconduct by employees could include intentional failures to comply with FDA regulations, provide accurate information to the FDA, comply with manufacturing standards we may establish, comply with federal and state healthcare fraud and abuse laws and regulations, report financial information or data accurately or disclose unauthorized activities to us. In particular, sales, marketing and business arrangements in the healthcare industry are subject to extensive laws and regulations intended to prevent fraud, kickbacks, self-dealing and other abusive practices. These laws and regulations may restrict or prohibit a wide range of pricing, discounting, marketing and promotion, sales commission, customer incentive programs and other business arrangements. Employee misconduct could also involve the improper use of information obtained in the course of clinical trials, which could result in regulatory sanctions and serious harm to our reputation. It is not always possible to identify and deter employee misconduct, and the precautions we take to detect and prevent this activity may not be effective in controlling unknown or unmanaged risks or losses or in protecting us from governmental investigations or other actions or lawsuits stemming from a failure to be in compliance with such laws or regulations. If any such actions are instituted against us, and we are not successful in defending ourselves or asserting our rights, those actions could have a material and adverse effect on our business, financial condition, results of operations and prospects, including the imposition of significant civil, criminal and administrative penalties, damages, monetary fines, individual imprisonment, disgorgement of profits, possible exclusion from participation in Medicare, Medicaid and other federal healthcare programs, contractual damages, reputational harm, diminished profits and future earnings, additional reporting or oversight obligations if we become subject to a corporate integrity agreement or other agreement to resolve allegations of non-compliance with the law and curtailment or restructuring of our operations, any of which could adversely affect our ability to operate our business and pursue our strategy.

Current and future legislation may increase the difficulty and cost for us and any future collaborators to obtain marketing approval of and commercialize our product candidates and affect the prices we, or they, may obtain.

In the United States and other jurisdictions, there have been, and we expect there will continue to be, a number of legislative and regulatory changes and proposed changes to the healthcare system that could affect our future results of operations. In particular, there have been and continue to be a number of initiatives at the U.S. federal and state levels that seek to reduce healthcare costs and improve the quality of healthcare. For example, in March 2010, the Patient Protection and Affordable Care Act, as amended by the Health Care and Education Reconciliation Act, or collectively the ACA, was enacted, which substantially changed the way healthcare is financed by both governmental and private payors. Among the provisions of the ACA of importance to the pharmaceutical and biotechnology industries are the following:

- an annual, nondeductible fee on any entity that manufactures or imports certain specified branded prescription drugs and biologic agents apportioned among these entities according to their market share in some government healthcare programs;
- an increase in the statutory minimum rebates a manufacturer must pay under the Medicaid Drug Rebate Program, to 23.1% and 13% of the average manufacturer price for most branded and generic drugs, respectively and capped the total rebate amount for innovator drugs at 100% of the Average Manufacturer Price,
- a new methodology by which rebates owed by manufacturers under the Medicaid Drug Rebate Program are calculated for certain drugs and biologics, including our product candidates, that are inhaled, infused, instilled, implanted or injected;
- extension of manufacturers' Medicaid rebate liability to covered drugs dispensed to individuals who are enrolled in Medicaid managed care organizations;
- expansion of eligibility criteria for Medicaid programs by, among other things, allowing states to offer Medicaid coverage to additional individuals and by adding new mandatory eligibility categories for individuals with income at or below 133% of the federal poverty level, thereby potentially increasing manufacturers' Medicaid rebate liability;
- expansion of the entities eligible for discounts under the Public Health program;
- a new Patient-Centered Outcomes Research Institute to oversee, identify priorities in, and conduct comparative clinical effectiveness research, along with funding for such research;
- establishment of a Center for Medicare Innovation at CMS to test innovative payment and service delivery models to lower Medicare and Medicaid spending, potentially including prescription drug spending; and
- a licensure framework for follow on biologic products.

There remain judicial and Congressional challenges to certain aspects of the ACA, as well as efforts by the Trump administration to repeal or replace certain aspects of the. For example, the Tax Cuts and Jobs Act of 2017, or the Tax Act, was enacted, which includes a provision repealing, effective January 1, 2019, the tax-based shared responsibility payment imposed by the ACA on certain individuals who fail to maintain qualifying health coverage for all or part of a year that is commonly referred to as the "individual mandate." Since the enactment of the Tax Act, there have been additional amendments to certain provisions of the ACA. On December 14, 2018, a Texas U.S. District Court Judge ruled that the ACA is unconstitutional in its entirety because the "individual mandate" was repealed by Congress as part of the Tax Act. Additionally, on December 18, 2019, the U.S. Court of Appeals for the 5th Circuit upheld the District Court ruling that the individual mandate was unconstitutional and remanded the case back to the District Court to determine whether the remaining provisions of the ACA are invalid as well. It is unclear how this decision, future decisions, subsequent appeals, and other efforts to repeal and replace the ACA will impact the ACA and our business.

In addition, other legislative changes have been proposed and adopted in the United States since the ACA was enacted. In August 2011, the Budget Control Act of 2011, among other things, led to aggregate reductions of Medicare payments to providers of 2% per fiscal year. These reductions went into effect in April 2013 and, due to subsequent legislative amendments to the statute, will remain in effect through 2029 unless additional action is taken by Congress. In January 2013, the American Taxpayer Relief Act of 2012 was signed into law, which, among other things, further reduced Medicare payments to several types of providers, including hospitals, imaging centers and cancer treatment centers, and increased the statute of limitations period for the government to recover overpayments to providers from three to five years. These new laws or any other similar laws introduced in the future may result in additional reductions in Medicare and other healthcare funding, which could negatively affect our customers and accordingly, our financial operations.

Moreover, payment methodologies may be subject to changes in healthcare legislation and regulatory initiatives. For example, CMS may develop new payment and delivery models, such as bundled payment models. In addition, recently there has been heightened governmental scrutiny over the manner in which manufacturers set prices for their marketed products, which has resulted in several U.S. Congressional inquiries and proposed and enacted federal and state legislation designed to, among other things, bring more transparency to drug pricing, reduce the cost of prescription drugs under government payor programs, and review the relationship between pricing and manufacturer patient programs. The Trump administration's budget proposal for fiscal year 2020 contains further drug price control measures that could be enacted during the budget process or in other future legislation, including, for example, measures to permit Medicare Part D plans to negotiate the price of certain drugs under Medicare Part B, to allow some states to negotiate drug prices under Medicaid, and to eliminate cost sharing for generic drugs for low-income patients. Further, the Trump administration released a "Blueprint" to lower drug prices and reduce out of pocket costs of drugs that contains additional proposals to increase manufacturer competition, increase the negotiating power of certain federal healthcare programs, incentivize manufacturers to lower the list price of their products and reduce the out of pocket costs of drug products paid by consumers. The U.S. Department of Health and Human Services has solicited feedback on certain of these measures and has implemented others under its existing authority. For example, in May 2019, CMS issued a final rule to allow Medicare Advantage plans the option to use step therapy for Part B drugs beginning January 1, 2020. This final rule codified CMS's policy change that was effective January 1, 2019. Although a number of these and other measures may require authorization to become effective, Congress and the Trump administration have each indicated that it will continue to seek new legislative and/or administrative measures to control drug costs. We expect that additional U.S. federal healthcare reform measures will be adopted in the future, any of which could limit the amounts that the U.S. federal government will pay for healthcare products and services, which could result in reduced demand for our product candidates or additional pricing pressures.

Individual states in the United States have also increasingly passed legislation and implemented regulations designed to control pharmaceutical and biological product pricing, including price or patient reimbursement constraints, discounts, restrictions on certain product access and marketing cost disclosure and transparency measures, and, in some cases, designed to encourage importation from other countries and bulk purchasing. Legally mandated price controls on payment amounts by third-party payors or other restrictions could harm our business, results of operations, financial condition and prospects. In addition, regional healthcare authorities and individual hospitals are increasingly using bidding procedures to determine what pharmaceutical products and which suppliers will be included in their prescription drug and other healthcare programs. This could reduce the ultimate demand for our product candidates or put pressure on our product pricing.

In the European Union, similar political, economic and regulatory developments may affect our ability to profitably commercialize our product candidates, if approved. In addition to continuing pressure on prices and cost containment measures, legislative developments at the European Union or member state level may result in significant additional requirements or obstacles that may increase our operating costs. The delivery of healthcare in the European Union, including the establishment and operation of health services and the pricing and reimbursement of medicines, is almost exclusively a matter for national, rather than E.U., law and policy. National governments and health service providers have different priorities and approaches to the delivery of healthcare and the pricing and reimbursement of products in that context. In general, however, the healthcare budgetary constraints in most E.U. member states have resulted in restrictions on the pricing and reimbursement of medicines by relevant health service providers. Coupled with ever-increasing European Union and national regulatory burdens on those wishing to develop and market products, this could prevent or delay marketing approval of our product candidates, restrict or regulate post-approval activities and affect our ability to commercialize our product candidates, if approved. In markets outside of the United States and European Union, reimbursement and healthcare payment systems vary significantly by country, and many countries have instituted price ceilings on specific products and therapies.

We cannot predict the likelihood, nature or extent of government regulation that may arise from future legislation or administrative action in the United States or any other jurisdiction. If we or any third parties we may engage are slow or unable to adapt to changes in existing requirements or the adoption of new requirements or policies, or if we or such third parties are not able to maintain regulatory compliance, our product candidates may lose any regulatory approval that may have been obtained and we may not achieve or sustain profitability.

Even if we are able to commercialize any product candidate, coverage and adequate reimbursement may not be available or such product candidate may become subject to unfavorable pricing regulations or third-party coverage and reimbursement policies, which would harm our business.

The regulations that govern regulatory approvals, pricing and reimbursement for drugs products vary widely from country to country. Some countries require approval of the sale price of a drug product before it can be marketed. In many countries, the pricing review period begins after marketing approval is granted. In some foreign markets, prescription drug product pricing remains subject to continuing governmental control even after initial approval is granted. As a result, we might obtain regulatory approval for a product in a particular country, but then be subject to price regulations that delay our commercial launch of the product, possibly for lengthy time periods and negatively impact the revenues we are able to generate from the sale of the product in that country. Adverse pricing limitations may hinder our ability to recoup our investment in one or more product candidates, even if our product candidates obtain regulatory approval.

Our ability to commercialize any products successfully also will depend in part on the extent to which coverage and adequate reimbursement for these products and related treatments will be available from third party payors, such as government authorities, private health insurers and other organizations. Even if we succeed in bringing one or more products to the market, these products may not be considered cost-effective, and the amount reimbursed for any products may be insufficient to allow us to sell our products on a competitive basis. Because our programs are in the early stages of development, we are unable at this time to determine their cost effectiveness or the likely level or method of coverage and reimbursement. Increasingly, the third-party payors who reimburse patients or healthcare providers are requiring that drug companies provide them with predetermined discounts from list prices, and are seeking to reduce the prices charged or the amounts reimbursed for drug products. If the price we are able to charge for any products we develop, or the coverage and reimbursement provided for such products, is inadequate in light of our development and other costs, our return on investment could be affected adversely.

There may be significant delays in obtaining reimbursement for newly-approved drug products, and coverage may be more limited than the purposes for which the drug product is approved by the FDA or similar foreign regulatory authorities. Moreover, eligibility for reimbursement does not imply that any drugs product will be reimbursed in all cases or at a rate that covers our costs, including research, development, manufacture, sale and distribution.

Interim reimbursement levels for new drug products, if applicable, may also be insufficient to cover our costs and may not be made permanent. Reimbursement rates may be based on payments allowed for lower cost drug products that are already reimbursed, may be incorporated into existing payments for other services and may reflect budgetary constraints or imperfections in Medicare data. Net prices for drug products may be reduced by mandatory discounts or rebates required by third party payors and by any future relaxation of laws that presently restrict imports of drug products from countries where they may be sold at lower prices than in the United States. Obtaining coverage and adequate reimbursement for our product candidates may be particularly difficult because of the higher prices often associated with drugs administered under the supervision of a physician. Similarly, because our product candidates are physician-administered injectables, separate reimbursement for the product itself may or may not be available. Instead, the administering physician may or may not be reimbursed for providing the treatment or procedure in which our product is used.

Further, no uniform policy for coverage and reimbursement exists in the United States, and coverage and reimbursement can differ significantly from payor to payor. Third-party payors often rely upon Medicare coverage policy and payment limitations in setting their own reimbursement rates, but also have their own methods and approval process apart from Medicare determinations. As a result, the coverage determination process is often a time-consuming and costly process that will require us to provide scientific and clinical support for the use of our product candidates to each payor separately, with no assurance that coverage and adequate reimbursement will be applied consistently or obtained in the first instance. Decisions regarding the extent of coverage and amount of reimbursement to be provided for any product candidates that we develop will be made on a payor-by-payor basis. One payor's determination to provide coverage for a drug does not assure that other payors will also provide coverage and adequate reimbursement for the drug. Additionally, a third-party payor's decision to provide coverage for a therapy does not imply that an adequate reimbursement rate will be approved.

Additionally, we may develop companion diagnostic tests for use with our product candidates. We, or our collaborators, will be required to obtain coverage and reimbursement for these tests separate and apart from the coverage and reimbursement we seek for our product candidates, once approved. While we have not yet developed any companion diagnostic test for our product candidates, if we do, there is significant uncertainty regarding our ability to obtain coverage and adequate reimbursement for the same reasons applicable to our product candidates.

Our inability to promptly obtain coverage and adequate reimbursement from both third-party payors for the product candidates and companion diagnostic tests that we develop and for which we obtain regulatory approval could have a material and adverse effect on our business, financial condition, results of operations and prospects.

We face potential liability related to the privacy of health information we obtain from clinical trials sponsored by us or our collaborators, from research institutions and our collaborators, and directly from individuals.

Most healthcare providers, including research institutions from which we or our collaborators obtain patient health information, are subject to privacy and security regulations promulgated under HIPAA, as amended by HITECH. Any person may be prosecuted under HIPAA's criminal provisions either directly or under aiding-and-abetting or conspiracy principles. Consequently, depending on the facts and circumstances, we could face substantial criminal penalties if we knowingly receive individually identifiable health information from a HIPAA-covered healthcare provider or research institution that has not satisfied HIPAA's requirements for disclosure of individually identifiable health information. In addition, we may maintain sensitive personally identifiable information, including health information, that we receive throughout the clinical trial process, in the course of our research collaborations, and directly from individuals (or their healthcare providers) who enroll in our patient assistance programs. As such, we may be subject to state laws requiring notification of affected individuals and state regulators in the event of a breach of personal information, which is a broader class of information than the individually identifiable health information protected by HIPAA.

Our clinical trial programs and research collaborations outside the U.S. may implicate international data protection laws, including, in Europe, the EU Data Protection Directive and, beginning on May 25, 2018, the General Data Protection Regulation, or the GDPR, that is replacing it. The GDPR will implement more stringent operational requirements for processors and controllers of personal data. It also significantly increases penalties for non-compliance. If our privacy or data security measures fail to comply with the GDPR requirements, we may be subject to litigation, regulatory investigations, enforcement notices requiring us to change the way we use personal data and/or fines of up to 20.0 million Euros or up to 4% of the total worldwide annual turnover of the preceding financial year, whichever is higher. In addition to statutory enforcement, a personal data breach can lead to negative publicity and a potential loss of business.

We are also subject to evolving E.U. laws on data export, as we may transfer personal data from the European Union to other jurisdictions. There is currently litigation challenging E.U. mechanisms for adequate data transfer. It is uncertain whether these mechanisms will be invalidated by the E.U. courts. We could be impacted by changes in law as a result of the current challenges to these mechanisms, which may lead to governmental enforcement actions, litigation, fines and penalties or adverse publicity that could have an adverse effect on our business.

We are likely to be required to expend significant capital and other resources to ensure ongoing compliance with applicable privacy and data security laws both inside and outside the United States. Claims that we have violated individuals' privacy rights or breached our contractual obligations, even if we are not found liable, could be expensive and time-consuming to defend and could result in adverse publicity that could harm our business.

If we or any collaborators fail to comply with applicable federal, state, or local regulatory requirements, we could be subject to a range of regulatory actions that could affect our or any collaborators' ability to seek to commercialize our clinical candidates. Any threatened or actual government enforcement action could also generate adverse publicity and require that we devote substantial resources that could otherwise be used in other aspects of our business.

Risks Related to Our Business Operations

Manufacturing our TriTAC and ProTriTAC product candidates is complex. We and our third-party manufacturers may encounter difficulties in production. If we encounter any such difficulties, our ability to supply our product candidates for clinical trials or, if approved, for commercial sale could be delayed or halted entirely.

The manufacture of biopharmaceutical products is complex and requires significant expertise and capital investment, including the development of advanced manufacturing techniques and process controls. The process of manufacturing our product candidates is extremely susceptible to product loss due to contamination, equipment failure or improper installation or operation of equipment, vendor or operator error, inconsistency in yields, variability in product characteristics and difficulties in scaling the production process. Even minor deviations from normal manufacturing processes could result in reduced production yields, product defects and other supply disruptions. If microbial, viral or other contaminations are discovered in our product candidates or in the manufacturing facilities in which our product candidates are made, such manufacturing facilities may need to be closed for an extended period of time to investigate and remedy the contamination. All of our TriTACs and ProTriTACs are manufactured from a vial of a master cell bank of that antibody's production cell line. We have or intend to have one master cell bank for each TriTAC and ProTriTAC that was or will be produced and tested in accordance with current good manufacturing practice, or cGMP, and applicable regulations. Each master cell bank is or will be stored in two independent locations, and we intend to produce working cell banks for each product candidate later in product development. It is possible that we could lose multiple cell banks from multiple locations and have our manufacturing severely impacted by the need to replace the cell banks. However, we believe we have adequate backup should any particular cell bank be lost in a catastrophic event. Any adverse developments affecting manufacturing operations for our product candidates, if any are approved, may result in shipment delays, inventory shortages, lot failures, product withdrawals or recalls, or other interruptions in the supply of our products. We may also have to take inventory write-offs and incur other charges and expenses for products that fail to meet specifications as a result of defects or storage over an extended period of time, undertake costly remediation efforts or seek more costly manufacturing alternatives.

Our business could be adversely affected by the effects of health epidemics, including the recent coronavirus disease (COVID-19) outbreak. If COVID-19 becomes a worldwide pandemic, it could materially affect our operations, including at our headquarters in the San Francisco Bay Area and at our clinical trial sites.

Our business could be adversely affected by health epidemics in regions where we or third parties on which we rely have manufacturing facilities, clinical trials sites and other business operations. If the COVID-19 outbreak continues to spread, we may need to limit operations or implement limitations, including work from home policies. There is a risk that other countries or regions may be less effective at containing COVID-19, or it may be more difficult to contain if the outbreak reaches a larger population or broader geography, in which case the risks described herein could be elevated significantly.

In addition, our clinical trials may be affected by the COVID-19 outbreak. Site initiation and patient enrollment at hospitals and medical institutions may be delayed due to prioritization of healthcare resources, such as physicians and staff, toward the COVID-19 outbreak. If COVID-19 becomes a worldwide pandemic, it may delay enrollment in our clinical trials, and some patients may not be able to comply with clinical trial protocols if quarantines impede patient movement or interrupt healthcare services. Moreover, limitations on global international travel may interrupt key trial activities, including necessary interactions with regulators, ethics committees and other important agencies and contractors. Any of the above could delay our clinical trials or prevent us from completing our clinical trials at all, and harm our ability to obtain approval for our product candidates.

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

Our business may become subject to economic, political, regulatory and other risks associated with international operations.

Our business is subject to risks associated with conducting business internationally. Accordingly, our future results could be harmed by a variety of factors, including:

- economic weakness, including inflation, or political instability, particularly in foreign economies and markets;
- differing regulatory requirements for drug approvals in foreign countries;
- differing jurisdictions could present different issues for securing, maintaining and/or obtaining freedom to operate in such jurisdictions;
- potentially reduced protection for intellectual property rights;
- difficulties in compliance with foreign laws and regulations;
- changes in foreign regulations and customs, tariffs and trade barriers;
- changes in foreign currency exchange rates and currency controls;
- changes in a specific country's or region's political or economic environment;
- trade protection measures, import or export licensing requirements or other actions by the U.S. or foreign governments;
- differing reimbursement regimes and price controls in certain foreign markets;
- negative consequences from changes in tax laws;
- compliance with tax, employment, immigration and labor laws for employees living or traveling abroad;
- workforce uncertainty in countries where labor unrest is more common than in the United States;
- difficulties associated with staffing and managing international operations, including differing labor relations;
- production shortages resulting from any events affecting raw material supply or manufacturing capabilities abroad;
- the impact of public health epidemics, such as the coronavirus disease (COVID-19) currently impacting multiple jurisdictions worldwide, including the United States; and
- business interruptions resulting from geo-political actions, including war and terrorism, or natural disasters, including earthquakes, typhoons, floods and fires.

We may become exposed to costly and damaging liability claims, either when testing our product candidates in the clinic or at the commercial stage, and our product liability insurance may not cover all damages from such claims.

We are exposed to potential product liability and professional indemnity risks that are inherent in the research, development, manufacturing, marketing and use of pharmaceutical products. While we currently have no products that have been approved for commercial sale, the current and future use of product candidates by us and our partners in clinical trials, and the sale of any approved products in the future, may expose us to liability claims. These claims might be made by patients that use the product, healthcare providers, pharmaceutical companies, our partners or others selling such products. Any claims against us, regardless of their merit, could be difficult and costly to defend and could materially adversely affect the market for our product candidates or any prospects for commercialization of our product candidates.

Although the clinical trial process is designed to identify and assess potential side effects, it is always possible that a drug, even after regulatory approval, may exhibit unforeseen side effects. If any of our product candidates were to cause adverse side effects during clinical trials or after approval of the product candidate, we may be exposed to substantial liabilities. Physicians and patients may not comply with any warnings that identify known potential adverse effects and patients who should not use our product candidates.

Even successful defense against product liability claims would require significant financial and management resources. Regardless of the merits or eventual outcome, liability claims may result in: decreased demand for our product candidates; injury to our reputation; withdrawal of clinical trial participants; initiation of investigations by regulators; costs to defend the related litigation; a diversion of management's time and our resources; substantial monetary awards to trial participants or patients; product recalls, withdrawals or labeling, marketing or promotional restrictions; loss of revenue; exhaustion of any available insurance and our capital resources; the inability to commercialize any product candidate; and a decline in our share price.

Although we maintain adequate product liability insurance for our product candidates, it is possible that our liabilities could exceed our insurance coverage. We intend to expand our insurance coverage to include the sale of commercial products if we obtain marketing approval for any of our product candidates. However, we may not be able to maintain insurance coverage at a reasonable cost or obtain insurance coverage that will be adequate to satisfy any liability that may arise. If a successful product liability claim or series of claims is brought against us for uninsured liabilities or in excess of insured liabilities, our assets may not be sufficient to cover such claims and our business operations could be impaired.

Risks from improper conduct by our employees, agents, contractors or collaborators could adversely affect our reputation, business, prospects, operating results and financial condition.

We cannot ensure that our compliance controls, policies and procedures will in every instance protect us from acts committed by our employees, agents, contractors or collaborators that would violate the laws or regulations of the jurisdictions in which we operate, including, without limitation, employment, foreign corrupt practices, trade restrictions and sanctions, environmental, competition and patient privacy and other privacy laws and regulations. Such improper actions could subject us to civil or criminal investigations and monetary and injunctive penalties, and could adversely impact our ability to conduct business, operating results and reputation.

We are subject to a number of anti-corruption laws, including the U.S. Foreign Corrupt Practices Act, or FCPA, and the U.K. Bribery Act. Our failure to comply with anti-corruption laws applicable to us could result in penalties, which could harm our reputation and harm our business, financial condition, results of operations, cash flows or prospects. The FCPA generally prohibits companies and their intermediaries from making improper payments to foreign officials for the purpose of obtaining or keeping business and/or other benefits. The FCPA also requires public companies to maintain accurate books and records and devise a system of sufficient internal accounting controls. We regularly review and update our policies and procedures and internal controls designed to provide reasonable assurance that we, our employees, distributors and other intermediaries comply with the anti-corruption laws to which we are subject. However, there are inherent limitations to the effectiveness of any policies, procedures and internal controls, including the possibility of human error and the circumvention or overriding of the policies, procedures and internal controls. There can be no assurance that such policies or procedures or internal controls will work effectively at all times or protect us against liability under these or other laws for actions taken by our employees, distributors and other intermediaries with respect to our business.

The SEC, and the Department of Justice continue to view FCPA enforcement activities as a high priority. There is no certainty that all of our employees, agents, contractors or collaborators, or those of our affiliates, will comply with all applicable laws and regulations, particularly given the high level of complexity of these laws. Violations of these laws and regulations could result in fines, criminal sanctions against us, our officers or our employees, requirements to obtain export licenses, cessation of business activities in sanctioned countries, implementation of compliance programs and prohibitions on the conduct of our business. Any such violations could materially damage our reputation, our brand, our international operations, our ability to attract and retain employees, and our business, prospects, operating results, and financial condition.

Our future growth and ability to compete depends on retaining our key personnel and recruiting additional qualified personnel.

Our success depends upon the continued contributions of our key management, scientific and technical personnel, many of whom have been instrumental for us and have substantial experience with our therapies and related technologies. The loss of key managers and senior scientists could delay our research and development activities. In addition, the competition for qualified personnel in the biopharmaceutical and pharmaceutical field is intense, and our future success depends upon our ability to attract, retain and motivate highly-skilled scientific, technical and managerial employees. We face competition for personnel from other companies, universities, public and private research institutions and other organizations. If our recruitment and retention efforts are unsuccessful in the future, it may be difficult for us to implement business strategy, which could have a material adverse effect on our business.

We conduct substantially all of our operations at our facilities in South San Francisco, California. This region is headquarters to many other biopharmaceutical companies and many academic and research institutions. Competition for skilled personnel in this region is intense and may limit our ability to hire and retain highly qualified personnel on acceptable terms or at all.

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

As of February 29, 2020, we had 61 full-time employees. We expect to experience significant growth in the number of our employees and the scope of our operations, particularly in the areas of drug development, regulatory affairs and sales and marketing. To manage our anticipated future growth, we must continue to implement and improve our managerial, operational and financial systems, expand our facilities and continue to recruit and train additional qualified personnel. Due to our limited financial resources and the limited experience of our management team in managing a company with such anticipated growth, we may not be able to effectively manage the expansion of our operations or recruit and train additional qualified personnel. The expansion of our operations may lead to significant costs and may divert our management and business development resources. Any inability to manage growth could delay the execution of our business plans or disrupt our operations.

In addition, future growth imposes significant added responsibilities on members of management, including: identifying, recruiting, integrating, maintaining and motivating additional employees; managing our internal development efforts effectively, including the clinical and FDA review process for our product candidates, while complying with our contractual obligations to contractors and other third parties; and improving our operational, financial and management controls, reporting systems and procedures. Our future financial performance and our ability to commercialize our product candidates will depend, in part, on our ability to effectively manage our growth, and our management may also have to divert a disproportionate amount of its attention away from day-to-day activities in order to devote a substantial amount of time to managing these growth activities.

We rely or expect to rely in substantial part on certain independent organizations, advisors and consultants to provide certain services, including strategic, financial, business development services, as well as substantial aspects of regulatory approval, clinical management, manufacturing and preparation for potential commercial launch. There can be no assurance that the services of independent organizations, advisors and consultants will continue to be available to us on a timely basis when needed, or that we can find qualified replacements. In addition, if we are unable to effectively manage our outsourced activities or if the quality or accuracy of the services provided by consultants or contract manufacturing organizations is compromised for any reason, our clinical trials may be extended, delayed or terminated, and we may not be able to obtain regulatory approval of our product candidates or otherwise advance our business. There can be no assurance that we will be able to manage our existing consultants or find other competent outside contractors and consultants on economically reasonable terms, or at all.

If we are not able to effectively expand our organization by hiring new employees and expanding our groups of consultants and contractors, we may not be able to successfully implement the tasks necessary to further develop and commercialize our product candidates and, accordingly, may not achieve our research, development and commercialization goals.

Acquisitions or joint ventures could disrupt our business, cause dilution to our stockholders and otherwise harm our business.

We actively evaluate various strategic transactions on an ongoing basis. We may acquire other businesses, products or technologies as well as pursue strategic alliances, joint ventures or investments in complementary businesses. Any of these transactions could be material to our financial condition and operating results and expose us to many risks, including:

- disruption in our relationships with existing strategic partners or suppliers as a result of such a transaction;
- unanticipated liabilities related to acquired companies or joint ventures;
- difficulties integrating acquired personnel, technologies and operations into our existing business;
- retention of key employees;
- diversion of management time and focus from operating our business to management of strategic alliances or joint ventures or acquisition integration challenges;
- increases in our expenses and reductions in our cash available for operations and other uses; and
- possible write-offs or impairment charges relating to acquired businesses.

In addition, we face significant competition in seeking appropriate strategic partners and the negotiation process is time-consuming and complex. Moreover, we may not be successful in our efforts to establish a strategic alliance or other alternative arrangements for our product candidates because they may be deemed to be at too early of a stage of development for collaborative effort and third parties may not view our product candidates as having the requisite potential to demonstrate safety and efficacy. Any delays in entering into new strategic transactions related to our product candidates could delay the development and commercialization of our product candidates in certain geographies for certain indications, which would harm our business prospects, financial condition and results of operations.

Foreign acquisitions involve unique risks in addition to those mentioned above, including those related to integration of operations across different cultures and languages, currency risks, potentially adverse tax consequences of overseas operations and the particular economic, political and regulatory risks associated with specific countries.

The anticipated benefit of any strategic alliance, joint venture or acquisition may not materialize or such strategic alliance, joint venture or acquisition may be prohibited. Additionally, future acquisitions or dispositions could result in potentially dilutive issuances of our equity securities, the incurrence of debt, contingent liabilities or amortization expenses or write-offs of goodwill, any of which could harm our financial condition. We cannot predict the number, timing or size of future joint ventures or acquisitions, or the effect that any such transactions might have on our operating results.

Our research and development activities could be affected or delayed as a result of possible restrictions on animal testing.

Certain laws and regulations require us to test our product candidates on animals before initiating clinical trials involving humans. Animal testing activities have been the subject of controversy and adverse publicity. Animal rights groups and other organizations and individuals have attempted to stop animal testing activities by pressing for legislation and regulation in these areas and by disrupting these activities through protests and other means. To the extent the activities of these groups are successful, our research and development activities may be interrupted, delayed or become more expensive.

Risks Related to Commercialization of Our Product Candidates

We operate in highly competitive and rapidly changing industries, which may result in others discovering, developing or commercializing competing products before or more successfully than we do.

The biopharmaceutical and pharmaceutical industries are highly competitive and subject to significant and rapid technological change. Our success is highly dependent on our ability to discover, develop and obtain marketing approval for new and innovative products on a cost-effective basis and to market them successfully. In doing so, we face and will continue to face intense competition from a variety of businesses, including large pharmaceutical and biotechnology companies, academic institutions, government agencies and other public and private research organizations. These organizations may have significantly greater resources than we do and conduct similar research, seek patent protection and establish collaborative arrangements for research, development, manufacturing and marketing of products that compete with our product candidates. Mergers and acquisitions in the biotechnology and pharmaceutical industries may result in even more resources being concentrated in our competitors. Competition may increase further as a result of advances in the commercial applicability of technologies and greater availability of capital for investment in these industries.

With the proliferation of new oncology drugs and therapies, we expect to face increasingly intense competition as new technologies become available. If we fail to stay at the forefront of technological change, we may be unable to compete effectively. Any product candidates that we successfully develop and commercialize will compete with existing therapies and new therapies that may become available in the future. The highly competitive nature of and rapid technological changes in the biotechnology and pharmaceutical industries could render our product candidates or our technology obsolete, less competitive or uneconomical. Our competitors may, among other things:

- have significantly greater financial, manufacturing, marketing, drug development, technical and human resources than we do;
- develop and commercialize products that are safer, more effective, less expensive, more convenient or easier to administer, or have fewer or less severe side effects;
- obtain quicker regulatory approval;
- establish superior proprietary positions covering our products and technologies;
- implement more effective approaches to sales and marketing; or
- form more advantageous strategic alliances.

Should any of these factors occur, our business, financial condition and results of operations could be materially adversely affected.

In addition, any collaborators may decide to market and sell products that compete with the product candidates that we have agreed to license to them, and any competition by our collaborators could also have a material adverse effect on our future business, financial condition and results of operations.

Smaller and other early stage companies may also prove to be significant competitors, particularly through collaborative arrangements with large and established companies. These third parties compete with us in recruiting and retaining qualified scientific and management personnel, establishing clinical trial sites and patient registration for clinical trials, as well as in acquiring technologies complementary to, or necessary for, our programs.

If the market opportunity for any product candidate that we or our strategic partners develop is smaller than we believe, our revenue may be adversely affected and our business may suffer.

We intend to initially focus our product candidate development on treatments for various oncology indications. Our projections of addressable patient populations that may benefit from treatment with our product candidates are based on our estimates. These estimates, which have been derived from a variety of sources, including scientific literature, surveys of clinics, patient foundations and market research, may prove to be incorrect. Further, new studies may change the estimated incidence or prevalence of these cancers. Additionally, the potentially addressable patient population for our product candidates may not ultimately be amenable to treatment with our product candidates. Our market opportunity may also be limited by future competitor treatments that enter the market. If any of our estimates prove to be inaccurate, the market opportunity for any product candidate that we or our strategic partners develop could be significantly diminished and have an adverse material impact on our business.

The market opportunities for our product candidates may be limited to those patients who are ineligible for or have failed prior treatments and may be small.

Cancer therapies are sometimes characterized by line of therapy (first, second, third, fourth, etc.), and the FDA often initially approves new therapies only for use in a particular line or lines of therapy. When cancer is detected early enough, first line therapy is sometimes adequate to provide a cure or prolong life without a cure. Whenever first line therapy (typically chemotherapy, hormone therapy, surgery or a combination of these) proves unsuccessful, second line therapy (typically more chemotherapy, radiation, antibody drugs, tumor targeted small molecules or a combination of these) may be administered. Third or fourth line therapies can include antibody and small molecule targeted therapies, more invasive forms of surgery and new technologies. We may initially seek approval of our product candidates as a third line therapy for patients who have failed other approved treatments. Subsequently, for product candidates that prove to be sufficiently beneficial, if any, we would expect to seek approval as a second and first line therapy. However, there is no guarantee that our product candidates, even if initially approved, would be subsequently approved as a second or first line therapy. In addition, we may have to conduct additional clinical trials prior to gaining approval as a second or first line therapy. Because the potentially addressable patient target population for our product candidates may be limited to patients who are ineligible for or have failed prior treatments, even if we obtain significant market share for our product candidates, we may never achieve profitability.

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

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

Even if approved, our products may not gain market acceptance, in which case we may not be able to generate product revenues, which will materially adversely affect our business, financial condition and results of operations.

Even if the FDA or any other regulatory authority approves the marketing of any product candidates that we develop on our own or with a collaborator, physicians, healthcare providers, patients or the medical community may not accept or use them. If these products do not achieve an adequate level of acceptance, we may not generate significant product revenues or any profits from operations. The degree of market acceptance of any of our product candidates will depend on a variety of factors, including:

- the timing of market introduction;
- the number and clinical profile of competing products;
- our ability to provide acceptable evidence of safety and efficacy;
- the prevalence and severity of any side effects;
- relative convenience and ease of administration;
- cost-effectiveness;
- patient diagnostics and screening infrastructure in each market;

- marketing and distribution support;
- availability of coverage, adequate reimbursement and sufficient payment from health maintenance organizations and other insurers, both public and private, for our product candidates, or the procedures utilizing our product candidates, if approved; and
- other potential advantages over alternative treatment methods.

If our product candidates fail to gain market acceptance, this will have a material adverse impact on our ability to generate revenues to provide a satisfactory, or any, return on our investments. Even if some products achieve market acceptance, the market may prove not to be large enough to allow us to generate significant revenues.

We currently have no marketing, sales or distribution infrastructure. If we are unable to develop sales, marketing and distribution capabilities on our own or through collaborations, or if we fail to achieve adequate pricing and/or reimbursement we will not be successful in commercializing our product candidates.

We currently have no marketing, sales and distribution capabilities because all of our product candidates are still in clinical or preclinical development. If any of our product candidates are approved, we intend either to establish a sales and marketing organization with technical expertise and supporting distribution capabilities to commercialize our product candidates, or to outsource this function to a third party. Either of these options would be expensive and time consuming. These costs may be incurred in advance of any approval of our product candidates. In addition, we may not be able to hire a sales force that is sufficient in size or has adequate expertise in the medical markets that we intend to target. Any failure or delay in the development of our internal sales, marketing and distribution capabilities would adversely impact the commercialization of our products, if approved.

To the extent that we enter into collaboration agreements with respect to marketing, sales or distribution, our product revenue may be lower than if we directly marketed or sold any approved products. In addition, any revenue we receive will depend in whole or in part upon the efforts of these third-party collaborators, which may not be successful and are generally not within our control. If we are unable to enter into these arrangements on acceptable terms or at all, we may not be able to successfully commercialize any approved products. If we are not successful in commercializing any approved products, either on our own or through collaborations with one or more third parties, our future product revenue will suffer and we may incur significant additional losses.

We have never commercialized a product candidate before and may lack the necessary expertise, personnel and resources to successfully commercialize any products on our own or together with suitable collaborators.

We have never commercialized a product candidate, and we currently have no sales force, marketing or distribution capabilities. To achieve commercial success for the product candidates, which we may license to others, we will rely on the assistance and guidance of those collaborators. For product candidates for which we retain commercialization rights, we will have to develop our own sales, marketing and supply organization or outsource these activities to a third party.

Factors that may affect our ability to commercialize our product candidates on our own include recruiting and retaining adequate numbers of effective sales and marketing personnel, obtaining access to or persuading adequate numbers of physicians to prescribe our product candidates and other unforeseen costs associated with creating an independent sales and marketing organization. Developing a sales and marketing organization will be expensive and time-consuming and could delay the launch of our product candidates. We may not be able to build an effective sales and marketing organization. If we are unable to build our own distribution and marketing capabilities or to find suitable partners for the commercialization of our product candidates, we may not generate revenues from them or be able to reach or sustain profitability.

Our product candidates for which we intend to seek approval as biologic products may face competition sooner than anticipated.

The ACA includes a subtitle called the Biologics Price Competition and Innovation Act of 2009, or BPCIA, which created an abbreviated approval pathway for biological products that are biosimilar to or interchangeable with an FDA-licensed reference biological product. Under the BPCIA, an application for a biosimilar product may not be submitted to the FDA until four years following the date that the reference product was first approved by the FDA. In addition, the approval of a biosimilar product may not be made effective by the FDA until 12 years from the date on which the reference product was first approved. During this 12-year period of exclusivity, another company may still market a competing version of the reference product if the FDA approves a full BLA for the competing product containing the sponsor’s own preclinical data and data from adequate and well-controlled clinical trials to demonstrate the safety, purity and potency of their product. The law is complex and is still being interpreted and implemented by the FDA. As a result, its ultimate impact, implementation, and meaning are subject to uncertainty.

We believe that any of our product candidates approved as a biological product under a BLA should qualify for the 12-year period of exclusivity. However, there is a risk that this exclusivity could be shortened due to congressional action or otherwise, or that the FDA will not consider our product candidates to be reference products for competing products, potentially creating the opportunity for competition sooner than anticipated. Other aspects of the BPCIA, some of which may impact the BPCIA exclusivity provisions, have also been the subject of recent litigation. Moreover, the extent to which a biosimilar, once approved, will be substituted for any one of our reference products in a way that is similar to traditional generic substitution for non-biological products is not yet clear, and will depend on a number of marketplace and regulatory factors that are still developing.

Jurisdictions in addition to the United States have established abbreviated pathways for regulatory approval of biological products that are biosimilar to earlier approved reference products. For example, the European Union has had an established regulatory pathway for biosimilars since 2005.

The increased likelihood of biosimilar competition has increased the risk of loss of innovators' market exclusivity. Due to this risk, and uncertainties regarding patent protection, if our clinical candidates are approved for marketing, it is not possible to predict the length of market exclusivity for any particular product with certainty based solely on the expiration of the relevant patent(s) or the current forms of regulatory exclusivity. It is also not possible to predict changes in United States regulatory law that might reduce biological product regulatory exclusivity. The loss of market exclusivity for a product would likely materially and negatively affect revenues and we may not generate adequate or sufficient revenues from them or be able to reach or sustain profitability.

Risks Related to Our Dependence on Third Parties

We rely, and expect to continue to rely, on third parties, including independent clinical investigators and CROs, to conduct our preclinical studies and clinical trials. If these third parties do not successfully carry out their contractual duties, comply with applicable regulatory requirements or meet expected deadlines, we may not be able to obtain regulatory approval for or commercialize our product candidates and our business could be substantially harmed.

We have relied upon and plan to continue to rely upon third parties, including independent clinical investigators and third-party CROs, to conduct our preclinical studies and clinical trials and to monitor and manage data for our ongoing preclinical and clinical programs. We rely on these parties for execution of our preclinical studies and clinical trials, and control only certain aspects of their activities. Nevertheless, we are responsible for ensuring that each of our studies and trials is conducted in accordance with the applicable protocol, legal, regulatory and scientific standards, and our reliance on these third parties does not relieve us of our regulatory responsibilities. We and our third-party contractors and CROs are required to comply with GCP requirements, which are regulations and guidelines enforced by the FDA and comparable foreign regulatory authorities for all of our products candidates in clinical development. Regulatory authorities enforce these GCPs through periodic inspections of trial sponsors, principal investigators and trial sites. If we or any of our CROs fail to comply with applicable GCPs, the clinical data generated in our clinical trials may be deemed unreliable and the FDA or comparable foreign regulatory authorities may require us to perform additional clinical trials before approving our marketing applications. We cannot assure you that upon inspection by a given regulatory authority, such regulatory authority will determine that any of our clinical trials comply with GCP regulations. In addition, our clinical trials must be conducted with product produced under cGMP regulations. Our failure to comply with these regulations may require us to repeat clinical trials, which would delay the regulatory approval process.

Further, these investigators and CROs are not our employees and we will not be able to control, other than by contract, the amount of resources, including time, which they devote to our product candidates and clinical trials. If independent investigators or CROs fail to devote sufficient resources to the development of our product candidates, or if their performance is substandard, it may delay or compromise the prospects for approval and commercialization of any product candidates that we develop. In addition, the use of third-party service providers may require us to disclose our proprietary information to these parties, which could increase the risk that this information will be misappropriated.

Our CROs have the right to terminate their agreements with us in the event of an uncured material breach. In addition, some of our CROs have an ability to terminate their respective agreements with us if it can be reasonably demonstrated that the safety of the subjects participating in our clinical trials warrants such termination, if we make a general assignment for the benefit of our creditors or if we are liquidated.

If any of our relationships with these third-party CROs terminate, we may not be able to enter into arrangements with alternative CROs or to do so on commercially reasonable terms. If CROs do not successfully carry out their contractual duties or obligations or meet expected deadlines, if they need to be replaced or if the quality or accuracy of the clinical data they obtain is compromised due to the failure to adhere to our clinical protocols, regulatory requirements or for other reasons, our clinical trials may be extended, delayed or terminated and we may not be able to obtain regulatory approval for or successfully commercialize our product candidates. As a result, our results of operations and the commercial prospects for our product candidates would be harmed, our costs could increase and our ability to generate revenues could be delayed.

Switching or adding additional CROs involves additional cost and requires management time and focus. In addition, there is a natural transition period when a new CRO commences work. As a result, delays occur, which can materially impact our ability to meet our desired clinical development timelines. Additionally, CROs may lack the capacity to absorb higher workloads or take on additional capacity to support our needs. Though we carefully manage our relationships with our CROs, there can be no assurance that we will not encounter similar challenges or delays in the future or that these delays or challenges will not have a material adverse impact on our business, financial condition and prospects.

We may not realize the benefits of any collaborative or licensing arrangement we enter into, and if we fail to enter into new strategic relationships our business, financial condition, commercialization prospects and results of operations may be materially adversely affected.

Our product development programs and the potential commercialization of our product candidates will require substantial additional cash to fund expenses. Therefore, for some of our product candidates, we may decide to enter into new collaborations with pharmaceutical or biopharmaceutical companies for the development and potential commercialization of those product candidates. For instance, we have a discovery collaboration and license agreement with AbbVie, pursuant to which we have licensed the development and commercialization of certain of our product candidates, as well as Development and Option Agreement with AbbVie, pursuant to which we granted to AbbVie an option to a worldwide, exclusive license with respect to HPN217.

We face significant competition in seeking appropriate collaborators. Collaborations are complex and time-consuming to negotiate and document. We may also be restricted under existing and future collaboration agreements from entering into agreements on certain terms with other potential collaborators. We may not be able to negotiate collaborations on acceptable terms, or at all. If our strategic collaborations do not result in the successful development and commercialization of product candidates, or if one of our collaborators terminates its agreement with us, we may not receive any future research funding or milestone or royalty payments under the collaboration. Moreover, our estimates of the potential revenue we are eligible to receive under our strategic collaborations may include potential payments related to therapeutic programs for which our collaborators have discontinued development or may discontinue development in the future. If that were to occur, we may have to curtail the development of a particular product candidate, reduce or delay its development program or one or more of our other development programs, delay its potential commercialization or reduce the scope of our sales or marketing activities, or increase our expenditures and undertake development or commercialization activities at our own expense. If we elect to increase our expenditures to fund development or commercialization activities on our own, we may need to obtain additional capital, which may not be available to us on acceptable terms or at all. If we do not have sufficient funds, we will not be able to bring our product candidates to market and generate product revenue. If we do enter into a new collaboration agreement, we could be subject to the following risks, each of which may materially harm our business, commercialization prospects and financial condition:

- we may not be able to control the amount and timing of resources that the collaboration partner devotes to the product development program;
- the collaboration partner may experience financial difficulties;
- we may be required to relinquish important rights such as marketing, distribution and intellectual property rights;
- a collaborator could move forward with a competing product developed either independently or in collaboration with third parties, including our competitors; or
- business combinations or significant changes in a collaborator’s business strategy may adversely affect our willingness to complete our obligations under any arrangement.

If we license products or businesses, we may not be able to realize the benefit of such transactions if we are unable to successfully integrate them with our existing operations and company culture. We cannot be certain that, following a strategic transaction or license, we will achieve the results, revenue or specific net income that justifies such transaction.

We rely on third-party manufacturers to produce our product candidates. Any failure by a third-party manufacturer to produce acceptable product candidates for us may delay or impair our ability to initiate or complete our clinical trials or commercialize approved products.

We do not currently own or operate any manufacturing facilities nor do we have any in-house manufacturing experience or personnel. We work with third-party contract manufacturers to produce sufficient quantities of our product candidates for preclinical testing and clinical trials, in compliance with applicable regulatory and quality standards, and intend to do so for the commercial manufacture of our products, if approved. If we are unable to arrange for such third-party manufacturing sources, or fail to do so on commercially reasonable terms, we may not be able to successfully produce sufficient supply of product candidate or we may be delayed in doing so. For example, public health epidemics, such as the coronavirus disease (COVID-19) currently impacting multiple jurisdictions worldwide, including the United States, may impact the ability of our existing or future manufacturers to perform their obligations under our manufacturing agreements with such parties. Such failure or substantial delay could materially harm our business.

Our TriTAC and ProTriTAC platforms rely on third parties for the biological materials used in testing and qualifying our products. Some biological materials have not always met our expectations or requirements, and any disruption in the supply of these biological materials could materially adversely affect our business. Although we have control processes and screening procedures, biological materials are susceptible to damage and contamination and may contain active pathogens. Improper storage of these materials, by us or any third-party suppliers, may require us to destroy some of our biological raw materials or product candidates.

Reliance on third-party manufacturers entails risks to which we would not be subject if we manufactured product candidates ourselves, including reliance on the third party for regulatory compliance and quality control and quality assurance, volume and timing of production, the possibility of breach of the manufacturing agreement by the third party because of factors beyond our control (including a failure to synthesize and manufacture our product candidates in accordance with our product specifications) and the possibility of termination or nonrenewal of the agreement by the third party at a time that is costly or damaging to us. In addition, the FDA and other regulatory authorities require that our product candidates be manufactured according to cGMPs. Pharmaceutical manufacturers and their subcontractors are required to register their facilities or products manufactured at the time of submission of the marketing application and then annually thereafter with the FDA and certain state and foreign agencies. They are also subject to periodic unannounced inspections by the FDA, state and other foreign authorities. Any subsequent discovery of problems with a product, or a manufacturing or laboratory facility used by us or our third-party suppliers, may result in restrictions on the product or on the manufacturing or laboratory facility, including marketed product recall, suspension of manufacturing, product seizure, or a voluntary withdrawal of the drug from the market. We may have little to no control regarding the occurrence of third-party manufacturer incidents. Any failure by our third-party manufacturers to comply with cGMP or failure to scale up manufacturing processes, including any failure to deliver sufficient quantities of product candidates in a timely manner, could lead to an irreparable delay in our development or commercialization timeline.

To date, we have relied on one single-source supplier for bulk drug substance. The loss of this supplier or its failure to supply us with BDS on a timely basis could cause a delay in our ability to develop our product candidates and adversely affect our business.

We depend on one single-source supplier for bulk drug substance, or BDS. Although we believe that we have a substantial reserve of BDS to support our current clinical trial programs, there can be no assurance that our supply of BDS will not be limited, interrupted, or of satisfactory quality or continue to be available at acceptable prices. Additionally, we do not have any control over the process or timing of the acquisition or manufacture of materials by our supplier, and cannot ensure that it will deliver to us the BDS we order on time, or at all. The loss of BDS provided by this supplier could require us to change the design of our product candidate development process based on the functions, limitations, features and specifications of the replacement.

In addition, the lead time needed to establish a relationship with a new supplier can be lengthy, and we may experience delays in meeting demand in the event we must switch to a new supplier. The time and effort to qualify a new supplier could result in additional costs, diversion of resources or reduced manufacturing yields, any of which would negatively impact our operating results. Our reliance on this single-source supplier exposes us to certain risks, including the following:

- our supplier may cease or reduce production or deliveries, raise prices or renegotiate terms;
- we may be unable to locate a suitable replacement on acceptable terms or on a timely basis, if at all;
- if there is a disruption to our single-source supplier’s operations, and if we are unable to enter into arrangements with alternative suppliers, we may need to halt our clinical trial programs;
- delays caused by supply issues may harm our reputation, frustrate our clinical trial sites and cause them to turn to our competitors for future projects; and
- our ability to develop our product candidates could be materially and adversely impacted if the single-source supplier upon which we rely were to experience a significant business challenge, disruption or failure due to issues such as financial difficulties or bankruptcy, issues relating to other customers such as regulatory or quality compliance issues, or other financial, legal, regulatory or reputational issues.

Moreover, to meet anticipated demand, our single-source supplier may need to increase manufacturing capacity, which could involve significant challenges. This may require us and our supplier to invest substantial additional funds and hire and retain the technical personnel who have the necessary experience. Neither we nor our supplier may successfully complete any required increase to existing manufacturing capacity in a timely manner, or at all.

We currently rely on third-party suppliers and other third parties for production of our product candidates and our dependence on these third parties may impair the advancement of our research and development programs and the development of our product candidates. Moreover, we intend to rely on third parties to produce commercial supplies of any approved product candidate and our commercialization of any of our product candidates could be stopped, delayed or made less profitable if those third parties fail to obtain approval of the FDA or comparable regulatory authorities, fail to provide us with sufficient quantities of product or fail to do so at acceptable quality levels or prices or fail to otherwise complete their duties in compliance with their obligations to us or other parties.

We do not currently own or operate any manufacturing facilities, nor do we have any in-house manufacturing experience or personnel. We rely on and expect to continue to rely on third-party contract manufacturing organizations, or CMOs, for the supply of current good manufacturing practice-grade, or cGMP-grade, clinical trial materials and commercial quantities of our product candidates and products, if approved. Reliance on third-party providers may expose us to more risk than if we were to manufacture product candidates ourselves. The facilities used by our contract manufacturers to manufacture our commercial products must be approved by the FDA or other global regulatory authorities pursuant to inspections that will be conducted after we submit our marketing authorization application or BLA to the relevant agency. We have limited control over the manufacturing process of, and beyond contractual terms, we are completely dependent on our contract manufacturing partners for compliance with cGMP for the manufacture of our product candidates. If our contract manufacturers cannot successfully manufacture material that conforms to our specifications and the strict regulatory requirements of global regulatory authorities they will not be able to secure and/or maintain regulatory approval for their manufacturing facilities. In addition, we have limited control over the ability of our contract manufacturers to maintain adequate quality control, quality assurance and qualified personnel. If the FDA or a comparable foreign regulatory authority does not approve these facilities for the manufacture of our product candidates or if it withdraws any such approval in the future, we may need to find alternative manufacturing facilities, which would significantly impact our ability to develop, obtain regulatory approval for or market our product candidates, if approved. In addition, any failure to achieve and maintain compliance with these laws, regulations and standards could subject us to the risk that we may have to delay the manufacturing of our product candidates or approved products, which would adversely affect our business and reputation. Furthermore, third-party providers may breach existing agreements they have with us because of factors beyond our control. They may also terminate or refuse to renew their agreement because of their own financial difficulties or business priorities, at a time that is costly or otherwise inconvenient for us. If we were unable to find an adequate replacement or another acceptable service provider in time, our clinical trials could be delayed or our commercial activities could be harmed. In addition, the fact that we are dependent on our collaborators, our suppliers and other third parties for the manufacture, filling, storage and distribution of our product candidates means that we are subject to the risk that the products may have manufacturing defects that would prevent the sale of these products to global markets. The inability to sell our products containing such defects could adversely affect our business, financial condition and results of operations.

Growth in the costs and expenses of components or raw materials may also adversely influence our business, financial condition and results of operations. Supply sources could be interrupted from time to time and, if interrupted, there is no guarantee that supplies could be resumed (whether in part or in whole) within a reasonable timeframe and at an acceptable cost or at all.

We rely on our manufacturers and other subcontractors to comply with and respect the proprietary rights of others in conducting their contractual obligations for us. If our manufacturers or other subcontractors fail to acquire the proper licenses or otherwise infringe third-party proprietary rights in the course of completing their contractual obligations to us, we may have to find alternative manufacturers or defend against claims of infringement, either of which would significantly impact our ability to develop, obtain regulatory approval for or market our product candidates, if approved. In addition, although we require manufacturers and service providers to assign or license to us their interest in and to intellectual property rights to improvements made by them in the development and manufacturing process for our products, in future contracts that we may enter into with these third parties, we may not own, or may have to share, these intellectual property rights to improvements.

We depend on third-party suppliers for key raw materials used in our manufacturing processes, and the loss of these third-party suppliers or their inability to supply us with adequate raw materials could harm our business.

We rely on our manufacturers to purchase the raw materials necessary to produce our product candidates for our clinical trials. There are a limited number of suppliers for raw materials that we use to manufacture our drugs and our manufacturers may qualify second-source suppliers of critical raw materials to prevent a possible disruption of the supply of the materials necessary to produce our product candidates for our clinical trials, and if approved, ultimately for commercial sale. We do not have any control over the process or timing of the acquisition of these raw materials by our manufacturers. We cannot be sure that the third-party raw material suppliers will remain in business, or that they will not be purchased by a company that is not interested in continuing to produce these materials. In addition, the lead time needed to qualify a new raw material supplier can be lengthy, and we may experience delays in meeting demand for our product in the event a new supplier must be used. The time and effort to qualify a new raw material supplier could result in additional costs, diversion of resources or inability to produce a comparable product candidate, any of which would negatively impact our operating results. Any significant delay in the supply of a product candidate for an ongoing clinical trial due to the need to replace a third-party raw material manufacturer could considerably delay completion of our clinical trials, product testing and potential regulatory approval of our product candidates. If our manufacturers or we are unable to purchase these raw materials after regulatory approval has been obtained for our product candidates, the commercial launch of our product candidates would be delayed or there would be a shortage in supply, which would impair our ability to generate revenues from the sale of our product candidates.

Risks Related to Intellectual Property and Information Technology

We rely on patents and other intellectual property rights to protect our technology, including product candidates and our TriTAC and ProTriTAC platforms, the enforcement, defense and maintenance of which may be challenging and costly. Failure to enforce or protect these rights adequately could harm our ability to compete and impair our business.

Our commercial success depends in part on obtaining and maintaining patents and other forms of intellectual property rights for technology related to our TriTAC and ProTriTAC platforms, including, but not limited to, our product candidates, methods used to manufacture those product candidates, formulations thereof and the methods for treating patients using those product candidates. Given that the development of our technology and product candidates is at an early stage, our intellectual property portfolio with respect to certain aspects of our technology and product candidates is also at an early stage. Failure to protect or to obtain, maintain or extend adequate patent and other intellectual property rights could materially adversely affect our ability to develop and market our product candidates.

We seek to protect our proprietary position by filing patent applications in the United States and abroad related to our novel platform technologies and product candidates that are important to our business. The patent prosecution process is expensive and time-consuming, and we may not be able to prepare, file and prosecute all necessary or desirable patent applications at a reasonable cost or in a timely manner. It is also possible that we will fail to identify patentable aspects of inventions made in the course of development and commercialization activities before it is too late to obtain patent protection on them. Further, the issuance, scope, validity, enforceability and commercial value of our current or future patent rights are highly uncertain. Our pending and future patent applications may not result in patents being issued which protect our technology or product candidates, in whole or in part, or which effectively prevent others from commercializing competitive technologies and product candidates. The patent examination process may require us to narrow the scope of the claims of our pending and future patent applications, which may limit the scope of patent protection that may be obtained. We cannot assure you that all of the potentially relevant prior art relating to our patents and patent applications has been found. If such prior art exists, it can invalidate a patent or prevent a patent from issuing from a pending patent application. Even if patents do successfully issue and even if such patents cover our product candidates, third parties may initiate opposition, interference, re-examination, post-grant review, inter partes review, nullification or derivation action in court or before patent offices, or similar proceedings challenging the validity, enforceability or scope of such patents, which may result in the patent claims being narrowed or invalidated. Our patent applications cannot be enforced against third parties practicing the technology claimed in such applications unless and until a patent issues from such applications, and then only to the extent the issued claims cover the technology.

Because patent applications in the United States and other jurisdictions are confidential for a period of time after filing, and some remain so until issued, we cannot be certain that we were the first to file any patent application related to our technology, including a particular product candidate. As a result, the issuance, scope, validity, enforceability and commercial value of our patent rights are highly uncertain.

Furthermore, if third parties have filed such patent applications on or before March 15, 2013, an interference proceeding can be initiated by such third parties to determine who was the first to invent any of the subject matter covered by the patent claims of our applications. If third parties have filed such applications after March 15, 2013, a derivation proceeding can be initiated by such third parties to determine whether our invention was derived from theirs. Even where we have a valid and enforceable patent, we may not be able to exclude others from practicing our invention where the other party can show that they used the invention in commerce before our filing date or the other party benefits from a compulsory license.

We may become involved in lawsuits to protect or enforce our issued patents relating to one or more of our product candidates or our TriTAC and ProTriTAC platforms, which could ultimately render our patents invalid or unenforceable and adversely affect our competitive position.

Competitors may infringe our patents or other intellectual property that relate to our TriTAC and ProTriTAC platforms and product candidates, their respective methods of use, manufacture and formulations thereof. To protect our competitive position and counter infringement or unauthorized use, we may from time to time need to resort to litigation to enforce or defend any patents or other intellectual property rights owned by us by filing infringement claims. As enforcement of intellectual property rights is difficult, unpredictable and expensive, we may fail in enforcing our rights—in which case our competitors may be permitted to use our technology without being required to pay us any license fees. In addition, litigation involving our patents carries the risk that one or more of our patents will be held invalid (in whole or in part, on a claim-by-claim basis) or held unenforceable. Such an adverse court ruling could allow third parties to commercialize our product candidates or methods, or our TriTAC and ProTriTAC platforms, and then compete directly with us, without payment to us.

If we were to initiate legal proceedings against a third party to enforce a patent covering one of our product candidates or methods, the defendant could counterclaim that our patent is invalid and/or unenforceable. In patent litigation in the United States or in certain jurisdictions in Europe, defendant counterclaims alleging invalidity and/or unenforceability are commonplace. Grounds for a validity challenge could be an alleged failure to meet any of several statutory requirements, for example, lack of novelty, obviousness or non-enablement. Grounds for an unenforceability assertion could be an allegation that someone connected with prosecution of the patent withheld relevant information from the U.S. Patent and Trademark Office, or made a misleading statement, during prosecution. Third parties may also raise similar invalidity and/or unenforceability claims before administrative bodies in the United States or abroad, even outside the context of litigation. Such mechanisms include inter partes review, ex parte re-examination and post grant review in the United States, and equivalent proceedings in foreign jurisdictions (*e.g.*, opposition proceedings). The outcome following legal assertions of invalidity and unenforceability during patent litigation is unpredictable. With respect to the validity question, for example, we cannot be certain that there is no invalidating prior art, of which we and the patent examiner were unaware during prosecution. If a defendant were to prevail on a legal assertion of invalidity and/or unenforceability, we would lose at least part, and perhaps all, of the patent protection on one or more of our technologies, product candidates, methods or certain aspects of our TriTAC and ProTriTAC platforms. Such a loss of patent protection could have a material adverse impact on our business.

There is also a risk that, even if the validity of our patents is upheld, the court will construe our patent's claims narrowly or decide that we do not have the right to stop the other party from using the invention at issue on the grounds that our patent claims do not cover the invention. Even if we establish infringement, the court may decide not to grant an injunction against further infringing activity and instead award only monetary damages, which may or may not be an adequate remedy. Furthermore, because of the substantial amount of discovery required in connection with intellectual property litigation, there is a risk that some of our confidential information could be compromised by disclosure during litigation. Patents and other intellectual property rights also will not protect our technology if competitors design around our protected technology without infringing our patents or other intellectual property rights.

Because of the expense and uncertainty of litigation, we may not be in a position to enforce our intellectual property rights against third parties. Instead, we may conclude that even if a third party is infringing our issued patent relating to our TriTAC and ProTriTAC platforms and/or product candidates, any patents that may be issued as a result of our pending or future patent applications or other intellectual property rights, the risk-adjusted cost of bringing and enforcing such a claim or action may be too high or not in the best interest of us or our stockholders. In such cases, we may decide that the more prudent course of action is to simply monitor the situation or initiate or seek some other non-litigious action or solution.

We may fail to identify relevant third-party patents or may incorrectly interpret the relevance, scope or expiration of a third-party patent which might adversely affect our ability to develop our TriTAC and ProTriTAC platforms and product candidates.

We cannot guarantee that our operations and activities do not, or will not in the future, infringe existing or future patents. We also cannot guarantee that any of our patent searches or analyses, including the identification of relevant patents, the scope of patent claims or the expiration of relevant patents, are complete or thorough, nor can we be certain that we have identified each and every third-party patent and pending application in the United States and abroad that is relevant to our TriTAC and ProTriTAC platforms or necessary for the commercialization of our product candidates in any jurisdiction.

Numerous U.S. and foreign patents and pending patent applications exist in our market that are owned by third parties. Our competitors in both the United States and abroad, many of which have substantially greater resources and have made substantial investments in patent portfolios and competing technologies, may have applied for or obtained or may in the future apply for and obtain, patents that will prevent, limit or otherwise interfere with our ability to make, use and sell our product candidates. We do not always conduct independent reviews of pending patent applications of and patents issued to third parties. Patent applications in the United States and elsewhere are typically published approximately 18 months after the earliest filing for which priority is claimed, with such earliest filing date being commonly referred to as the priority date. Certain U.S. applications that will not be filed outside the United States can remain confidential until patents are issued. In addition, patent applications in the United States and elsewhere can be pending for many years before issuance, and unintentionally abandoned patents or applications can be revived. Furthermore, pending patent applications that have been published can, subject to certain limitations, be later amended in a manner that could cover our technologies, our product candidates or the use thereof. As such, there may be applications of third parties now pending or recently revived patents of which we are unaware. These applications may later result in issued patents, or the revival of previously abandoned patents, that will prevent, limit or otherwise interfere with our ability to make, use or sell our product candidates.

The scope of a patent claim is determined by an interpretation of law, the written disclosure in a patent and the patent's prosecution history. Our interpretation of the relevance or the scope of a patent or a pending application may be incorrect, which may negatively impact our ability to market our product candidates. We may incorrectly determine that our product candidates are not covered by a third-party patent or may incorrectly predict whether a third party's pending application will issue with claims of relevant scope. Our determination of the expiration date of any patent in the United States or abroad that we consider relevant may be incorrect, which may negatively impact our ability to develop and market our product candidates. Our failure to identify and correctly interpret relevant patents may negatively impact our ability to develop and market our product candidates.

We cannot provide any assurances that third-party patents do not exist which might be enforced against our current technology, including our platform technologies, product candidates and their respective methods of use, manufacture and formulations thereof, and could result in either an injunction prohibiting our manufacture or future sales, or, with respect to our future sales, an obligation on our part to pay royalties and/or other forms of compensation to third parties, which could be significant.

Intellectual property rights of third parties could adversely affect our ability to develop or commercialize our product candidates, such that we could be required to litigate or obtain licenses from third parties in order to develop or market our product candidates. Such litigation or licenses could be costly or not available on commercially reasonable terms.

Our commercial success depends, in part, on our ability to develop, manufacture, market and sell our product candidates without infringing the intellectual property and other proprietary rights of third parties. Our competitive position may suffer if patents issued to third parties or other third-party intellectual property rights cover our methods or product candidates or elements thereof, our manufacture or uses relevant to our development plans, our product candidates, or other attributes of our product candidates or our TriTAC and ProTriTAC platforms. In such cases, we may not be in a position to develop or commercialize product candidates unless we successfully pursue litigation to nullify or invalidate the third-party intellectual property right concerned, which can be expensive and time consuming, or enter into a license agreement with the intellectual property right holder, if available on commercially reasonable terms.

There is a substantial amount of intellectual property litigation in the biotechnology and pharmaceutical industries, and we may become party to, or threatened with, litigation or other adversarial proceedings regarding intellectual property rights with respect to our product candidates. For example, on November 25, 2018, we received a letter from counsel for Maverick alleging that our ProTriTAC program is subject to the non-compete provision of our Asset Transfer Agreement with Maverick. On January 3, 2019, Maverick filed a complaint against us in the Delaware Court of Chancery and a motion for a temporary restraining order seeking to prohibit us from further developing our ProTriTAC platform. The complaint alleges claims for breach of contract and misappropriation of trade secrets, and seeks as relief, among other things, a declaration that our ProTriTAC technology impermissibly competes in the Maverick Field (as defined in the Asset Transfer Agreement), a preliminary and permanent injunction and unspecified damages. We believe that the mechanism of action employed by our ProTriTAC platform falls outside the Maverick Field. On May 8, 2019, the court granted Millennium, a wholly owned subsidiary of Takeda Pharmaceutical Company Limited, permission to intervene in the litigation based on a proposed complaint. On May 14, 2019, Millennium filed a Complaint in Intervention, asserting various claims, including fraud and unjust enrichment, and seeking as relief, among other things, an injunction and unspecified damages. A trial on Maverick and Millennium's claims was held on September 9-13 and 17, 2019. The parties have completed post-trial briefing and closing arguments and are awaiting a decision from the Court. We will vigorously defend the claims asserted against us.

In the event that an injunction is granted, we would be unable to proceed with development of our ProTriTAC platform until the injunction is lifted, if ever and, if Millennium were to prevail on its claims, we could be required to pay damages. The various markets in which we plan to operate are subject to frequent and extensive litigation regarding patents and other intellectual property rights. In addition, many companies in intellectual property-dependent industries, including those producing therapeutics to treat and potentially cure cancer, have employed intellectual property litigation as a means to gain an advantage over competitors. As a result, we may be required to defend against claims of intellectual property infringement that may be asserted by our competitors against us and, if the outcome of any such litigation is adverse to us, it may affect our ability to compete effectively.

Third-party intellectual property right holders, including our competitors, may assert and actively bring infringement claims against us based on existing or future intellectual property rights. The pharmaceutical and biotechnology industries have produced a significant number of patents, and it may not always be clear to industry participants, including us, which patents cover various types of product candidates or methods of use. The coverage of patents is subject to interpretation by the courts, and the interpretation is not always uniform.

If we are sued for patent infringement, we would need to demonstrate that our product candidates or platform technologies either do not infringe the patent claims of a relevant patent or that the patent claims are invalid or unenforceable, and we may not be able to do this. Proving invalidity may be difficult. For example, in the United States, proving invalidity in court requires a showing of clear and convincing evidence to overcome the presumption of validity enjoyed by issued patents. Even if we are successful in these proceedings, we may incur substantial costs and the time and attention of our management and scientific personnel could be diverted in pursuing these proceedings, which could have a material adverse effect on our business and operations. In addition, we may not have sufficient resources to bring these actions to a successful conclusion. In addition, we may not be able to successfully settle or otherwise resolve such infringement claims. If we are unable to successfully settle future claims on terms acceptable to us, we may be required to engage or continue costly, unpredictable and time-consuming litigation and may be prevented from or experience substantial delays in marketing our product candidates.

Our involvement in litigation, and in any interferences, opposition proceedings or other intellectual property proceedings inside and outside of the United States may divert management from focusing on business operations, could cause us to spend significant amounts of money and may have no guarantee of success. Any current and potential intellectual property litigation also could force us to do one or more of the following:

- stop selling, incorporating, manufacturing or using our product candidates or any products, if approved, in the United States and/or other jurisdictions that use the subject intellectual property;
- obtain from a third party asserting its intellectual property rights, a license to sell or use the relevant technology, including the obligation to pay royalties, which license may not be available on reasonable terms, or at all, or may be non-exclusive thereby giving our competitors access to the same technologies licensed to us;
- redesign those products or processes that use any allegedly infringing or misappropriated technology, which may result in significant cost or delay to us, or which redesign could be technically infeasible; or
- pay damages, including the possibility of treble damages and attorneys' fees in a patent case if a court finds us to have willfully infringed certain intellectual property rights.

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

Litigation or other legal proceedings relating to intellectual property claims, with or without merit, is unpredictable and generally expensive and time consuming. Even if resolved in our favor, such litigation and other legal proceedings may cause us to incur significant expenses and is likely to divert significant resources from our core business, including distracting our technical and management personnel from their normal responsibilities, and may impact our reputation. In addition, there could be public announcements of the results of hearings, motions or other interim proceedings or developments and if securities analysts or investors perceive these results to be negative, we could have a substantial adverse effect on the price of our common shares. Such litigation or proceedings could substantially increase our operating losses and reduce our resources available for development activities. We may not have sufficient financial or other resources to adequately conduct such litigation or proceedings. Some of our competitors may be able to sustain the costs of such litigation or proceedings more effectively than we can because of their substantially greater financial resources. Uncertainties resulting from the initiation and continuation of patent litigation or other proceedings could have a material adverse effect on our ability to compete in the marketplace.

We may need to obtain additional licenses of third-party technology that may not be available to us or are available only on commercially unreasonable terms, and which may cause us to operate our business in a more costly or otherwise adverse manner that was not anticipated.

We currently have rights to the intellectual property, including patent applications relating to our TriTAC and ProTriTAC platforms and our product candidates. From time to time, we may be required to license technologies relating to our therapeutic research programs from additional third parties to further develop or commercialize our platform technologies and product candidates. Similarly, the targets of our product candidates have also been the subject of research by many companies that have filed patent applications or have patents related to such targets and therapeutic methods relating to those targets. There can be no assurance any such patents will not be asserted against us or that we will not need to seek licenses from such third parties. We may not be able to secure such licenses on acceptable terms, if at all, and any such litigation would be costly and time-consuming.

Should we be required to obtain licenses to any third-party technology, including any such patents required to manufacture, use or sell our product candidates, the growth of our business will likely depend in part on our ability to acquire, in-license, maintain or use these proprietary rights. The inability to obtain any third-party license required to develop or commercialize any of our product candidates could cause us to abandon any related efforts, which could seriously harm our business and operations.

In addition, our product candidates may require specific formulations to work effectively and efficiently and the rights to these formulations may be held by others. We may be unable to acquire or in-license any compositions, methods of use, processes, or other third-party intellectual property rights from third parties that we identify as necessary for our product candidates. The licensing and acquisition of third-party intellectual property rights is a competitive area, and a number of more established companies are also pursuing strategies to license or acquire third-party intellectual property rights that we may consider attractive. These established companies may have a competitive advantage over us due to their size, cash resources, and greater clinical development and commercialization capabilities.

Our involvement in litigation, and in any interferences, opposition proceedings or other intellectual property proceedings inside and outside of the United States may divert management from focusing on business operations, could cause us to spend significant amounts of money and may have no guarantee of success. Any current and potential intellectual property litigation also could force us to do one or more of the following:

- stop selling, incorporating, manufacturing or using our product candidates or any products, if approved, in the United States and/or other jurisdictions that use the subject intellectual property;
- obtain from a third party asserting its intellectual property rights, a license to sell or use the relevant technology, including the obligation to pay royalties, which license may not be available on reasonable

In addition, companies that perceive us to be a competitor may be unwilling to assign or license rights to us. We also may be unable to license or acquire third-party intellectual property rights on terms that would allow us to make an appropriate return on our investment. Even if we are able to obtain a license, it may be non-exclusive, thereby giving our competitors access to the same technologies licensed to us. If we are unable to successfully obtain a license to third-party intellectual property rights necessary for the development of a product candidate or program, we may have to abandon development of that product candidate or program and our business and financial condition could suffer.

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

Our registered or unregistered trademarks or trade names may be challenged, infringed, circumvented or declared generic or determined to be infringing on other marks. We may not be able to protect our rights to these trademarks and trade names, which we need to build name recognition by potential collaborators, partners or customers in our markets of interest. Over the long term, if we are unable to establish name recognition based on our trademarks and trade names, then we may not be able to compete effectively and our business may be adversely affected. If other entities use trademarks similar to ours in different jurisdictions, or have senior rights to ours, it could interfere with our use of our current trademarks throughout the world.

During trademark registration proceedings, we may receive rejections. Although we would be given an opportunity to respond to those rejections, we may be unable to overcome such rejections. In addition, in both the USPTO and comparable agencies in many foreign jurisdictions, third parties are given an opportunity to oppose pending trademark applications and to seek to cancel registered trademarks. Opposition or cancellation proceedings may be filed against our trademarks, which may not survive such proceedings. If we are unable to establish name recognition based on our trademarks and trade names, we may not be able to compete effectively and our business may be adversely affected.

We may license our trademarks and trade names to third parties, such as distributors. Though these license agreements may provide guidelines for how our trademarks and trade names may be used, a breach of these agreements or misuse of our trademarks and tradenames by our licensees may jeopardize our rights in or diminish the goodwill associated with our trademarks and trade names.

Patent terms may be inadequate to protect our competitive position on our product candidates for an adequate amount of time.

Patents have a limited lifespan. In the United States, if all maintenance fees are timely paid, the natural expiration of a patent is generally 20 years from its earliest U.S. non-provisional filing date. Various extensions may be available, but the life of a patent, and the protection it affords, is limited. Even if patents covering our product candidates are obtained, once the patent life has expired for a product, we may be open to competition from competitive medications, including biosimilar or generic medications. In addition, although upon issuance in the United States a patent's life can be increased based on certain delays caused by the United States Patent and Trademark Office, or the USPTO, this increase can be reduced or eliminated based on certain delays caused by the patent applicant during patent prosecution. If we do not have sufficient patent life to protect our product candidates and any products, if approved, our business and results of operations will be adversely affected. Given the amount of time required for the development, testing and regulatory review of new product candidates, patents protecting such candidates might expire before or shortly after such candidates are commercialized. As a result, our patent portfolio may not provide us with sufficient rights to exclude others from commercializing products similar or identical to ours.

If we do not obtain protection under the Hatch-Waxman Amendments and similar non-U.S. legislation for extending the term of patents covering each of our product candidates, our business may be materially harmed

Depending upon the timing, duration and conditions of FDA marketing approval of our product candidates, one or more of our U.S. patents may be eligible for limited patent term extension under the Drug Price Competition and Patent Term Restoration Act of 1984, referred to as the Hatch-Waxman Amendments, and similar legislation in the European Union. The Hatch-Waxman Amendments permit a patent term extension of up to five years for a patent covering an approved product as compensation for effective patent term lost during product development and the FDA regulatory review process. However, we may not receive an extension if we fail to apply within applicable deadlines, fail to apply prior to expiration of relevant patents or otherwise fail to satisfy applicable requirements. Moreover, the length of the extension could be less than we request. If we are unable to obtain patent term extension or the term of any such extension is less than we request, the period during which we can enforce our patent rights for that product will be shortened and our competitors may obtain approval to market competing products sooner. As a result, our revenue from applicable products could be reduced, possibly materially.

We enjoy only limited geographical protection with respect to certain patents and may not be able to protect our intellectual property rights throughout the world.

Patents are of national or regional effect. While we will endeavor to try to protect our technologies, products and product candidates with intellectual property rights such as patents, as appropriate, the process of obtaining patents is time-consuming, expensive and sometimes unpredictable in other countries. As such, we may not be able to prevent third parties from practicing our inventions in all countries outside the United States, or from selling or importing products made using our inventions in and into the United States or other jurisdictions.

International applications under the Patent Cooperation Treaty, or PCT, are usually filed within 12 months after the priority filing. Based on the PCT filing, national and regional patent applications may be filed in additional jurisdictions where we believe our product candidates may be marketed. We have so far not filed for patent protection in all national and regional jurisdictions where such protection may be available. Filing, prosecuting and defending patents on all of our research programs and product candidates in all countries throughout the world would be prohibitively expensive, and our intellectual property rights in some countries outside the United States can be less extensive than those in the United States. In addition, we may decide to abandon national and regional patent applications before grant. Finally, the grant proceeding of each national/regional patent is an independent proceeding which may lead to situations in which applications might in some jurisdictions be refused by the relevant patent offices, while granted by others. Further, the standards applied by the USPTO and foreign patent offices in granting patents are not always applied uniformly or predictably. It is common that depending on the country, the scope of patent protection may vary for the same product candidate and/or technology. As such, we do not know the degree of future protection that we will have on our technologies and product candidates.

Competitors may use our or our collaboration partners' technologies in jurisdictions where we have not obtained patent protection to develop their own products and, further, may export otherwise infringing products to territories where we or our collaboration partners have patent protection, but enforcement is not as strong as that in the United States. These products may compete with our product candidates, and our or our collaboration partners' patents or other intellectual property rights may not be effective or sufficient to prevent them from competing.

The laws of some jurisdictions, particularly certain developing countries, do not protect intellectual property rights, particularly those relating to pharmaceuticals or biologics, to the same extent as laws in the United States, and many companies have encountered significant difficulties in protecting and defending such rights in such jurisdictions. Consequently, we may not be able to prevent third parties from practicing our inventions in all countries outside the United States, or from selling or importing products made using our inventions in and into the United States or other jurisdictions. If we encounter difficulties in protecting, or are otherwise precluded from effectively protecting, the intellectual property rights important for our business in such jurisdictions, the value of these rights may be diminished and we may face additional competition from others in those jurisdictions.

Proceedings to enforce our patent rights in foreign jurisdictions could result in substantial costs and divert our efforts and attention from other aspects of our business, could put our patents at risk of being invalidated or interpreted narrowly and our patent applications at risk of not issuing, and could provoke third parties to assert claims against us. We may not prevail in any lawsuits that we initiate and the damages or other remedies awarded, if any, may not be commercially meaningful. Accordingly, our efforts to enforce our intellectual property rights around the world may be inadequate to obtain significant commercial advantage from the intellectual property that we develop or license.

Some countries, including China and India, have compulsory licensing laws under which a patent owner may be compelled to grant licenses to third parties. In addition, some countries limit the enforceability of patents against government agencies or government contractors. In these countries, the patent owner may have limited remedies, which could materially diminish the value of such patent. If we are forced to grant a license to third parties with respect to any patents relevant to our business, our competitive position may be impaired and our business and results of operations may be adversely affected.

We may become subject to claims challenging the inventorship or ownership of our patents and other intellectual property.

We may be subject to claims that former employees, consultants, independent contractors, collaborators or other third parties have an interest in our patents or other intellectual property as an owner, co-owner, inventor or co-inventor. The failure to name the proper inventors on a patent application can result in the patents issuing thereon being unenforceable. Inventorship disputes may arise from conflicting views regarding the contributions of different individuals named as inventors, the effects of foreign laws where foreign nationals are involved in the development of the subject matter of the patent, conflicting obligations of third parties involved in developing our product candidates or as a result of questions regarding co-ownership of potential joint inventions. Litigation may be necessary to resolve these and other claims challenging inventorship and/or ownership. Alternatively, or additionally, we may enter into agreements to clarify the scope of our rights in such intellectual property. If we fail in defending any such claims, in addition to paying monetary damages, we may lose valuable intellectual property rights, such as exclusive ownership of, or right to use, valuable intellectual property. Such an outcome could have a material adverse effect on our business. Even if we are successful in defending against such claims, litigation could result in substantial costs and be a distraction to management and other employees.

Intellectual property rights do not necessarily address all potential threats to our competitive advantage.

The degree of future protection afforded by our intellectual property rights is uncertain because intellectual property rights have limitations, and may not adequately protect our business, or permit us to maintain our competitive advantage. The following examples are illustrative:

- others may be able to make product candidates similar to our product candidates but that are not covered by the claims of the patents that we own or have exclusively licensed;
- the patents of third parties may have an adverse effect on our business;
- we or any future strategic partners might not have been the first to conceive or reduce to practice the inventions covered by the issued patent or pending patent application that we own or have exclusively licensed;
- we or any future strategic partners might not have been the first to file patent applications covering certain of our inventions;
- others may independently develop similar or alternative technologies or duplicate any of our technologies without infringing our intellectual property rights;
- it is possible that our pending patent applications will not lead to issued patents;
- issued patents that we own or have exclusively licensed may not provide us with any competitive advantage, or may be held invalid or unenforceable, as a result of legal challenges by our competitors;
- we cannot predict the degree and range of protection any issued patents will afford us against competitors, whether or not others will obtain patents claiming aspects similar to those covered by our patents and patent applications, or whether we will need to initiate litigation or administrative proceedings which may be costly whether we win or lose;
- our competitors might conduct research and development activities in countries where we do not have patent rights and then use the information learned from such activities to develop competitive products for sale in our major commercial markets;
- third parties performing manufacturing or testing for us using our product candidates or technologies could use the intellectual property of others without obtaining a proper license; and
- we may not develop additional technologies that are patentable.

Should any of these events occur, they could significantly harm our business, results of operations and prospects.

Composition of matter patents for biological and pharmaceutical products such as our product candidates are generally considered to be the strongest form of intellectual property protection for those types of products, as such patents provide protection without regard to any method of use. We cannot be certain that the claims in our pending patent applications covering composition of matter of our product candidates will be considered patentable by the USPTO or by patent offices in foreign countries, or that the claims in any of our issued patents will be considered valid and enforceable by courts in the United States or foreign countries. Method of use patents protect the use of a product for the specified method. This type of patent does not prevent a competitor from making and marketing a product that is identical to our product for an indication that is outside the scope of the patented method. Moreover, even if competitors do not actively promote their product for our targeted indications, physicians may prescribe these products "off-label." Although off-label prescriptions may infringe or contribute to the infringement of method of use patents, the practice is common and such infringement is difficult to prevent or prosecute.

Changes in patent laws or patent jurisprudence could diminish the value of patents in general, thereby impairing our ability to protect our product candidates.

As is the case with other biopharmaceutical companies, our success is heavily dependent on intellectual property, particularly patents. Obtaining and enforcing patents in the biopharmaceutical industry involve both technological complexity and legal complexity. Recent U.S. Supreme Court rulings have narrowed the scope of patent protection available in certain circumstances and weakened the rights of patent owners in certain situations. Therefore, obtaining and enforcing biopharmaceutical patents is costly, time-consuming and inherently uncertain.

In September 2011, the America Invents Act, or the AIA, was enacted in the United States, resulting in significant changes to the U.S. patent system. An important change introduced by the AIA was a transition to a "first-to-file" system for deciding which party should be granted a patent when two or more patent applications are filed by different parties claiming the same invention, which went into effect on March 16, 2013. Therefore, a third party that now files a patent application in the USPTO before we do could be awarded a patent covering an invention of ours even if we created the invention before it was created by the third party. While we are cognizant of the time from invention to filing of a patent application, circumstances could prevent us from promptly filing patent applications for our inventions.

Among some of the other changes introduced by the AIA were changes that limit where a patentee may file a patent infringement suit and providing opportunities for third parties to challenge any issued patent in the USPTO. This applies to all of our U.S. patents, even those issued before March 16, 2013. Because of a lower evidentiary standard in USPTO proceedings compared to the evidentiary standard in U.S. federal courts necessary to invalidate a patent claim, a third party could potentially provide evidence in a USPTO proceeding sufficient for the USPTO to hold a claim invalid even though the same evidence would be insufficient to invalidate the claim if first presented in a district court action. Accordingly, a third party may attempt to use the USPTO procedures to invalidate our patent claims that would not have been invalidated if first challenged by the third party as a defendant in a district court action. The AIA and its continued implementation could increase the uncertainties and costs surrounding the prosecution of our patent applications, and the patent applications of our collaborators, and the enforcement or defense of our issued patents.

Depending on decisions by the U.S. Congress, the federal courts, and the USPTO, the laws and regulations governing patents could change in unpredictable ways that could weaken our ability to obtain new patents or to enforce our existing patents and patents that we might obtain in the future. For example, in the recent case, *Assoc. for Molecular Pathology v. Myriad Genetics, Inc.*, the U.S. Supreme Court held that certain claims to DNA molecules are not patentable. While we do not believe that any of the patents owned or licensed by us will be found invalid based on this decision, we cannot predict how future decisions by the courts, the U.S. Congress or the USPTO may impact the value of our patents. Similarly, there is complexity and uncertainty related to European patent laws. For example, the European Patent Convention was amended in April 2010 to limit the time permitted for filing divisional applications. In addition, the European Patent Convention patent system is relatively stringent in the type of amendments that are allowed during prosecution. These limitations and requirements could adversely affect our ability to obtain new patents in the future that may be important for our business.

We may rely on trade secret and proprietary know-how, which can be difficult to trace and enforce and, if we are unable to protect the confidentiality of our trade secrets, our business and competitive position would be harmed.

In addition to seeking patents for some of our technology and product candidates, we may rely on trade secrets and/or confidential know-how to protect our technology, especially where patent protection is believed to be of limited value, to maintain our competitive position with respect to our research programs and product candidates. Elements of our product candidates, including processes for their preparation and manufacture, may involve proprietary know-how, information, or technology that is not covered by patents, and thus for these aspects we may consider trade secrets and know-how to be our primary intellectual property. Any disclosure, either intentional or unintentional, by our employees or by other third parties of our trade secrets or proprietary information could enable competitors to duplicate or surpass our technological achievements, thus adversely eroding our competitive position in our market.

Trade secrets and/or confidential know-how can be difficult to protect or maintain as confidential. To protect this type of information against disclosure or appropriation by competitors, our policy is to require our employees, consultants, contractors, collaborators, advisors and other third parties to enter into confidentiality agreements with us. Despite these efforts, any of these parties may unintentionally or willfully breach the agreements and disclose our confidential information, and confidentiality agreements may not provide an adequate remedy in the event of unauthorized disclosure of confidential information. Monitoring unauthorized uses and disclosures is difficult, and we do not know whether the steps we have taken to protect our proprietary technologies will be effective. Enforcing a claim that a third party obtained illegally and is using trade secrets and/or confidential know-how is also expensive, time consuming and unpredictable. The enforceability of confidentiality agreements may vary from jurisdiction to jurisdiction. The laws of some foreign countries do not protect proprietary rights to the same extent or in the same manner as the laws of the United States. As a result, we may encounter significant problems in protecting and defending our intellectual property both in the United States and abroad. Furthermore, if a competitor lawfully obtained or independently developed any of our trade secrets, we would have no right to prevent such competitor from using that technology or information to compete with us, which could harm our competitive position. Additionally, if the steps taken to maintain our trade secrets are deemed inadequate, we may have insufficient recourse against third parties for misappropriating the trade secret. In addition, some courts inside and outside the United States are less willing or unwilling to protect trade secrets or other proprietary information.

Trade secrets can over time be disseminated within the industry through independent development, the publication of journal articles and the movement of personnel skilled in the art from company to company or academic to industry scientific positions. Though our agreements with third parties typically restrict the ability of our employees, consultants, contractors, collaborators, advisors and other third parties to publish data potentially relating to our trade secrets, our agreements may contain certain limited publication rights. Because from time to time we expect to rely on third parties in the development, manufacture and distribution of our product candidates and provision of our services, we must, at times, share trade secrets with them. Despite employing the contractual and other security precautions described above, the need to share trade secrets increases the risk that such trade secrets become known by our competitors, are inadvertently incorporated into the technology of others, or are disclosed or used in violation of these agreements. If any of our trade secrets were to be lawfully obtained or independently developed by a competitor or other third party, we would have no right to prevent them from using that technology or information to compete with us. If any of our trade secrets were to be disclosed to or independently developed by a competitor or other third party, our competitive position would be harmed.

In addition, our competitors may independently develop substantially equivalent trade secrets, proprietary information or know-how and may even apply for patent protection in respect of the same. If successful in obtaining such patent protection, our competitors could limit our use of our trade secrets and/or confidential know-how. Under certain circumstances and to guarantee our freedom to operate, we may also decide to publish some know-how to prevent others from obtaining patent rights covering such know-how.

We may be subject to third-party claims asserting that our employees, consultants, contractors, collaborators or advisors have misappropriated or wrongfully used or disseminated their intellectual property, or claiming ownership of what we regard as our own intellectual property.

Many of our employees, including our senior management, were previously employed at universities or at other biopharmaceutical companies, including our competitors or potential competitors. Some of these employees executed proprietary rights, non-disclosure and non-competition agreements in connection with such previous employment. Similarly, we work with consultants, contractors, collaborators, advisors or other third parties who have worked with, and do currently work with, other companies, including our competitors or potential competitors, and have executed proprietary rights, non-disclosure and non-competition agreements in connection with such other companies. Although we try to ensure that our employees, consultants, contractors, collaborators, advisors or other third parties do not use or disclose the proprietary information or know-how of others in their work for us, we may be subject to claims that we or these employees or individuals that we work with have used or disclosed confidential information or intellectual property of others, including trade secrets or other proprietary information, or that we caused an individual to breach the terms of his or her non-competition or non-solicitation agreement with a current or former employer or competitor.

Litigation may be necessary to defend against these claims and, even if we are successful, could result in substantial costs and could be a distraction to management, our employees and our routine business. If we fail in prosecuting or defending any such claims, in addition to paying monetary damages, we may lose valuable intellectual property rights or personnel or sustain damages. Such intellectual property rights could be awarded to a third party, and we could be required to obtain a license from such third party to develop or commercialize our technology or product candidates. Such a license may not be available on commercially reasonable terms or at all. Moreover, any such litigation or the threat thereof may adversely affect our reputation and our ability to form strategic alliances or sublicense our rights to collaborators, engage with scientific advisors or hire employees or consultants, each of which would have an adverse effect on our business, results of operations and financial condition.

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

Periodic maintenance and annuity fees on any issued patent are due to be paid to the USPTO and foreign patent agencies in several stages over the lifetime of the patent. The USPTO and various foreign governmental patent agencies require compliance with a number of procedural, documentary, fee payment and other similar provisions during the patent application process. While an inadvertent lapse can in many cases be cured by payment of a late fee or by other means in accordance with the applicable rules, there are situations in which noncompliance can result in abandonment or lapse of the patent or patent application, resulting in partial or complete loss of patent rights in the relevant jurisdiction. Non-compliance events that could result in abandonment or lapse of a patent or patent application include failure to respond to official actions within prescribed time limits, non-payment of fees and failure to properly legalize and submit formal documents. If we fail to maintain the patents and patent applications covering our product candidates, our competitors might be able to enter the market, which would have an adverse effect on our business.

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

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

Use of social media could give rise to liability, breaches of data security, or reputational harm.

We and our employees use social media to communicate externally. There is risk that the use of social media by us or our employees to communicate about our product candidates or business may give rise to liability, lead to the loss of trade secrets or other intellectual property, or result in public exposure of personal information of our employees, clinical trial patients, customers, and others. Furthermore, negative posts or comments about us or our product candidates in social media could seriously damage our reputation, brand image, and goodwill. Any of these events could have a material adverse effect on our business, prospects, operating results, and financial condition and could adversely affect the price of our common stock.

Our computer systems, or those used by our CROs or other contractors or consultants, may fail or suffer security breaches, which could adversely affect our business.

Despite the implementation of security measures, our computer systems and data and those of our current or future CROs or other contractors and consultants are vulnerable to failure, interruption, compromise or damage from computer hacking, malicious software, fraudulent activity, employee misconduct, human error, telecommunication and electrical failures, natural disasters, public health epidemics, such as the coronavirus disease (COVID-19) currently impacting multiple jurisdictions worldwide, including the United States, or other cybersecurity attacks or accidents. Future acquisitions could expose us to additional cybersecurity risks and vulnerabilities from any newly acquired information technology infrastructure. Cybersecurity attacks are constantly increasing in sophistication and are made by groups and individuals with a wide range of motives (including industrial espionage) and expertise, including by organized criminal groups, “hacktivists,” nation states and others. As a company with an increasingly global presence, our systems are subject to frequent attacks. Due to the nature of some of these attacks, there is a risk that an attack may remain undetected for a period of time. While we continue to make investments to improve the protection of data and information technology, there can be no assurance that our efforts will prevent service interruptions or security breaches.

Any cybersecurity incident could adversely affect our business, by leading to, for example, the loss of trade secrets or other intellectual property, demands for ransom or other forms of blackmail or the unauthorized disclosure of personal or other sensitive information of our employees, clinical trial patients, customers and others. Although to our knowledge we have not experienced any material cybersecurity incident to date, if such an event were to occur, it could seriously harm our development programs and our business operations. We could be subject to regulatory actions taken by governmental authorities, litigation under laws that protect the privacy of personal information, or other forms of legal proceedings, which could result in significant liabilities or penalties. Further, a cybersecurity incident may disrupt our business or damage our reputation, which could have a material adverse effect on our business, prospects, operating results, share price and stockholder value, and financial condition. We could also incur substantial remediation costs, including the costs of investigating the incident, repairing or replacing damaged systems, restoring normal business operations, implementing increased cybersecurity protections, and paying increased insurance premiums.

Risks Related to Ownership of Our Common Stock

Our stock price may be volatile or may decline regardless of our operating performance, resulting in substantial losses for investors.

The market price of our common stock may be highly volatile and may fluctuate substantially as a result of a variety of factors, some of which are related in complex ways. Since shares of our common stock were sold in our initial public offering in February 2019 at a price of $14.00 per share, the reported high and low sales prices of our common stock through February 29, 2020 has ranged from $9.07 to $21.47.

The market price of our common stock may fluctuate significantly in response to numerous factors, many of which are beyond our control, including the factors listed below and other factors describe in this "Risk Factors" section:

- the anticipated results of our Phase 1 trial of HPN424 and Phase 1/2a trial of HPN536 and the commencement, enrollment or results of our planned Phase 1/2 clinical trial of HPN217 and Phase 1/2a clinical trial of HPN328, any other future preclinical studies and clinical trials and trials we may conduct, or changes in the development status of our product candidates;
- any delay in our regulatory filings for our product candidates and any adverse development or perceived adverse development with respect to the applicable regulatory authority's review of such filings, including without limitation the issuance by the FDA of a "refusal to file" letter or a request for additional information;
- adverse results or delays in clinical trials;
- our decision to initiate a preclinical study or clinical trial, not to initiate a preclinical study or clinical trial or to terminate an existing clinical study or trial;
- adverse actions taken by regulatory agencies with respect to our preclinical studies or clinical trials, manufacturing supply chain or sales and marketing activities, including failure to receive regulatory approval of our product candidates;
- changes in laws or regulations, including but not limited to preclinical study or clinical trial requirements for approvals;
- any adverse changes to our relationship with manufacturers or suppliers;
- manufacturing, supply or distribution shortages;
- litigation involving us, our industry or both, or investigations by regulators into our operations or those of our competitors;
- our failure to commercialize our product candidates;
- additions or departures of key scientific or management personnel;
- unanticipated serious safety concerns related to the use of our product candidates;
- disputes or other developments relating to proprietary rights, including patents, litigation matters and our ability to obtain patent protection for our technologies;
- variations in our results of operations;
- our cash position;
- our failure to meet the estimates and projections of the investment community or that we may otherwise provide to the public;
- publication of research reports about us or our industry, or immuno-oncology in particular, or positive or negative recommendations or withdrawal of research coverage by securities analysts;
- announcements made by us or our competitors of new product and service offerings, acquisitions, strategic relationships, joint ventures or capital commitments;
- our inability to establish collaborations, if needed;
- our ability to effectively manage our growth;
- the size of our initial cancer target markets;
- our ability to successfully treat additional types of cancers or at different stages;
- changes in the market valuations of similar companies;

- press reports, whether or not true, about our business;
- sales or perceived potential sales of our common stock by us or our stockholders in the future;
- overall fluctuations in the equity markets;
- ineffectiveness of our internal controls;
- changes in accounting practices or principles;
- changes or developments in the global regulatory environment;
- general political and economic conditions; and
- other events or factors, many of which are beyond our control.

In addition, the stock markets have experienced extreme price and volume fluctuations that have affected and continue to affect the market prices of equity securities of many biopharmaceutical companies. Stock prices of many biopharmaceutical companies have fluctuated in a manner unrelated or disproportionate to the operating performance of those companies. If we were to become involved in securities litigation, it could subject us to substantial costs, divert resources and the attention of management from our business and adversely affect, our business, operating results, financial condition and cash flows.

Our principal stockholders and management own a significant percentage of our stock and will be able to exert significant control over matters subject to stockholder approval.

As of February 29, 2020, our executive officers, directors, holders of 5% or more of our capital stock and their respective affiliates owned approximately 69.2% of our outstanding voting stock. Therefore, these stockholders will have the ability to influence us through this ownership position. These stockholders may be able to determine all matters requiring stockholder approval. For example, these stockholders may be able to control elections of directors, amendments of our organizational documents, or approval of any merger, sale of assets, or other major corporate transaction. This may prevent or discourage unsolicited acquisition proposals or offers for our common stock that you may feel are in your best interest as one of our stockholders.

Sales of substantial amounts of our outstanding common stock in the public market could cause our common stock price to fall.

Our common stock price could decline as a result of sales of a large number of shares of common stock or the perception that these sales could occur. These sales, or the possibility that these sales may occur, might also make it more difficult for us to sell equity securities in the future at a time and price that we deem appropriate.

Certain of our stockholders have rights, subject to some conditions, that to require us to file registration statements covering the sale of their shares or to include their shares in registration statements that we may file for ourselves or our other stockholders. We have also registered the offer and sale of all shares of common stock that we issued under our equity compensation plans. These shares may accordingly be sold in the public market upon issuance, subject to vesting conditions and, in the case of our directors, officers and other affiliates, restrictions that may apply under Rule 144 promulgated under the Securities Act of 1933, as amended, or the Securities Act.

In addition, in the future, we may issue shares of common stock, or other equity or debt securities convertible into common stock, in connection with a financing, acquisition, employee arrangement or otherwise. Any such issuance could result in substantial dilution to our existing stockholders and could cause the price of our common stock to decline.

An active trading market for our common stock may not be sustained.

Our common stock is currently listed on the NASDAQ Global Select Market under the symbol “HARP”. The price for our common stock may vary and an active or liquid market in our common stock may not be sustainable. The lack of an active market may impair the value of your shares, your ability to sell your shares at the time you wish to sell them and the prices that you may obtain for your shares. An inactive market may also impair our ability to raise capital by selling our common stock and our ability to acquire other companies, products or technologies by using our common stock as consideration.

If securities or industry analysts either do not publish research about us or publish inaccurate or unfavorable research about us, our business or our market, or if they change their recommendations regarding our common stock adversely, the trading price or trading volume of our common stock could decline.

The trading market for our common stock is influenced in part by the research and reports that securities or industry analysts may publish about us, our business, our market or our competitors. If one or more of these analysts initiate research with an unfavorable rating or downgrade our common stock, provide a more favorable recommendation about our competitors or publish inaccurate or unfavorable research about our business, our common stock price would likely decline. If any analyst who may cover us were to cease coverage of us or fail to regularly publish reports on us, we could lose visibility in the financial markets, which in turn could cause the trading price or trading volume of our common stock to decline.

If we are unable to maintain effective internal control over financial reporting, it could result in material misstatements in our financial statements and cause investors to lose confidence in the accuracy and completeness of our financial reports, either of which could adversely affect the market price of our common stock.

Ensuring that we have adequate internal financial and accounting controls and procedures in place so that we can produce accurate financial statements on a timely basis is a costly and time-consuming effort that needs to be re-evaluated frequently. Our 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 in accordance with GAAP. We are required to document, review and improve our internal controls and procedures for compliance with Section 404 of the Sarbanes-Oxley Act of 2002, or the Sarbanes-Oxley Act, which requires annual management assessment of the effectiveness of our internal control over financial reporting. If we are unable to maintain effective internal control over financial reporting, the accuracy and timing of our financial reporting, and our stock price, may be adversely affected and we may be unable to maintain compliance with the applicable stock exchange listing requirements.

Implementing any appropriate changes to our internal controls may distract our officers and employees, entail substantial costs to modify our existing processes and take significant time to complete. These changes may not, however, be effective in maintaining the adequacy of our internal controls, and any failure to maintain that adequacy, or consequent inability to produce accurate financial statements on a timely basis, could increase our operating costs and harm our business. In addition, investors' perceptions that our internal controls are inadequate or that we are unable to produce accurate financial statements on a timely basis may harm our stock price.

We are an emerging growth company and a smaller reporting company, and any decision on our part to comply only with applicable reduced reporting and disclosure requirements could make our common stock less attractive to investors.

We are an "emerging growth company" as defined in the JOBS Act and, for as long as we continue to be an emerging growth company, we may choose to take advantage of exemptions from various reporting requirements applicable to other public companies but not to emerging growth companies, including:

- not being required to have our independent registered public accounting firm audit our internal control over financial reporting under Section 404 of the Sarbanes-Oxley Act;
- reduced disclosure obligations regarding executive compensation in our periodic reports and annual report on Form 10-K; and
- exemptions from the requirements of holding non-binding advisory votes on executive compensation and stockholder approval of any golden parachute payments not previously approved.

We could be an emerging growth company for up to five years following the completion of our initial public offering. Our status as an emerging growth company will end as soon as any of the following takes place:

- the last day of the fiscal year in which we have more than $1.07 billion in gross annual revenue;
- the date we qualify as a "large accelerated filer," with at least $700 million of equity securities held by non-affiliates;
- the date on which we have issued, in any three-year period, more than $1.0 billion in non-convertible debt securities; or
- the last day of the fiscal year ending after the fifth anniversary of the completion of our initial public offering.

We cannot predict if investors will find our common stock less attractive if we choose to rely on any of the exemptions afforded to emerging growth companies. If some investors find our common stock less attractive because we rely on any of these exemptions, there may be a less active trading market for our common stock and the market price of our common stock may be more volatile.

Under the JOBS Act, emerging growth companies can also delay adopting new or revised accounting standards until such time as those standards apply to private companies. We elected to use this extended transition period for complying with new or revised accounting standards that have different effective dates for public and private companies until the earlier of the date that we (i) are no longer an emerging growth company or (ii) affirmatively and irrevocably opt out of the extended transition period provided in the JOBS Act. As a result, these financial statements may not be comparable to companies that comply with the new or revised accounting pronouncements as of public company effective dates.

We are also a "smaller reporting company" as defined in the Securities Exchange Act of 1934, as amended. We may continue to be a smaller reporting company even after we are no longer an emerging growth company. We may take advantage of certain of the scaled disclosures available to smaller reporting companies and will be able to take advantage of these scaled disclosures for so long as our voting and non-voting common stock held by non-affiliates is less than $250.0 million measured on the last business day of our second fiscal quarter, or our annual revenue is less than $100.0 million during the most recently completed fiscal year and our voting and non-voting common stock held by non-affiliates is less than $700.0 million measured on the last business day of our second fiscal quarter.

The requirements of being a public company may strain our resources, result in litigation and divert management's attention.

As a public company, we are subject to the reporting requirements of the Exchange Act, the Sarbanes-Oxley Act, the Dodd-Frank Wall Street Reform and Consumer Protection Act, or the Dodd-Frank Act, the listing requirements of The NASDAQ Global Select Market, or NASDAQ, and other applicable securities rules and regulations. Complying with these rules and regulations has increased and will increase our legal and financial compliance costs, make some activities more difficult, time consuming or costly and increase demand on our systems and resources. The Exchange Act requires, among other things, that we file annual, quarterly and current reports with respect to our business and operating results. The Sarbanes-Oxley Act requires, among other things, that we maintain effective disclosure controls and procedures and internal control over financial reporting. We are required to disclose changes made in our internal control and procedures on a quarterly basis. In order to maintain and, if required, improve our disclosure controls and procedures and internal control over financial reporting to meet this standard, significant resources and management oversight may be required. As a result, management's attention may be diverted from other business concerns, which could adversely affect our business and operating results. We may also need to hire additional employees or engage outside consultants to comply with these requirements, which will increase our costs and expenses.

In addition, changing laws, regulations and standards relating to corporate governance and public disclosure are creating uncertainty for public companies, increasing legal and financial compliance costs and making some activities more time consuming. These laws, regulations and standards are subject to varying interpretations, in many cases due to their lack of specificity and, as a result, their application in practice may evolve over time as new guidance is provided by regulatory and governing bodies. This could result in continuing uncertainty regarding compliance matters and higher costs necessitated by ongoing revisions to disclosure and governance practices. We intend to invest resources to comply with evolving laws, regulations and standards, and this investment may result in increased general and administrative expenses and a diversion of management's time and attention from revenue-generating activities to compliance activities. If our efforts to comply with new laws, regulations and standards differ from the activities intended by regulatory or governing bodies due to ambiguities related to their application and practice, regulatory authorities may initiate legal proceedings against us and our business may be adversely affected.

These new rules and regulations may make it more expensive for us to obtain director and officer liability insurance and, in the future, we may be required to accept reduced coverage or incur substantially higher costs to obtain coverage. These factors could also make it more difficult for us to attract and retain qualified members of our board of directors, particularly to serve on our audit committee and compensation committee, and qualified executive officers.

By disclosing information in filings required of a public company, our business and financial condition are more visible, which we believe may result in threatened or actual litigation, including by competitors and other third parties. If those claims are successful, our business could be seriously harmed. Even if the claims do not result in litigation or are resolved in our favor, the time and resources needed to resolve them could divert our management's resources and seriously harm our business.

We do not currently intend to pay dividends on our common stock and, consequently, our stockholders' ability to achieve a return on their investment will depend on appreciation of the value of our common stock.

We have never declared or paid cash dividends on our common stock. We currently intend to retain all available funds and any future earnings to support operations and to finance the growth and development of our business. We do not intend to declare or pay any cash dividends on our capital stock in the foreseeable future. As a result, any investment return on our common stock will depend upon increases in the value for our common stock, which is not certain.

Delaware law and provisions in our amended and restated certificate of incorporation and amended and restated bylaws, each of which will be in effect immediately after the completion of our initial public offering, could make a merger, tender offer or proxy contest difficult, thereby depressing the trading price of our common stock.

Our amended and restated certificate of incorporation and amended and restated bylaws contain provisions that could depress the trading price of our common stock by acting to discourage, delay or prevent a change of control of our company or changes in our management that our stockholders may deem advantageous. These provisions include the following:

- establish a classified board of directors so that not all members of our board of directors are elected at one time;
- permit our board of directors to establish the number of directors and fill any vacancies and newly created directorships;
- provide that members of our board of directors may only be removed for cause;
- require super-majority voting to amend certain provisions of our amended and restated certificate of incorporation and amended and restated bylaws;

- authorize the issuance of "blank check" preferred stock that our board of directors could use to implement a stockholder rights plan;
- eliminate the ability of our stockholders to call special stockholder meetings;
- prohibit stockholder action by written consent, which requires all stockholder actions to be taken at stockholder meetings;
- provide that our board of directors is expressly authorized to make, alter or repeal our amended and restated bylaws;
- restrict the forum for certain litigation against us to Delaware; and
- establish advance notice requirements for nominations for election to our board of directors or for proposing matters that can be acted upon by stockholders at annual stockholder meetings.

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

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

Our amended and restated certificate of incorporation provides that the Court of Chancery of the State of Delaware (or, if and only if the Court of Chancery of the State of Delaware lacks subject matter jurisdiction, any state court located within the State of Delaware or, if and only if all such state courts lack subject matter jurisdiction, the federal district court for the District of Delaware), to the fullest extent permitted by applicable law, is the exclusive forum for:

- any derivative action or proceeding brought on our behalf;
- any action asserting a breach of fiduciary duty;
- any action asserting a claim against us arising under the Delaware General Corporation Law, or the DGCL, our amended and restated certificate of incorporation or our amended and restated bylaws; and
- any action asserting a claim against us that is governed by the internal-affairs doctrine.

However, this exclusive forum provision would not apply to suits brought to enforce a duty or liability created by the Exchange Act. Furthermore, this provision applies to Securities Act claims and Section 22 of the Securities Act creates concurrent jurisdiction for federal and state courts over all suits brought to enforce any duty or liability created by the Securities Act or the rules and regulations thereunder. Accordingly, there is uncertainty as to whether a court would enforce such provision, and our stockholders will not be deemed to have waived our compliance with the federal securities laws and the rules and regulations thereunder.

This exclusive-forum provision may limit a stockholder's ability to bring a claim in a judicial forum that it finds favorable for disputes with us or our directors, officers or other employees, which may discourage lawsuits against us and our directors, officers and other employees.

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

Our U.S. net operating loss, or NOL, carryforwards and tax credit carryforwards are potentially subject to annual utilization limits under Sections 382 and 383 of the Internal Revenue Code of 1986, as amended, or the Code. Our U.S. NOL carryforwards arising prior to 2018 and tax credit carryforwards could expire unused and be unavailable to offset future taxable income or income tax liabilities because of their limited duration or because of restrictions under U.S. tax law. Our U.S. NOL carryforwards arising after 2017 carryforward indefinitely but are subject to limitations. Under Sections 382 and 383 of the Code, if a corporation undergoes an "ownership change," generally defined as a greater than 50 percentage point change (by value) in its equity ownership during a rolling three-year period, the corporation's ability to use its pre-change tax attributes, such as NOLs and R&D tax credits, to offset its post-change income or taxes may be limited. We have not performed an analysis under Section 382 of the Code and cannot predict or otherwise determine whether our federal tax attribute carryforwards may be limited in the future. As a result, if we earn taxable income in the future, our ability to use existing U.S. NOL and R&D tax credit carryforwards to reduce U.S. taxable income or tax liability may be subject to limitations. This could adversely impact our future operating results by increasing our future tax liabilities. Similar rules may also limit our ability to use accumulated state tax attributes to reduce our state tax liabilities. Also, there may be periods when the use of NOLs is suspended or otherwise limited at the state level, which could accelerate or permanently increase state taxes owed.

We may have ownership changes in the future, due to further changes in our stock ownership. Some of these ownership changes could be outside of our control. If an ownership change occurs and our ability to use our historical NOL and tax credit carryforwards is limited, it could adversely impact our future operating results by increasing our tax obligations.

New or future changes to tax laws could materially adversely affect our company.

The Tax Act, which was enacted on December 22, 2017, significantly amended the Code. Future guidance from the U.S. Internal Revenue Service and other tax authorities with respect to the Tax Act may affect us, and certain aspects of the Tax Act could be repealed or modified in future legislation. Changes in corporate tax rates, the realization of net deferred tax assets relating to our U.S. operations, the taxation of foreign earnings, and the deductibility of expenses under the Tax Act or future tax reform legislation could have a material impact on the value of our deferred tax assets, could result in significant one-time charges in the current or future taxable years, and could increase our future U.S. tax expense. The foregoing items, as well as any other future changes in tax laws, could have a material adverse effect on our business, cash flow, financial condition, or results of operations. In addition, it is uncertain if and to what extent various states will conform to the Tax Act or any newly enacted federal tax legislation.

Item 1B. Unresolved Staff Comments

Not applicable.

Item 2. Properties

We currently lease approximately 34,988 square feet of office and laboratory space in South San Francisco, California under an eight-year lease agreement that expires in June 2027. Under the lease agreement we are given an option to extend the lease term for an additional period of 8 years, when certain conditions are met. We believe this space is sufficient to meet our needs for the foreseeable future and that any additional space we may require will be available on commercially reasonable terms.

Item 3. Legal Proceedings

From time to time, we may become involved in legal proceedings arising in the ordinary course of our business. On January 3, 2019, Maverick Therapeutics, Inc., or Maverick, filed a complaint against us in the Delaware Court of Chancery and a motion for a temporary restraining order seeking to prohibit us from further developing our ProTriTAC platform. The complaint alleges various claims for breach of contract and misappropriation of trade secrets, and seeks as relief, among other things, a declaration that our ProTriTAC technology impermissibly competes in the Maverick Field (as defined in our Asset Transfer Agreement with Maverick), a preliminary and permanent injunction and unspecified damages. On January 18, 2019, the Court denied Maverick's motion for a temporary restraining order. We believe that the mechanism of action employed by our ProTriTAC platform falls outside the Maverick Field. On May 8, 2019, Millennium Pharmaceuticals, Inc., or Millennium, a wholly owned subsidiary of Takeda Pharmaceutical Company Limited, was granted permission by the court to intervene in the litigation based on a proposed complaint. Millennium and Maverick are parties to a collaboration agreement and a warrant agreement, and Millennium's proposed complaint alleges, in part, that we fraudulently induced Millennium to enter into the agreements with Maverick. Millennium seeks to assert various tort claims against us. A trial on Maverick and Millennium's claims was held on September 9-13 and 17, 2019. The parties have completed post-trial briefing and closing arguments and are awaiting a decision from the Court. We will vigorously defend the claims asserted against us.

We are not currently a party to any other material legal proceedings. Regardless of outcome, litigation can have an adverse impact on us due to defense and settlement costs, diversion of management resources, negative publicity, reputational harm and other factors.

Item 4. Mine Safety Disclosures

Not applicable.

Part II

Item 5. Market for the Registrant's Common Equity, related stockholder matters and issuer purchases of equity securities

Market Information for Common Stock

Our common stock has been listed on The NASDAQ Global Select Market under the symbol "HARP" since February 8, 2019. Prior to that, there was no public trading market for our common stock. The following table sets forth for the indicated periods the high and low intraday sales prices per share for our common stock on The Nasdaq Global Select Market.

	High	Low
Year ended December 31, 2019		
First quarter (from February 8, 2019)	$ 17.85	$ 9.07
Second quarter	$ 13.26	$ 9.55
Third quarter	$ 17.50	$ 10.67
Fourth quarter	$ 21.47	$ 12.78

Holders of Record

As of February 29, 2020, there were approximately 33 stockholders of record of our common stock. The actual number of stockholders is greater than this number of record holders, and includes stockholders who are beneficial owners, but whose shares are held in street name by brokers and other nominees. This number of holders of record also does not include stockholders whose shares may be held in trust by other entities.

Dividend Policy

We have never declared or paid cash dividends on our capital stock. We currently intend to retain all available funds and any future earnings to support operations and to finance the growth and development of our business. We do not intend to declare or pay any cash dividends on our capital stock in the foreseeable future. Any future determination to pay dividends will be made at the discretion of our board of directors, subject to applicable laws, and will depend upon, among other factors, our results of operations, financial condition, contractual restrictions and capital requirements. Our future ability to pay cash dividends on our capital stock may be limited by the terms of any future debt or preferred securities.

Recent Sales of Unregistered Securities

There were no sales of unregistered securities during the period covered by this Annual Report on Form 10-K.

Use of Proceeds from Registered Securities

On February 7, 2019, our Registration Statement on Form S-1 (File No. 333-229040) relating to the initial public offering of our common stock was declared effective by the SEC. Pursuant to such Registration Statement, we sold an aggregate of 5,769,201 shares of our common stock at a price of $14.00 per share for aggregate cash proceeds of approximately $70.7 million, net of underwriting discounts and commissions and offering costs, which includes the partial exercise by the underwriters of their option to purchase additional shares.

There has been no material change in the expected use of the net proceeds from our initial public offering, as described in our final prospectus filed with the SEC on February 8, 2019 pursuant to Rule 424(b) under the Securities Act of 1933, as amended.

Registrant Purchases of Equity Securities

None.

Item 6. Selected Financial Data.

We have derived the following selected statements of operations data for the years ended December 31, 2019, 2018 and 2017 and the selected balance sheet data as of December 31, 2019 and 2018 from our audited financial statements included elsewhere in this report.

Our historical results are not necessarily indicative of the results that may be expected in any future period. You should read this data together with the information under "Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations" and our financial statements and related notes included elsewhere in this report.

	Year Ended December 31,		
	2019	2018	2017
	(in thousands, except per share numbers)		
Statement of operations data:			
Revenue			
Collaboration and license revenue	$ 5,777	$ 4,750	$ 708
Total revenue	5,777	4,750	708
Operating expenses			
Research and development	41,592	26,368	13,622
General and administrative	22,391	6,106	3,614
Total operating expenses	63,983	32,474	17,236
Loss from operations	(58,206)	(27,724)	(16,528)
Interest income	2,676	395	78
Interest expense	—	—	(285)
Other expense	(42)	(37)	(95)
Net loss	$ (55,572)	$ (27,366)	$ (16,830)
Net loss per share, basic and diluted(1)	(2.56)	(25.65)	(18.81)
Weighted-average shares used in computing net loss per share, basic and diluted (1)	21,746,461	1,066,877	894,901

(1) See Notes 2 and 12 to our audited financial statements included elsewhere in this report for an explanation of the calculations of our basic and diluted net loss per share and the weighted-average number of shares used in computing the per share amounts.

	As of December 31,		
	2019	2018	2017
	(in thousands)		
Balance sheet data:			
Cash, cash equivalents, and marketable securities	$ 155,129	$ 89,493	$ 29,423
Working capital(1)	128,104	78,275	22,731
Total assets	176,604	102,580	31,872
Convertible preferred stock	—	129,577	39,841
Accumulated deficit	(118,163)	(62,591)	(35,225)
Total stockholders' equity (deficit)	94,220	(53,479)	(26,943)

(1) We define working capital as current assets less current liabilities. See our audited financial statements and related notes included elsewhere in this report for further details regarding our current assets and current liabilities.

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

You should read the following discussion and analysis of our financial condition and results of operations together with our financial statements and related notes and other financial information included elsewhere in this Annual Report on Form 10-K. Some of the information contained in this discussion and analysis or set forth elsewhere in this Annual Report, including information with respect to our plans and strategy for our business, includes forward-looking statements that involve risks and uncertainties. See "Special Note Regarding Forward-Looking Statements" and "Risk Factors" for a discussion of forward-looking statements and important factors that could cause actual results to differ materially from the results described in or implied by the forward-looking statements. In addition, the section of this Management's Discussion and Analysis of Financial Condition and Results of Operations generally discusses 2019 and 2018 items and year-to-year comparisons between 2019 and 2018. Discussions of 2017 items and year-to-year comparisons between 2018 and 2017 that are not included in this Annual Report on Form 10-K can be found in "Management's Discussion and Analysis of Financial Condition and Results of Operations" in Part II Item 7 of the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2018, filed with the SEC on March 14, 2019.

Overview

We are a clinical-stage immunotherapy company developing a novel class of T cell engagers that harness the power of the body's immune system to treat patients suffering from cancer and other diseases. T cell engagers are engineered proteins that direct a patient's own T cells to kill target cells that express specific proteins, or antigens, carried by the target cells. Using our proprietary TriTAC platform, we are developing a pipeline of novel T cell engagers, or TriTACs, initially focused on the treatment of solid tumors and hematologic malignancies.

We currently have two TriTAC product candidates in clinical development. HPN424, is currently in a Phase 1 clinical trial for the treatment of metastatic castration-resistant prostate cancer, or mCRPC. HPN536, is currently in a Phase 1/2a clinical trial for the treatment of ovarian cancer and other mesothelin-, or MSLN-, expressing solid tumors. We also have two TriTAC product candidates in preclinical development, HPN217, targeting B-cell maturation antigen, or BCMA, for the treatment of multiple myeloma and HPN328, targeting Delta-like ligand 3, or DLL3, for the treatment of small cell lung cancer, or SCLC.

Pipeline Update

HPN424: Our lead product candidate is currently in the dose escalation portion of a Phase 1 clinical trial for the treatment of mCRPC. The dose escalation phase is designed to determine the maximum tolerated dose and a recommended Phase 2 dose. Once a recommended Phase 2 dose is determined, we will initiate the dose expansion phase. Consistent with the TriTAC mechanism of action, we observed adverse events associated with T cell activation and cytokine induction, which prompted us to explore the use of dexamethasone as a premedication to limit potential adverse events. We have found that the addition of weekly dexamethasone premedication, tapered over several weeks, has successfully limited adverse events. Several patients have completed the scheduled taper and have successfully continued treatment with HPN424 in the absence of dexamethasone, with no complications observed thus far. Enrollment is ongoing in the dose-escalation phase of the trial. Pharmacokinetics observed to date continue to support once-weekly dosing of HPN424. We expect to present interim dose-escalation data at ASCO at the end of May 2020 and to initiate an expansion cohort in 2020.

HPN536: In April 2019, we advanced our second TriTAC, HPN536, a MSLN-targeting T cell engager, into the clinic and dosed the first patient in a Phase 1/2a clinical trial for ovarian and other MSLN-expressing solid tumors. Patient enrollment continues as planned in the dose-escalation phase of the trial. The study consists of two phases, an initial dose escalation phase of approximately 20 ovarian and pancreatic cancer patients, followed by an expansion phase of up to three additional parallel cohorts of 20 patients each with ovarian, pancreatic and mesothelioma cancer. The study is collecting data to evaluate the safety, tolerability, pharmacokinetics and activity of HPN536. We expect to present interim data from the trial in the second half of 2020.

HPN217: In November 2019 we submitted an IND to the FDA, for the treatment of multiple myeloma, as well as entered into a Development and Option Agreement with AbbVie. Under our agreement with AbbVie, we have already received an upfront payment of $30 million and anticipate receiving a cash milestone payment of up to $50 million upon dosing the first patient in the Phase 1/2 clinical trial for HPN217 within a specified time period, which we expect to occur in the first half of 2020. Additionally, we are eligible to receive future payments totaling up to $430 million upon AbbVie's exercise of an exclusive license option and achievement of certain development, regulatory, and commercial milestones, in addition to receipt of royalties on commercial sales. We are responsible for conducting the Phase 1/2 clinical trial of HPN217 under our agreement with AbbVie.

HPN328: We are developing HPN328, which targets DLL3, to initially treat SCLC. We plan to file an IND for HPN328 by mid-year 2020 and to initiate a Phase 1/2a clinical trial in the second half of 2020. In October 2019, we presented data on HPN328 for the treatment of small cell lung cancer at the AACR-NCI-EORTC International Conference on Molecular Targets and Cancer Therapeutics. HPN328 was well-tolerated in cynomolgus monkeys at 1 and 10 mg/kg and pharmacokinetic data support the potential for once weekly dosing.

Since commencing operations in 2015, we have devoted substantially all of our resources to performing research and development and manufacturing activities in support of our product development efforts, hiring personnel, raising capital to support and expand such activities and providing general and administrative support for these operations. We do not have any products approved for sale and have not generated any revenue from product sales. We have funded our operations to date primarily from the issuance of convertible notes, the sale of convertible preferred stock, the sale of common stock, payments received under our discovery collaboration agreement with AbbVie, and most recently the initial public offering, or IPO, of our common stock on the NASDAQ Global Select Market, or Nasdaq.

Since our inception, we have incurred significant operating losses. Our ability to generate product revenue sufficient to achieve profitability will depend heavily on the successful development and eventual commercialization of one or more of our current or future product candidates and programs. Our net losses were $55.6 million, 27.4 million, and $16.8 million for the years ended December 31, 2019, 2018, and 2017, respectively. As of December 31, 2019, we had an accumulated deficit of $118.2 million. Our primary use of cash is to fund operating expenses, which consist primarily of research and development expenditures, and to a lesser extent, general and administrative expenditures. We expect to continue to incur net losses for the foreseeable future, and we expect our research and development expenses, general and administrative expenses, and capital expenditures will continue to increase.

We expect to continue to incur significant expenses and increasing operating losses for at least the next several years. Our net losses may fluctuate significantly from period to period, depending on the timing of our planned clinical trials and expenditures on other research and development activities. We expect our expenses will increase substantially over time as we:

- continue the research and development of HPN424, HPN536, and HPN217, as well as our other product candidates;
- initiate preclinical studies and clinical trials for any additional product candidates that we may pursue in the future;
- seek marketing approvals for product candidates that successfully complete clinical trials;
- establish a sales, marketing, manufacturing and distribution infrastructure to commercialize any product candidate for which we may obtain marketing approval;
- continue to invest in our technology platforms, including TriTAC and ProTriTAC;
- maintain, protect and expand our portfolio of intellectual property rights, including patents, trade secrets and know-how;
- implement operational, financial and management systems; and
- attract, hire and retain additional administrative, clinical, regulatory and scientific personnel.

Furthermore, we expect to incur additional costs associated with operating as a public company, including significant legal, accounting, investor relations and other expenses that we did not incur as a private company.

In early 2019, we closed the IPO of our common stock, in which we issued and sold an aggregate of 5,769,201 shares of common stock at a price of $14.00 per share for net proceeds of approximately $70.7 million (inclusive of a partial exercise of the underwriters' option), after deducting underwriting discounts, commissions and offering expenses.

Collaborations with AbbVie

Development and Option Agreement

On November 20, 2019, we entered into a Development and Option Agreement Development and Option Agreementwith AbbVie in connection with our HPN217 program, which targets B cell maturation antigen, or BCMA. Pursuant to such agreement, we granted to AbbVie an option to a worldwide, exclusive license to our patents and know-how applicable to the HPN217 program to develop, manufacture, and commercialize products arising from the HPN217 program and targeting BCMA, or HPN217 Products. Under the Development and Option Agreement, we filed an IND for HPN217, and will conduct clinical development activities pursuant to a mutually agreed upon development plan, including conducting a Phase 1/2 clinical trial of HPN217, in order for AbbVie to determine whether it wishes to exercise its option to a worldwide, exclusive license to such HPN217 program. We plan to initiate a Phase 1/2 clinical trial in the first half of 2020.

Under the Development and Option Agreement, AbbVie may exercise its license option at any time during a period commencing on the effective date of the agreement and expiring after a specified period following delivery by us of a specified data package arising from the first Phase 1/2 trial for the HPN217 Product. Following AbbVie's exercise of its option, and except for completion of certain development activities by us under the development plan, AbbVie will be solely responsible, at its cost, for the development, manufacture and commercialization of HPN217 Products. AbbVie is required to use commercially reasonable efforts to develop and obtain regulatory approval for one HPN217 Product, for at least one indication, for use in each Major Market (as defined in the Development and Option Agreement).

AbbVie paid an upfront payment of $30.0 million and we expect to receive a development milestone payment of up to $50.0 million upon dosing the first patient in the Phase 1/2 clinical trial within a specified time period, which we expect to occur in the first half of 2020. If AbbVie exercises its option, AbbVie will pay us an option exercise fee of $200 million. Following option exercise, AbbVie will be required to make further payments to us of up to $230 million in the aggregate for the achievement of specified development, regulatory and commercial sales milestones for HPN217 Products. We will also receive tiered royalties on net sales by AbbVie, its affiliates and sublicensees of HPN217 Products at percentages ranging from the high single digits to the very low double digits, subject to specified offsets and reductions. Royalties will be payable under the Development and Option Agreement on a product-by-product and country-by-country basis commencing on the date of first commercial sale of each HPN217 Product, and ending on the later of expiration of all valid claims of specified licensed patents in such country, expiration of regulatory exclusivity in such country, or ten years following first commercial sale of such HPN217 Product in such country.

We will recognize revenue under the Development and Option Agreement as the initial development activities are performed using an input method, according to the costs incurred as related to the estimated costs for the development and regulatory activities to be performed through the completion of a Phase 1/2 clinical trial of HPN217. Accordingly, of the $30.0 million upfront payment received in 2019, $1.7 million of revenue was recognized for the year ended 2019 and as of December 31, 2019, we had $29.3 million of deferred revenue under the Development and Option Agreement.

Amended and Restated Discovery Collaboration Agreement

On November 20, 2019, we entered into an Amended and Restated Discovery Collaboration and License Agreement, or the Restated Collaboration Agreement, with AbbVie, which agreement amends and restates the Discovery Collaboration and License Agreement entered into between us and AbbVie, dated October 10, 2017 and amended April 3, 2019, or the Original Collaboration Agreement. Pursuant to the Original Collaboration Agreement, we granted to AbbVie worldwide exclusive rights to develop and commercialize products that incorporate our proprietary TriTAC technology together with soluble TCRs provided by AbbVie that bind to targets accepted by the parties. Under the terms of the Original Collaboration Agreement, AbbVie was allowed to designate up to two targets, which it selected in 2017 and 2019, respectively. Pursuant to the Restated Collaboration Agreement, the worldwide, exclusive license granted to AbbVie under the Collaboration Agreement to develop and commercialize products that incorporate our proprietary Tri-specific T-cell Activating Construct, or TriTAC, platform technology together with soluble T cell receptors, or TCRs, provided by AbbVie has been expanded to cover products that incorporate antibodies provided by AbbVie or by us. The expansion of the collaboration also allows AbbVie to designate up to six additional targets, selected during a specified period following the effective date, to be the subject of activities under the collaboration. During a period of up to four years following the date of AbbVie's designation of each target for the products, and confirmation of target availability, we and AbbVie will conduct certain research and discovery activities under a mutually agreed discovery and research plan in connection with the creation and evaluation of constructs comprising our proprietary TriTAC technology, in conjunction with the soluble TCR or antibody sequences directed at the agreed upon targets of interest. We may not, including through any third party, develop or commercialize any competing product that binds to any of the included targets. As was the case under the Original Collaboration Agreement, following the discovery phase, AbbVie will be solely responsible, at its cost, for the development, manufacture and commercialization of the products that arise from the activities under the discovery plan. AbbVie is required to use commercially reasonable efforts to develop and commercialize one such product directed to each target for which the discovery activities were completed in each Major Market (as defined in the Restated Collaboration Agreement).

In addition to the upfront payment of $17 million already paid under the Original Collaboration Agreement, under the Restated Collaboration Agreement, we received an upfront payment of $20 million for AbbVie's right to select two additional targets and an option to select up to four further targets. AbbVie will be required to make payments to us, upon target selection, of $10 million for each target, up to four further targets selected by AbbVie. For each of the up to eight targets selected, we will receive up to $300 million in the aggregate for the achievement of specified development, regulatory and commercial sales milestones for licensed products indicated for human therapeutic or prophylactic use, totaling up to $2.4 billion in the aggregate, if such licensed products are successfully progressed against all-included targets and indications. We will also be eligible to receive tiered royalties on net sales by AbbVie, its affiliates and sublicensees of licensed products at percentages in the mid-single digits, subject to specified offsets and reductions. Royalties will be payable under the Restated Collaboration Agreement on a product-by-product and country-by-country basis commencing on the date of first commercial sale of each product, and ending on the later of expiration of all valid claims of specified licensed patents in such country, expiration of regulatory exclusivity in such country or ten years following first commercial sale of such product in such country. If licensed products are developed and commercialized for diagnostic or veterinary use, or certain screening or monitoring uses, the parties have agreed to negotiate an appropriate reduction in the economic terms applicable to such non-therapeutic and prophylactic applications.

We recognized revenue under the Original Collaboration Agreement over a period in which related research and development activities occur. Accordingly, of the $17.0 million upfront payment received in 2017, $4.0 million and $4.3 million of revenue was recognized during the years ended 2019 and 2018, respectively, and, as of December 31, 2019, we had $8.0 million of deferred revenue under the Original Collaboration Agreement.

We will recognize revenue under the Restated Collaboration Agreement over a period in which related research and development activities occur. Accordingly, of the $20.0 million upfront payment received in 2019, no revenue was recognized for the year ended 2019 and as of December 31, 2019, we had $20.0 million of deferred revenue under the Restated Collaboration Agreement.

The Restated Collaboration Agreement will terminate upon the date of the expiration of all AbbVie's royalty payment obligations in all countries. The Restated Collaboration Agreement may be terminated by either party immediately for the insolvency of the other party or on 90 days' written notice for an uncured material breach of such agreement by the other party. AbbVie may also terminate the Restated Collaboration Agreement in its entirety or on a target-by-target or country-by-country basis for any reason on 30 days' written notice to the Company. In addition, AbbVie may terminate the Restated Collaboration Agreement immediately in its entirety or on a target-by-target basis if AbbVie considers in good faith that there has been a failure of the discovery or development efforts with respect to such target, or that further development or commercialization of products directed to such target is not advisable as a result of a serious safety issue.

License Agreement with Werewolf Therapeutics, Inc.

In March 2018, we entered into an assignment and license agreement, or the Werewolf Agreement, with Werewolf Therapeutics, Inc., or Werewolf, a portfolio company of MPM Capital, Inc., a holder of more than 5% of our capital stock. Dr. Luke Evnin, a member of our Board, is the Chairman of the board of directors of Werewolf. Under the Werewolf Agreement, we assigned certain patents that relate to certain inducible polypeptides (and binding moiety for conditional activation of certain polypeptides) to Werewolf and granted to Werewolf a non-exclusive, royalty-bearing, sublicenseable license under certain other patents owned by us and relating to certain proteins, to make, use and commercialize products that are covered by such patents in the field of molecules comprising a certain polypeptide. Werewolf assigned certain patents to us relating to adoptive cell therapies and binding moieties for conditional activation of immunoglobulin and non-immunoglobulin molecules. Under the Werewolf Agreement, Werewolf paid us an upfront fee of $0.5 million. If Werewolf commercializes products covered by the licensed patents, then beginning on the first sale of such products, Werewolf will be obligated to pay to us a royalty on net sales of such products by Werewolf, its affiliates and licensees at a percentage in the low single digits, subject to an obligation to make a minimum annual royalty payment at an amount in the low hundreds of thousands of dollars.

In December 2019, we and Werewolf amended the Werewolf Agreement by entering into a Second Amended and Restated Assignment and License Agreement, or the Amended Werewolf Agreement, to include the grant to Werewolf of an exclusive, royalty-bearing, sublicensable license under certain patents owned by us and relating to certain proteins, to make, use, and commercialize products that are covered by such patents in the field of molecules comprising a certain protein. If Werewolf commercializes products covered by these licensed patents, then beginning on the first sale of such products, Werewolf will be obligated to pay to us a royalty on net sales of such products by Werewolf, its affiliates and licensees at a percentage in the low single digits, and this royalty cannot be added to any other royalty owed to us under the Amended Werewolf Agreement. In addition, each party granted to the other a non-exclusive, royalty-free, sublicensable, perpetual license under certain other patents relating to a certain binding domain of a certain protein, to make, use and commercialize products that are covered by such patents in a field defined by a certain type of molecule for each party.

Royalties on net sales will be recognized when the underlying sales occur. No royalty revenue was recognized under the Werewolf Agreement as of December 31, 2019.

Financial Operations Overview

Revenue

We have no products approved for commercial sale and have not generated any revenue from product sales. Our collaboration and license revenue to date is related to work performed by us under the Restated Collaboration Agreement and Development and Option Agreement, and is recognized when designated research and development services are performed. To date, we have not received any milestone or royalty payments under the Original Collaboration Agreement or the Restated Collaboration Agreement. We expect that any collaboration and license revenue we generate from the Restated Collaboration Agreement and the Development and Option Agreement and any future collaboration partners will fluctuate from period to period as a result of the timing and amount of milestones and other payments. Additionally, for R&D services that we recognize over time, we measure our progress using an input method. The input methods we use are based on the effort we expend or costs we incur toward the satisfaction of our performance obligation. We estimate the amount of effort we expend, including the time we estimate it will take us to complete the activities, or costs we incur in a given period, relative to the estimated total effort or costs to satisfy the performance obligation. This results in a percentage that we multiply by the transaction price to determine the amount of revenue we recognize each period. This approach requires us to make numerous estimates and use significant judgement. If our estimates or judgements change over the course of the collaboration, they may affect the timing and amount of revenue that we recognize in the current and future periods. On January 1, 2017, we adopted on a full retrospective basis Accounting Standards Codification Topic 606, *Revenue from Contracts with Customers*, or Topic 606. See further discussion under "Critical Accounting Policies and Estimates – Revenue Recognition."

Operating Expenses

Research and Development

Research and development expenses represent costs incurred in performing research, development and manufacturing activities in support of our own product development efforts and those of our collaborators, and include salaries, employee benefits, stock-based compensation, laboratory supplies, outsourced research and development expenses, professional services and allocated facilities-related costs. We expense both internal and external research and development expenses as they are incurred. We do not allocate our costs by product candidates, as our research and development expenses include internal costs, such as payroll and other personnel expenses, and external costs, neither of which are tracked by product candidate. In particular, with respect to internal costs, several of our departments support multiple product candidate research and development programs. Non-refundable advance payments for services that will be used or rendered for future research and development activities are recorded as prepaid expenses and recognized as expenses as the related services are performed.

We expect our research and development expenses to continue to increase substantially in absolute dollars for the foreseeable future as we advance our product candidates into and through preclinical studies and clinical trials, pursue regulatory approval of our product candidates and expand our pipeline of product candidates. The process of conducting the necessary preclinical and clinical research to obtain regulatory approval is costly and time consuming. The actual probability of success for our product candidates may be affected by a variety of factors, including the safety and efficacy of our product candidates, early clinical data, investment in our clinical programs, the ability of collaborators to successfully develop our licensed product candidates, competition, manufacturing capability and commercial viability. We may never succeed in achieving regulatory approval for any of our product candidates. As a result of the uncertainties discussed above, we are unable to determine the duration and completion costs of our research and development projects or when and to what extent we will generate revenue from the commercialization and sale of our product candidates.

General and Administrative

Our general and administrative expenses consist primarily of personnel costs, allocated facilities costs and other expenses for outside professional services, including legal, human resource, audit and accounting services. Personnel costs consist of salaries, benefits and stock-based compensation. We expect to incur additional expenses as a result of operating as a public company, including expenses related to compliance with the rules and regulations of the Securities and Exchange Commission, or the SEC, Nasdaq and any other securities exchange on which our securities are traded, additional insurance expenses, investor relations activities and other administrative and professional services. We also expect to increase the size of our administrative function to support the growth of our business.

Other Expense

Other expense is primarily comprised of foreign currency transaction losses related to certain transactions with European third-party vendors.

Results of Operations

Comparison of Years Ended December 31, 2019 and 2018

	Year Ended December 31,			
	2019	2018	Change ($)	Change (%)
	(dollars in thousands)			
Revenue:				
Collaboration and license revenue	$ 5,777	$ 4,750	$ 1,027	22%
Total revenue	5,777	4,750	1,027	22%
Operating expenses:				
Research and development	41,592	26,368	15,224	58%
General and administrative	22,391	6,106	16,285	267%
Total operating expenses	63,983	32,474	31,509	97%
Loss from operations	(58,206)	(27,724)	30,482	110%
Interest income	2,676	395	2,281	578%
Other expense	(42)	(37)	5	-14%
Net loss	$ (55,572)	$ (27,366)	$ 28,206	103%

* Not meaningful

Revenue

Collaboration and license revenue of $5.8 million for the year ended December 31, 2019 consisted of revenue recognized related to research and development services performed under the Restated Collaboration Agreement of $4.0 million and the Development and Option Agreement of $1.7 million. Collaboration and license revenue of $4.8 million for the year ended December 31, 2018 primarily consisted of revenue recognized related to research and development services performed under the Restated Collaboration Agreement of $4.3 million and $0.5 million of the upfront payment received by us in May 2018 under the Werewolf Agreement.

Research and Development

The following table summarizes our research and development expenses incurred during the respective periods:

	Year Ended December 31,	
	2019	2018
	(In thousands)	
Product and clinical development	$ 17,208	$ 8,504
Research and technology services	2,747	3,401
Laboratory supplies and equipment	2,226	1,828
Pharmacology services	1,303	1,054
Personnel-related	8,728	5,830
Facility and other allocated expenses	6,412	3,366
Consulting	2,968	2,385
Total research and development expenses	$ 41,592	$ 26,368

Research and development expenses increased by $15.2 million, or 58%, in 2019 compared to 2018. The increase was primarily due to a $8.9 million increase in product and clinical development expense and pharmacology services due to development of four identified product candidates, which includes conducting preclinical and clinical studies and manufacturing runs to support ongoing clinical development, a $3.0 million increase in facility and other allocated expenses primarily related to a lease agreement for the office and laboratory space in South San Francisco, California, or the Cove Lease, entered into in August 2018, a $2.9 million increase in personnel-related expenses due to an increase in headcount, a $0.6 million increase in consulting expenses primarily due to preparation of our HPN424, HPN536 and HPN217 clinical trials, a $0.4 million increase in laboratory supplies and equipment to support increased activity related to all of our product candidates, which was offset by a $0.6 million decrease in research and technology services due to the completion of certain research activities as our lead product candidates transitioned into clinical development.

General and Administrative

General and administrative expenses increased by $16.3 million, or 267%, in 2019 compared to 2018. The increase was primarily due to a $11.0 million increase in legal fees primarily associated with ongoing litigation with Maverick Therapeutics, Inc., a $2.7 million increase in personnel-related expenses due to an increase in headcount, a $1.6 million increase in other professional services to support our ongoing operations as a public company, a $0.8 million increase in facility and other allocated expenses primarily related to the Cove Lease, and a net $0.2 million increase consulting and accounting services related to quarterly reviews and year-end audits associated with preparations for our initial public offering.

Interest Income

Interest income increased by $2.3 million, or 579%, in 2019 compared to 2018. The increase was primarily due to an increase in interest earned on our cash deposit accounts and marketable securities during the year ended December 31, 2019.

Other Expense

Other expense did not significantly fluctuate period over period.

Liquidity and Capital Resources

Liquidity

Since our inception and through December 31, 2019, we have financed our operations primarily through the issuance of convertible notes, the sale of convertible preferred stock, the sale of common stock, upfront payments received by us from our collaboration and license agreements and the initial public offering of our common stock on the Nasdaq, including the partial exercise of the underwriters' option to purchase additional shares, in which we received an aggregate of approximately $70.7 million in net proceeds, which amount is net of $10.1 million in underwriters' discount and offering costs. As of December 31, 2019, we had $155.1 million in cash and cash equivalents and marketable securities, an accumulated deficit of $118.2 million and working capital of $128.1 million. We expect to continue to incur substantial costs in order to conduct research and development activities necessary to develop and commercialize our product candidates. Additional capital will be needed to undertake these activities and commercialization efforts, and, therefore, we intend to raise such capital through the issuance of additional equity, borrowings, and potentially strategic alliances with other companies. However, if such financing is not available at adequate levels or on acceptable terms, we could be required to significantly reduce operating expenses and delay, reduce the scope of or eliminate some of the development programs or commercialization efforts, out-license intellectual property rights to our product candidates and sell unsecured assets, or a combination of the above, any of which may have a material adverse effect on the our business, results of operations, financial condition and/or out ability to fund our scheduled obligations on a timely basis or at all.

Capital Resources

Our primary uses of cash are to fund operating expenses, which consist primarily of funding our clinical and preclinical trials, research and development expenditures and related personnel costs. Cash used to fund operating expenses is impacted by the timing of when we pay these expenses, as reflected in the change in our outstanding accounts payable and accrued expenses. The timing and amount of our future funding requirements depends on many factors, including the following:

- the scope, rate of progress, results and cost of our preclinical studies, clinical trials and other related activities;
- the cost of manufacturing clinical supplies, and establishing commercial supplies, of our product candidates and any products that we may develop;
- the number and characteristics of product candidates that we pursue;
- the cost, timing and outcomes of regulatory approvals;
- the cost and timing of establishing sales, marketing and distribution capabilities;
- the terms and timing of any other collaborative, licensing and other arrangements that we may establish;
- the timing, receipt and amount of sales, profit sharing or royalties, if any, from our potential products;
- the cost of preparing, filing, prosecuting, defending and enforcing any patent claims and other intellectual property rights
- the extent to which we acquire or invest in businesses, products or technologies, although we currently have no commitments or agreements relating to any of these types of transactions;

- the compliance and administrative costs associated with being a public company; and
- the cost of attracting, hiring and retaining additional administrative, clinical, regulatory and scientific personnel.

Based on our current business plans, we believe that our existing cash, cash equivalents and marketable securities, which include the net proceeds generated from our IPO in February 2019, will be sufficient to fund our planned operations for at least the next 12 months from the issuance date of this Annual Report Form 10-K. However, we will require additional funding in order to complete development of our product candidates and commercialize our products, if approved. We may seek to raise any necessary additional capital through a combination of public or private equity offerings, debt financings, collaborations, strategic alliances, licensing arrangements and other marketing and distribution arrangements. There can be no assurance that we will be successful in acquiring additional funding at levels sufficient to fund our operations or on terms favorable to us. If we are unable to obtain adequate financing when needed, we may have to delay, reduce the scope of or suspend one or more of our preclinical studies and clinical trials, research and development programs or commercialization efforts. Because of the numerous risks and uncertainties associated with the development and commercialization of our product candidates and the extent to which we may enter into additional collaborations with third parties to participate in their development and commercialization, we are unable to estimate the amounts of increased capital outlays and operating expenditures associated with our current and anticipated preclinical studies and clinical trials. To the extent that we raise additional capital through additional collaborations, strategic alliances or licensing arrangements with third parties, we may have to relinquish valuable rights to our product candidates, future revenue streams, research programs or product candidates or to grant licenses on terms that may not be favorable to us. If we do raise additional capital through public or private equity or convertible debt offerings, the ownership interest of our existing stockholders will be diluted, and the terms of these securities may include liquidation or other preferences that adversely affect our stockholders' rights. If we raise additional capital through debt financing, we may be subject to covenants limiting or restricting our ability to take specific actions, such as incurring additional debt, making capital expenditures or declaring dividends.

Please see the section entitled "Risk Factors" for additional risks associated with our substantial capital requirements and the challenges we may face in raising capital.

Cash Flows

	Year Ended December 31,	
	2019	2018
	(In thousands)	
Net cash (used in) provided by:		
Operating activities	$ (2,891)	$ (27,126)
Investing activities	(69,315)	(663)
Financing activities	71,449	88,326
Net increase (decrease) in cash, cash equivalents, and restricted cash	$ (757)	$ 60,537

Cash Flows from Operating Activities

In 2019, cash used in operating activities was $2.9 million, which consisted of a net loss of $55.6 million and a net change of $49.0 million in our net operating assets and liabilities, partially offset by $3.6 million in non-cash charges. The non-cash charges consisted of stock-based compensation of $2.1 million, depreciation and amortization of $0.9 million, amortization operating right-of-use lease asset of $1.2 million and net amortization of premiums and discounts on marketable securities of $0.5 million. The change in operating assets and liabilities was primarily due to an increase in deferred revenue of $45.3 million resulting from the upfront payments of $30 million from the Development and Option Agreement and $20 million from the Restated Collaboration Agreement, a net increase in accounts payable and accrued liabilities of $2.5 million related to legal fees associated with Maverick litigation and timing of research and development activities, an increase in prepaid expenses and other current assets of $1.8 million resulting from the timing of payments made for operating costs to support our operations as a public company and timing for ongoing research and development activities and a decrease in other assets of $3.0 million resulting from the recognition of deferred IPO costs.

In 2018, cash used in operating activities was $27.1 million, which consisted of a net loss of $27.4 million and a net change of $1.1 million in our net operating assets and liabilities, partially offset by $1.3 million in non-cash charges. The non-cash charges consisted of stock-based compensation of $0.7 million and depreciation and amortization of $0.6 million. The change in operating assets and liabilities was primarily due to a decrease in deferred revenue of $4.3 million resulting from the recognition of collaboration revenue, an increase in accounts payable and accrued liabilities of $3.6 million, and an increase in prepaid expenses and other current assets of $0.5 million resulting from the timing of payments made for research and development activities.

Cash Flows from Investing Activities

In 2019, cash used in investing activities of $69.3 million primarily related to purchases of marketable securities and property and equipment consisting primarily of laboratory equipment offset by the maturity and sale of marketable securities.

In 2018, cash used in investing activities of $0.7 million related to purchases of property and equipment consisting primarily of laboratory equipment.

Cash Flows from Financing Activities

In 2019, cash provided by financing activities of $71.4 million was primarily related to the proceeds received from our IPO in February 2019.

In 2018, cash provided by financing activities of $88.3 million was related primarily to $69.8 million in net cash proceeds received from the November 2018 issuance of our Series C convertible preferred stock, $20.0 million in net cash proceeds received from the July 2018 issuance of our Series B convertible preferred stock as a result of our IND filing for HPN424, and $0.2 million in proceeds from the issuance of common stock upon the exercise of stock options, partially offset by $1.7 million in deferred offering costs related to our initial public offering.

Contractual Obligations and Other Commitments

The following table summarizes our contractual obligations as of December 31, 2019:

	Payments due by period				
	Less than 1 year	1 to 3 years	4 to 5 years	After 5 years	Total
	(In thousands)				
Operating lease obligations	$ 2,487	$ 7,943	$ 2,818	$ 7,433	$ 20,681
Total	$ 2,487	$ 7,943	$ 2,818	$ 7,433	$ 20,681

The obligations noted above represent operating lease obligations related to our currently occupied premises at 131 Oyster Point Blvd in South San Francisco, California that commenced in July 2019 and expires in June 2027. The initial annual base rent is approximately $2.2 million, and such amount will increase by 3.5% annually on each anniversary of the commencement date, equaling approximately $20.0 million over the eight-year lease term. In connection with the lease, we will maintain a letter of credit for the benefit of the landlord in the amount of $0.5 million. Under the lease agreement, we have an option to extend the lease for an additional period of eight years. As of December 31, 2019, we have not determined whether we will exercise our option to extend the lease term.

In December 2016, we entered into a royalty transfer agreement with MPM Oncology Charitable Foundation, Inc. and UBS Optimus Foundation pursuant to which we will pay 0.5% of our annual global net sales to each of the counterparties for products that incorporate or utilize intellectual property that was discovered or developed by us prior to our initial public offering.

In October 2015, we entered into a collaboration and license agreement with AGC Biologics, Inc. (formerly known as CMC ICOS Biologics, Inc.), or AGC, for certain manufacturing-related technology, and in July 2016, we entered into a development and manufacturing agreement with AGC. Pursuant to these agreements, so long as AGC is our exclusive manufacturer, we will not owe AGC any milestone or royalty payments for the use of their manufacturing technology. However, if AGC is no longer our exclusive manufacturer, and we still use such technology, we will owe AGC specified milestones of up to $350,000 per specified product and a royalty on net sales of these products of less than 1%. We have an option to buy out these royalty obligations by making a one-time payment to AGC in a dollar amount in the mid-single digit millions. See “Business—Collaboration and License Agreements—Agreements with AGC Biologics, Inc.”

In addition, we enter into agreements in the normal course of business with contract research organizations for clinical trials and with vendors for preclinical studies and other services and products for operating purposes, which are generally cancelable upon written notice. These payments are not included in this table of contractual obligations.

Off-Balance Sheet Arrangements

Since our inception, we have not engaged in any off-balance sheet arrangements, as defined in the rules and regulations of the SEC.

Critical Accounting Polices and Estimates

Our management's discussion and analysis of our financial condition and results of operations is based on our financial statements, which have been prepared in accordance with GAAP. The preparation of these financial statements requires us to make estimates and assumptions that affect the reported amounts of assets and liabilities and the disclosure of contingent assets and liabilities at the date of the financial statements, as well as the reported revenue generated, and reported expenses incurred during the reporting periods. Our estimates are based on our historical experience and on various other factors that we believe are reasonable under the circumstances, the results of which form the basis for making judgments about the carrying value of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions or conditions.

While our significant accounting policies are described in the notes to our financial statements included elsewhere in this Annual Report on Form 10-K, we believe that the following critical accounting policies are most important to understanding and evaluating our reported financial results.

Revenue Recognition

Effective January 1, 2017, we early adopted on a full retrospective basis Accounting Standards Codification Topic 606, *Revenue from Contracts with Customers*, or Topic 606. This standard applies to all contracts with customers, except for contracts that are within the scope of other standards, such as leases, insurance, collaboration arrangements and financial instruments. In accordance with ASC 606, we recognize revenue when our customer obtains control of promised goods or services, in an amount that reflects the consideration which we expect to receive in exchange for those goods or services.

To determine revenue recognition for arrangements that we determine are within the scope of Topic 606, we perform the following five steps:

(i) identify the contract(s) with a customer;
(ii) identify the performance obligations in the contract;
(iii) determine the transaction price;
(iv) allocate the transaction price to the performance obligations in the contract; and
(v) recognize revenue when or as we satisfy a performance obligation.

We only apply the five-step model to contracts when it is probable that we will collect the consideration we are entitled to in exchange for the goods and services we transfer to the customer. At contract inception, we assess the goods or services promised within each contract that falls under the scope of Topic 606, determine those that are performance obligations and assesses whether each promised good or service is distinct. We then recognize as revenue the amount of the transaction price that is allocated to the respective performance obligation when or as the performance obligation is satisfied.

We allocate the transaction price to each performance obligation on a relative stand-alone selling price basis. The stand-alone selling price may be, but is not presumed to be, the contract price. In determining the allocation, we maximize the use of observable inputs. When the stand-alone selling price of a good or service is not directly observable, we estimate the stand-alone selling price for each performance obligation using assumptions that require judgment. Acceptable estimation methods include, but are not limited to: (i) the adjusted market assessment approach, (ii) the expected cost plus margin approach, and (iii) the residual approach (when the stand-alone selling price is not directly observable and is either highly variable or uncertain). In order for the residual approach to be used, we must demonstrate that (a) there are observable stand-alone selling prices for one or more of the performance obligations and (b) one of the two criteria in ASC 606-10- 32-34(c)(1) and (2) is met. The residual approach cannot be used if it would result in a stand-alone selling price of zero for a performance obligation, as a performance obligation, by definition, has value on a stand-alone basis.

An option in a contract to acquire additional goods or services gives rise to a performance obligation only if the option provides a material right to the customer that it would not receive without entering into that contract. Factors that we consider in evaluating whether an option represents a material right include, but are not limited to: (i) the overall objective of the arrangement, (ii) the benefit the collaborator might obtain from the arrangement without exercising the option, (iii) the cost to exercise the option (e.g. priced at a significant and incremental discount) and (iv) the likelihood that the option will be exercised. With respect to options determined to be performance obligations, we recognize revenue when those future goods or services are transferred or when the options expire.

We enter into corporate collaborations under which we may obtain upfront license fees, research and development funding, and development, regulatory and commercial milestone payments and royalty payments. Our performance obligations under these arrangements may include licenses of intellectual property, distribution rights, research and development services, delivery of manufactured product and/or participation on joint steering committees.

- *Licenses of Intellectual Property.* If the license to our intellectual property is determined to be distinct from the other performance obligations identified in the arrangement, we recognize revenue from upfront fees allocated to the license when the license is transferred to the customer and the customer is able to use and benefit from the license. For licenses that are bundled with other promises, we utilize judgement to assess the nature of the combined performance obligation to determine whether the combined performance obligation is satisfied over time or at a point in time and, if over time, the appropriate method of measuring proportional performance for purposes of recognizing revenue from non-refundable, upfront fees. We evaluate the measure of proportional performance each reporting period and, if necessary, adjust the measure of performance and related revenue recognition. We recognize collaboration revenue by measuring the progress toward complete satisfaction of the performance obligation using an input measure. In order to recognize revenue over the research and development period, we measure actual costs incurred to date compared to the overall total expected costs to satisfy the performance obligation. Revenues are recognized as the program costs are incurred. We will re-evaluate the estimate of expected costs to satisfy the performance obligation each reporting period and make adjustments for any significant changes.
- *Milestone Payments.* At the inception of each arrangement that includes development, regulatory or commercial milestone payments, we evaluate whether the milestones are considered probable of being reached and estimates the amount to be included in the transaction price. Topic 606 suggests two alternatives to use when estimating the amount of variable consideration: the expected value method and the most likely amount method. Under the expected value method, an entity considers the sum of probability-weighted amounts in a range of possible consideration amounts. Under the most likely amount method, an entity considers the single most likely amount in a range of possible consideration amounts. Whichever method is used, it should be consistently applied throughout the life of the contract; however, it is not necessary for us to use the same approach for all contracts. We expect to use the most likely amount method for development and regulatory milestone payments. If it is probable that a significant revenue reversal would not occur, the associated milestone value is included in the transaction price. Milestone payments that are not within our or the licensee's control, such as regulatory approvals, are not considered probable of being achieved until those approvals are received. The transaction price is then allocated to each performance obligation on a relative stand-alone selling price basis. We recognize revenue as or when the performance obligations under the contract are satisfied. At the end of each subsequent reporting period, we re-evaluate the probability or achievement of each such milestone and any related constraint, and if necessary, adjust our estimates of the overall transaction price. Any such adjustments are recorded on a cumulative catch-up basis, which would affect revenues and earnings in the period of adjustment.
- *Commercial Milestones and Royalties.* For arrangements that include sales-based royalties, including milestone payments based on the level of sales, and in which the license is deemed to be the predominant item to which the royalties relate, we recognize revenue when the related sales occur. To date, we have not recognized any royalty revenue resulting from our collaboration arrangements.

Upfront payments and fees are recorded as deferred revenue upon receipt or when due, and may require deferral of revenue recognition to a future period until we perform our obligations under these arrangements. Amounts payable to us are recorded as accounts receivable when our right to consideration is unconditional.

See Note 8, "Collaboration and License Agreements" for additional details regarding our collaboration arrangements with AbbVie.

Research and Development Expenses and Accrued Research and Development Costs

We expense research and development costs as incurred. Research and development expenses consist of personnel costs for our research and product development employees. Also included are non-personnel costs such as professional fees payable to third parties for preclinical and preclinical studies, clinical trials and research services, production of materials for clinical trials, laboratory supplies and equipment maintenance and depreciation, intellectual property licenses and other consulting costs. We estimate preclinical and clinical study and research expenses based on the services performed, pursuant to contracts with research institutions that conduct and manage preclinical studies, clinical trials and research services on our behalf. We estimate these expenses based on discussions with management and external service providers as to the progress or stage of completion of services and the contracted fees to be paid for such services. We record the estimated costs of research and development activities based upon the estimated amount services provided but not yet invoiced, and include these costs in development expenses. We accrue for these costs based on factors such as estimates of the work completed and in accordance with agreements established with our third-party service provides under the service agreements. We make significant judgments and estimates in determining the accrued liabilities balance in each reporting period. As actual costs become known, we adjust our accrued liabilities. We have not experienced any material differences between accrued costs and actual costs incurred. However, the status and timing of actual services performed may vary from our estimates, resulting in adjustments to expense in future periods. Changes in these estimates that result in material changes to our accruals could materially affect our results of operations. Payments associated with licensing agreements to acquire exclusive license to develop, use, manufacture and commercialize products that have not reached technological feasibility and do not have alternate future use are expensed as incurred.

Payments made to third parties under these arrangements in advance of the performance of the related services by the third parties are recorded as prepaid expenses until the services are rendered. Such payments are evaluated for current or long-term classification based on when such services are expected to be received.

Stock-Based-Compensation

We maintain a stock-based compensation plan as a long-term incentive for employees, consultants and members of our board of directors. The plan allows for the issuance of non-statutory options, or NSOs, and incentive stock options to employees and NSOs to nonemployees.

Share-based payments are measured using fair-value-based measurements and recognized as compensation expense over the service period in which the awards are expected to vest. Our fair-value-based measurements of awards to employees and directors as of the grant date utilize the single-option award-valuation approach, and we use the straight-line method for expense attribution. The valuation model used for calculating the estimated fair value of stock awards is the Black-Scholes option-pricing model. The Black-Scholes model requires us to make assumptions and judgments about the variables used in the calculations, including the expected term (weighted-average period of time that the options granted are expected to be outstanding), the expected volatility of our common stock, the related risk-free interest rate and the expected dividend. We have elected to recognize forfeitures of share-based payment awards as they occur.

Effective January 1, 2018, we early adopted ASU No. 2018-07, *Compensation – Stock Compensation (Topic 718): Improvements to Nonemployee Share-Based Payment Accounting* (“ASU 2018-07”). The new guidance requires equity-classified share-based payment awards issued to nonemployees to be measured on the grant date, instead of being measured through the performance completion date under the pre-existing guidance. For stock-based awards issued to non-employees, we record expense related to stock options based on the fair value of the options calculated using the Black-Scholes option-pricing model based on the measured grant date. For stock-based awards issued to non-employees prior to January 1, 2018, we recorded expense related to stock options based on the fair value of the options calculated using the Black-Scholes option-pricing model, remeasured at each reporting period until the options vest over the service performance period.

We estimate the fair value of stock options granted to our employees on the grant date, and rights to acquire stock granted under our Employee Stock Purchase Plan ("ESPP"), and the resulting stock-based compensation expense, using the Black-Scholes option-pricing model.

The Black-Scholes option-pricing model requires the use of highly subjective assumptions which determine the fair value of stock-based awards. These assumptions include:

- *Expected term.* The expected term represents the period that stock-based awards are expected to be outstanding. The expected term for option grants is determined using the simplified method. The simplified method deems the term to be the average of the time-to-vesting and the contractual life of the stock-based awards.
- *Expected volatility*. Since we have a limited trading history for our common stock, the expected volatility was estimated based on the average volatility for comparable publicly traded biotechnology companies over a period equal to the expected term of the stock option grants. The comparable companies were chosen based on their similar size, stage in the life cycle or area of specialty.
- *Risk-free interest rate*. The risk-free interest rate is based on the U.S. Treasury zero coupon issues in effect at the time of grant for periods corresponding with the expected term of option.
- *Expected dividend*. We have never paid dividends on our common stock and have no plans to pay dividends on our common stock. Therefore, we used an expected dividend yield of zero.

Fair Value of Common Stock

Prior to our IPO in February 2019, the fair values of the shares of common stock underlying our share-based awards were estimated on each grant date by our board of directors. Given the absence of a public trading market for our common stock prior to our February 2019 IPO, our board of directors exercised reasonable judgment and considered a number of objective and subjective factors to determine the best estimate of the fair value of our common stock, including our stage of development; our actual operating results and financial performance; progress of our research and development efforts; conditions in the industry and economy in general; the rights, preferences and privileges of our convertible preferred stock relative to those of our common stock; the likelihood of achieving a liquidity event for the holders of our common stock, such as an initial public offering or a sale of our company, given prevailing market conditions; equity market conditions affecting comparable public companies; the lack of marketability of our common stock and the results of independent third-party valuations. Valuations of our common stock were prepared by an unrelated third-party valuation firm in accordance with the guidance provided by the American Institute of Certified Public Accountants 2013 Practice Aid, Valuation of Privately-Held-Company Equity Securities Issued as Compensation.

For our valuations performed prior to December 31, 2018, we used the Option Pricing Model (OPM) Backsolve method to estimate the fair value of our common stock. In an option pricing method, or OPM, framework, the backsolve method for inferring the equity value implied by a recent financing transaction involves making assumptions for the expected time to liquidity, volatility and risk-free rate and then solving for the value of equity such that value for the most recent financing equals the amount paid. Furthermore, as of each of the valuation dates prior to December 31, 2018, we were at an early stage of development and future liquidity events were difficult to forecast. We applied a discount for lack of marketability to account for a lack of access to an active public market.

Subsequent to the completion of our IPO in February 2019, our board of directors determines the fair value of our common stock based on the closing price of our common stock as reported on the date of grant on the primary stock exchange on which our common stock is traded.

Recent Accounting Pronouncements

See Note 2 to our financial statements included elsewhere in this report for more information.

Emerging Growth Company Status

We are an emerging growth company, as defined in the JOBS Act. Under the JOBS Act, emerging growth companies can delay adopting new or revised accounting standards issued subsequent to the enactment of the JOBS Act until such time as those standards apply to private companies. We elected to use this extended transition period for complying with new or revised accounting standards that have different effective dates for public and private companies until the earlier of the date that we (i) are no longer an emerging growth company or (ii) affirmatively and irrevocably opt out of the extended transition period provided in the JOBS Act. As a result, these financial statements may not be comparable to companies that comply with the new or revised accounting pronouncements as of public company effective dates. We early adopted ASU 2014-09, *Revenue from Contracts with Customers* (Accounting Standards Codification Topic 606), ASU 2016-09, *Stock Compensation—Improvements to Employee Share-Based Payment Accounting*, and ASU 2018-07, *Compensation – Stock Compensation (Topic 718): Improvements to Nonemployee Share-Based Payment Accounting*, ASU No. 2016-02, *(Topic 842), Leases*, as the JOBS Act does not preclude an emerging growth company from early adopting a new or revised accounting standard earlier than the time that such standard applies to private companies. We expect to use the extended transition period for any other new or revised accounting standards during the period in which we remain an emerging growth company.

We will remain an emerging growth company until the earliest of (i) the last day of our first fiscal year (a) following the fifth anniversary of the completion of our initial public offering, (b) in which we have total annual gross revenues of at least $1.07 billion or (c) in which we are deemed to be a large accelerated filer, which means the market value of our common stock that is held by non-affiliates exceeds $700.0 million as of the prior June 30th and (ii) the date on which we have issued more than $1.0 billion in non-convertible debt securities during the prior three-year period.

Item 7A. Quantitative and Qualitative Disclosures about Market Risk.

Interest Rate Risk

Market risk represents the risk of loss that may impact our financial position due to adverse changes in financial market prices and rates. We are exposed to market risks in the ordinary course of our business. Our market risk exposure is primarily the result of fluctuations that may cause the market value of these assets to fluctuate. We are exposed to market risk related to changes in interest rates. We had cash, cash equivalents and marketable securities of $155.1 million as of December 31, 2019, which consisted primarily of money market funds and marketable securities, largely composed of investment grade, short- to intermediate-term fixed income securities.

The primary objective of our investment activities is to preserve capital to fund our operations. We also seek to maximize income from our investments without assuming significant risk. To achieve our objectives, we maintain a portfolio of investments in a variety of securities of high credit quality and short-term duration, according to our board-approved investment policy. Our investments are subject to interest rate risk and could fall in value if market interest rates increase. A hypothetical 10% relative change in interest rates during any of the periods presented would not have had a material impact on our consolidated financial statements.

Item 8. Financial Statements and Supplemental Data

The information required to be filed in this item appears under “Exhibits, Financial Statement Schedules” in Part IV, Item 15 of this Annual Report on Form 10-K and is set forth on pages F-1 to F-30.

The following financial statements of the registrant, related notes and report of independent registered public accounting firm are set forth beginning on page F-1 of this report

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

None.

Item 9A. Controls and Procedures.

Evaluation of Disclosure Controls and Procedures

Our management, with the participation of our Chief Executive Officer and Chief Financial Officer, have evaluated our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) of the Exchange Act) as of the end of the period covered by this Annual Report on Form 10-K. Based on that evaluation, our chief executive officer and our chief financial officer have concluded that, as of the end of the period covered by this Annual Report on Form 10-K, our disclosure controls and procedures are designed at a reasonable assurance level and are effective to provide reasonable assurance that information we are required to disclose in reports that we file or submit under the Exchange Act is recorded, processed, summarized, and reported within the time periods specified in SEC rules and forms, and that such information is accumulated and communicated to our management, including the Chief Executive Officer and the Chief Financial Officer, as appropriate, to allow timely decisions regarding required disclosures.

Management's Annual Report on Internal Control Over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting, as defined in Rules 13a-15(f) and 15d-15(f) of the Exchange Act. Our management, under the supervision and with the participation of our Chief Executive Officer and Chief Financial Officer, conducted an evaluation of the effectiveness of our internal control over financial reporting as of December 31, 2019 based on the framework in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 Framework). Based on the results of its evaluation, our management concluded that our internal control over financial reporting was effective as of December 31, 2019.

Changes in Internal Control over Financial Reporting

There were no changes in our internal control over financial reporting identified in connection with the evaluation required by Rule 13a-15(d) and 15d-15(d) of the Exchange Act that occurred during the quarter ended December 31, 2019 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Inherent Limitation on the Effectiveness of Internal Control

The effectiveness of any system of internal control over financial reporting, including ours, is subject to inherent limitations, including the exercise of judgment in designing, implementing, operating, and evaluating the controls and procedures, and the inability to eliminate misconduct completely. Accordingly, in designing and evaluating the disclosure controls and procedures, management recognizes that any system of internal control over financial reporting, including ours, no matter how well designed and operated, can only provide reasonable, not absolute assurance of achieving the desired control objectives. In addition, the design of disclosure controls and procedures must reflect the fact that there are resource constraints and that management is required to apply its judgment in evaluating the benefits of possible controls and procedures relative to their costs. Moreover, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate. We intend to continue to monitor and upgrade our internal controls as necessary or appropriate for our business, but cannot assure you that such improvements will be sufficient to provide us with effective internal control over financial reporting.

Item 9B. Other Information.

We will hold our first annual meeting of stockholders as a public company on May 28, 2020. The record date for the meeting is April 9, 2020.

PART III

Item 10. Directors, Executive Officers and Corporate Governance

Information required by this item is incorporated by reference to the information set forth in the sections titled “Information About Our Board of Directors” and “Information About Our Executive Officers Who Are Not Directors,” “Corporate Governance,” “Corporate Governance – Code of Business Conduct and Ethics,” “Delinquent Section 16(a) Reports,” “Corporate Governance – Committees of the Board of Directors – Nominating and Corporate Governance Committee,” “Corporate Governance – Committees of the Board of Directors – Audit Committee” and “Corporate Governance – Committees of the Board of Directors – Compensation Committee” in our definitive proxy statement to be filed with the SEC on Schedule 14A in connection with our 2020 Annual Meeting of Shareholders, or the Proxy Statement, which is expected to be filed not later than 120 days after December 31, 2019.

Item 11. Executive Compensation

Information required by this item is incorporated by reference to the information set forth in the sections titled “Executive Compensation,” “Director Compensation” and “Committees of the Board of Directors — Compensation Committee Interlocks and Insider Participation” in the Proxy Statement.

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

Information required by this item is incorporated by reference to the information set forth in the sections titled “Securities Authorized For Issuance Under Equity Compensation Plans” and “Security Ownership of Certain Beneficial Owners and Management” in the Proxy Statement and is incorporated herein by reference.

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

Information required by this item is incorporated by reference to the information set forth in the sections titled “Corporate Governance – Board of Directors Independence” and “Transactions With Related Persons” in the Proxy Statement and is incorporated herein by reference.

Item 14. Principal Accounting Fees and Services.

Information required by this item is incorporated by reference to the information set forth in the sections titled “Independent Registered Public Accounting Firm Fees and Services” in the Proxy Statement.

PART IV

Item 15. Exhibits, Financial Statement Schedules.

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

1. Financial Statements:

The following financial statements and schedules of the Registrant are contained in Part II, Item 8, "Financial Statements and Supplementary Data" of this Annual Report on Form 10-K:

2. Financial Statement Schedules

No financial statement schedules are provided because the information called for is not required or is shown either in the financial statements or notes thereto.

(b) Exhibits

The exhibits listed in the following "Exhibit Index" are filed, furnished or incorporated by reference as part of this Annual Report.

EXHIBIT INDEX

Number	Exhibit Description	Form	File No.	Exhibit	Filing Date	Filed Herewith
2.1¥*	Asset Transfer Agreement by and between the Registrant and Maverick Therapeutics, Inc., dated as of December 30, 2016, as amended	S-1	333-229040	2.1	1/29/2019	
3.1	Amended and Restated Certificate of Incorporation of the Registrant	10-Q	001-38800	3.1	8/5/2019	
3.2	Amended and Restated Bylaws of the Registrant	8-K	001-38800	3.2	2/13/2019	
4.1	Form of Common Stock Certificate.	S-1	333-229040	4.1	1/29/2019	
4.2	Amended and Restated Investors' Rights Agreement, dated as of November 9, 2018, by and among the Registrant and certain of its stockholders.	S-1	333-229040	4.2	12/27/2018	
4.3	Description of Registrant's securities registered pursuant to Section 12 of the Securities Exchange Act of 1934					x
10.1+	Form of Indemnification Agreement between the Registrant and each of its directors and executive officers	S-1	333-229040	10.4	1/4/2019	
10.2+	Harpoon Therapeutics, Inc. 2015 Equity Incentive Plan and related form agreements	S-1	333-229040	10.1	12/27/2018	
10.3+	Harpoon Therapeutics, Inc. 2019 Equity Incentive Plan and related form agreements	S-1	333-229040	10.2	1/29/2019	
10.4+	Harpoon Therapeutics, Inc. Amended and Restated Employee Stock Purchase Plan and related form agreements	S-1	333-229040	10.3	1/29/2019	
10.5+	Employment Offer Letter by and between Gerald McMahon and the Registrant, dated as of December 10, 2016	S-1	333-229040	10.5	12/27/2018	
10.6+	Employment Offer Letter by and between Holger Wesche and the Registrant, dated as of March 17, 2015, as amended	S-1	333-229040	10.6	12/27/2018	
10.7+	Employment Offer Letter by and between Natalie Sacks and the Registrant, dated as of September 13, 2018	S-1	333-229040	10.7	12/27/2018	
10.8+	Non-Employee Director Compensation Policy	S-1	333-229040	10.10	1/29/2019	
10.9¥	License Agreement between the Registrant and TCR² Therapeutics, Inc., dated as of June 21, 2017	S-1	333-229040	10.12	12/27/2018	
10.10	Royalty Transfer Agreement by and between the Registrant, MPM Oncology Charitable Foundation, Inc. and the UBS Optimus Foundation, dated as of December 1, 2016, as amended	S-1	333-229040	10.13	12/27/2018	
10.11¥	First Amended and Restated Assignment and License Agreement between the Registrant and Werewolf Therapeutics, Inc., dated as of October 19, 2018	S-1	333-229040	10.14	12/27/2018	
10.12¥	CHEF 1 Collaboration and License Agreement between the Registrant and CMC ICOS Biologics, Inc., dated October 26, 2015	S-1	333-229040	10.15	12/27/2018	
10.13¥	Amendment to CHEF1 Collaboration and License Agreement and Development and Manufacturing Services Agreement between Registrant and AGC Biologics, Inc. (previously CMC ICOS Biologics, Inc.), dated as of December 12, 2018	S-1	333-229040	10.21	1/29/2019	
10.14¥	Development and Manufacturing Services Agreement between the Registrant and CMC ICOS Biologics, Inc., dated July 5, 2016	S-1	333-229040	10.16	12/27/2018	
10.15	Lease by and between the Registrant and HCP Oyster Point III LLC, dated as of July 27, 2018	S-1	333-229040	10.19	12/27/2018	
10.16+	Employment Offer Letter by and between Georgia Erbez and the Registrant, dated as of October 19, 2018	S-1	333-229040	10.20	1/4/2019	
10.17¥	Amended and Restated Discovery Collaboration and License Agreement between the Registrant and AbbVie Biotechnology Ltd., dated as of November 20, 2019					x
10.18¥	Development and Option Agreement between the Registrant and AbbVie Biotechnology Ltd., dated as of November 20, 2019					x
10.19¥	Second Amended and Restated Assignment and License Agreement between the Registrant and Werewolf Therapeutics, Inc., dated as of December 20, 2019					x
10.20+	Fifth Amended and Restated Consulting Agreement by and between Patrick Baeuerle and the Registrant, dated as of March 3, 2020					x
21.1	List of subsidiaries of the Registrant	S-1	333-229040	21.1	12/27/2018	

Number	Exhibit Description	Form	File No.	Exhibit	Filing Date	Filed Herewith
23.1	Consent of Independent Registered Public Accounting Firm					x
24.1	Power of Attorney (included on signature page to this Form 10-K)					x
31.1	Certification of Chief Executive Officer pursuant to Exchange Act Rules 13a-14(a) and 15d-14(a), as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002					x
31.2	Certification of Chief Financial Officer pursuant to Exchange Act Rules 13a-14(a) and 15d-14(a), as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002					x
32.1†	Certifications of Chief Executive Officer and Chief Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002					x
101.INS	XBRL Instance Document					
101.SCH	XBRL Taxonomy Schema Linkbase Document					
101.CAL	XBRL Taxonomy Definition Linkbase Document					
101.DEF	XBRL Taxonomy Calculation Linkbase Document					
101.LAB	XBRL Taxonomy Labels Linkbase Document					
101.PRE	XBRL Taxonomy Presentation Linkbase Document					

†	The certifications attached as Exhibit 32.1 that accompany this Annual Report on Form 10-K, are deemed furnished and not filed with the Securities and Exchange Commission and are not to be incorporated by reference into any filing of Harpoon Therapeutics, Inc. under the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended, whether made before or after the date of this Annual Report on Form 10-K, irrespective of any general incorporation language contained in such filing.
+	Indicates management contract or compensatory plan.
¥	Confidential treatment has been granted as to certain portions of this exhibit, which portions have been omitted and submitted separately to the Securities and Exchange Commission.
*	Certain schedules and/or exhibits to this agreement have been omitted in accordance with Item 601(b)(2) of Regulation S-K. A copy of any omitted schedule and/or exhibit will be furnished to the Securities and Exchange Commission upon request.
**	Portions of this exhibit have been omitted in accordance with Item 601(b)(10) of Regulation S-K.

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, as amended, the Registrant has duly caused this Report to be signed on its behalf by the undersigned, thereunto duly authorized**.**

Date: March 12, 2020

HARPOON THERAPEUTICS, INC.

By: /s/ Gerald McMahon, Ph.D.

Gerald McMahon, Ph.D.

President and Chief Executive Officer

POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Gerald McMahon, Ph.D. and Georgia Erbez, and each of them, as his or her true and lawful attorneys-in-fact and agents, with full power of substitution for him or her, and in his or her name in any and all capacities, to sign any and all amendments to this Annual Report on Form 10-K, and to file the same, with exhibits thereto and other documents in connection therewith, with the U.S. 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 therewith, as fully to all intents and purposes as he or she might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents, and either of them, his or her substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

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

Signature	Title	Date
/s/ Gerald McMahon, Ph.D. Gerald McMahon, Ph.D.	President, Chief Executive Officer and Director *(Principal Executive Officer)*	March 12, 2020
/s/ Georgia Erbez Georgia Erbez	Chief Financial Officer *(Principal Financial and Accounting Officer)*	March 12, 2020
/s/ Luke Evnin, Ph.D. Luke Evnin, Ph.D.	Chairman of the Board of Directors	March 12, 2020
/s/ Patrick Baeuerle, Ph.D. Patrick Baeuerle, Ph.D.	Director	March 12, 2020
/s/ Mark Chin Mark Chin	Director	March 12, 2020
/s/ Jonathan Drachman, M.D. Jonathan Drachman, M.D.	Director	March 12, 2020
/s/ Julie Eastland Julie Eastland	Director	March 12, 2020
/s/ Ron Hunt Ron Hunt	Director	March 12, 2020
/s/ Scott Myers Scott Myers	Director	March 12, 2020

HARPOON THERAPEUTICS, INC.
INDEX TO FINANCIAL STATEMENTS

Report of Independent Registered Public Accounting Firm

To the Stockholders and the Board of Directors of Harpoon Therapeutics, Inc.

Opinion on the Financial Statements

We have audited the accompanying balance sheets of Harpoon Therapeutics, Inc. (the Company), as of December 31, 2019 and 2018, the related statements of operations and comprehensive loss, convertible preferred stock and stockholders' equity (deficit) and cash flows for each of the three years in the period ended December 31, 2019, and the related notes (collectively referred to as the "financial statements"). In our opinion, the financial statements present fairly, in all material respects, the financial position of the Company at December 31, 2019 and 2018, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2019 in conformity with U.S. generally accepted accounting principles.

Adoption of New Accounting Standard

As discussed in Note 1 to the financial statements, the Company changed its method of accounting for leases in 2019.

Basis for Opinion

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

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. As part of our audits we are required to obtain an understanding of internal control over financial reporting but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion.

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

/s/ Ernst & Young LLP

We have served as the Company's auditor since 2017.

Redwood City, California
March 12, 2020

HARPOON THERAPEUTICS, INC.
Balance Sheets
(In thousands, except share and per share amounts)

	December 31, 2019	December 31, 2018
Assets		
Current assets		
Cash and cash equivalents	$ 88,736	$ 89,493
Short-term marketable securities	59,337	—
Prepaid expenses and other current assets	2,544	730
Total current assets	150,617	90,223
Property and equipment, net	11,383	2,998
Long-term marketable securities	7,056	—
Operating lease right-of-use asset	7,015	—
Tenant improvement allowance receivable	—	5,784
Other assets	533	3,575
Total assets	$ 176,604	$ 102,580
Liabilities, convertible preferred stock and stockholders' equity (deficit)		
Current liabilities		
Accounts payable	2,594	4,357
Accrued liabilities	7,495	3,341
Deferred revenue, current	11,207	4,250
Operating lease liabilities, current	1,217	—
Total current liabilities	22,513	11,948
Deferred revenue, noncurrent	46,144	7,792
Operating lease liabilities, net of current portion	13,727	—
Other long-term liabilities	—	6,742
Total liabilities	82,384	26,482
Commitments and contingencies (Note 7)		
Convertible preferred stock, $0.0001 par value; 10,000,000 shares and 82,000,000 shares authorized at December 31, 2019 and 2018, respectively; no shares and 16,618,448 shares issued and outstanding as of December 31, 2019 and 2018, respectively	—	129,577
Stockholders' equity (deficit)		
Common stock, $0.0001 par value; 150,000,000 shares and 114,000,000 shares authorized at December 31, 2019 and 2018, respectively; 24,904,848 shares and 1,383,221 shares issued and outstanding at December 31, 2019 and 2018, respectively	3	1
Additional paid-in capital	212,339	9,111
Accumulated other comprehensive income	41	—
Accumulated deficit	(118,163)	(62,591)
Total stockholders' equity (deficit)	94,220	(53,479)
Total liabilities, convertible preferred stock and stockholders' equity (deficit)	$ 176,604	$ 102,580

The accompanying notes are an integral part of these financial statements.

HARPOON THERAPEUTICS, INC.
Statements of Operations and Comprehensive Loss
(in thousands, except share and per share data)

	For the year ended December 31,		
	2019	**2018**	**2017**
Revenue			
Collaboration and license revenue	$ 5,777	$ 4,750	$ 708
Total revenue	5,777	4,750	708
Operating expenses			
Research and development	41,592	26,368	13,622
General and administrative	22,391	6,106	3,614
Total operating expenses	63,983	32,474	17,236
Loss from operations	(58,206)	(27,724)	(16,528)
Interest income	2,676	395	78
Interest expense	—	—	(285)
Other expense	(42)	(37)	(95)
Net loss	(55,572)	(27,366)	(16,830)
Other comprehensive loss:			
Net unrealized gain on marketable securities	41	—	—
Comprehensive loss	$ (55,531)	$ (27,366)	$ (16,830)
Net loss per share, basic and diluted	(2.56)	(25.65)	(18.81)
Weighted-average common shares used in computing net loss per share, basic and diluted	21,746,461	1,066,877	894,901

The accompanying notes are an integral part of these financial statements.

HARPOON THERAPEUTICS, INC.
Statements of Convertible Preferred Stock and Stockholders' Equity (Deficit)
(in thousands, except share and per share data)

	Convertible Preferred Stock		Common Stock		Additional Paid-In Capital	Note Receivable from Stockholder	Accumulated Other Comprehensive Income/(Loss)	Accumulated Deficit	Total Stockholders' Equity (Deficit)
	Shares	Amount	Shares	Amount					
Balance at December 31, 2016	3,050,329	$ 14,926	821,844	$ 1	$ 7,978	$ (28)	$ —	$ (18,395)	$ (10,444)
Issuance of Series B convertible preferred stock at $6.39 per share, net of issuance costs of $271	3,128,541	19,729	—	—	—	—	—	—	—
Issuance of Series B convertible preferred stock at $6.39 per share upon extinguishment of 2016 Notes and 2017 Notes, net of issuance costs of $271	811,103	5,186	—	—	—	—	—	—	—
Capital transaction with a related party upon extinguishment of 2016 and 2017 Notes	—	—	—	—	(204)	—	—	—	(204)
Issuance of warrants related to 2017 Notes	—	—	—	—	144	—	—	—	144
Issuance of common stock for exercise of stock options	—	—	7,897	—	4	—	—	—	4
Issuance of common stock	—	—	3,050	—	2	—	—	—	2
Vesting of early exercised stock options	—	—	30,502	—	18	—	—	—	18
Stock-based compensation	—	—	—	—	367	—	—	—	367
Vesting of Founder's shares	—	—	85,001	—	—	—	—	—	—
Net loss and comprehensive loss	—	—	—	—	—	—		(16,830)	(16,830)
Balances at December 31, 2017	6,989,973	39,841	948,294	1	8,309	(28)	—	(35,225)	(26,943)
Issuance of Series B convertible preferred stock at $6.39 per share upon extinguishment of 2016 Notes and 2017 Notes, net of issuance costs of $8	3,128,540	19,992	—	—	—	—	—	—	—
Issuance of Series C convertible preferred stock at $10.77 per share, net of issuance costs of $256	6,499,935	69,744	—	—	—	—	—	—	—
Issuance of common stock for exercise of stock options	—	—	125,533	—	122		—	—	122
Vesting of early exercised stock options	—	—	56,025	—	36	—	—	—	36
Stock-based compensation	—	—	—	—	644	28	—	—	672
Vesting of Founder's shares	—	—	81,567	—	—	—	—	—	—
Repurchase of common stock	—	—	—	—	—	—	—	—	—
Net loss and comprehensive loss	—	—	—	—	—	—	—	(27,366)	(27,366)
Balances at December 31, 2018	16,618,448	129,577	1,211,419	1	9,111	—	—	(62,591)	(53,479)
Conversion of Series A, B, and C convertible preferred stock into common stock	(16,618,448)	(129,577)	16,618,448	1	129,575	—	—	—	129,576
Issuance of common stock upon exercise of warrants	—	—	563,043	—		—	—	—	—
Issuance of common stock upon initial public offering, net of offering costs of $10,122	—	—	5,769,201	1	70,646	—	—	—	70,647
Issuance of common stock for exercise of stock options	—	—	572,436	—	803	—	—	—	803
Vesting of early exercised stock options	—	—	93,336	—	133	—	—	—	133
Stock-based compensation	—	—	—	—	2,071	—	—	—	2,071
Vesting of Founder's shares	—	—	22,181	—	—	—	—	—	—
Net loss	—	—	—	—	—	—	—	(55,572)	(55,572)
Other comprehensive income	—	—	—	—	—	—	41	—	41
Balances at December 31, 2019	—	$ —	**24,850,064**	$ 3	$ 212,339	$ —	$ 41	$ (118,163)	$ 94,220

The accompanying notes are an integral part of these financial statements.

HARPOON THERAPEUTICS, INC.
Statements of Cash Flows
(in thousands)

	For the year ended December 31,		
	2019	**2018**	**2017**
Cash flows from operating activities			
Net loss	$ (55,572)	$ (27,366)	$ (16,830)
Adjustments to reconcile net loss to net cash (used in) provided by operating activities			
Stock-based compensation expense	2,071	672	367
Depreciation and amortization	900	644	366
Non cash lease expense	1,202		
Accrued interest on convertible notes payable	—	—	153
Net amortization of discounts on marketable securities	(541)	—	—
Amortization of debt discount	—	—	132
Changes in operating assets and liabilities			
Prepaid expenses and other assets	(1,814)	(507)	335
Other assets	3,042	—	(138)
Accounts payable	(1,761)	2,555	804
Accrued liabilities	4,288	1,048	257
Deferred revenue	6,957	(4,250)	16,292
Operating lease liabilities	(15)	—	—
Deferred revenue, non current	38,352	—	—
Other long-term liabilities	—	78	(24)
Net cash (used in) provided by operating activities	(2,891)	(27,126)	1,714
Cash flows from investing activities			
Purchases of property and equipment	(3,516)	(663)	(2,275)
Purchases of marketable securities	(141,816)	—	—
Proceeds from repayment of note receivable	—	—	6,750
Maturities of marketable securities	76,017	—	—
Net cash (used in) provided by investing activities	(69,315)	(663)	4,475
Cash flows from financing activities			
Proceeds from initial public offering of common stock, net of commissions	70,646	—	—
Proceeds from issuance of convertible preferred stock, net of issuance costs	—	89,828	19,729
Proceeds from issuance of convertible notes, net of issuance costs	—	—	2,496
Proceeds from issuance of common stock upon exercise of stock options, net	803	158	22
Proceeds from issuance of common stock	—	—	2
Payments of deferred initial public offering costs	—	(1,660)	—
Net cash provided by financing activities	71,449	88,326	22,249
Net increase (decrease) in cash, cash equivalents, and restricted cash	(757)	60,537	28,438
Cash, cash equivalents, and restricted cash at beginning of period	89,960	29,423	985
Cash, cash equivalents, and restricted cash at end of period	$ 89,203	$ 89,960	$ 29,423
Supplemental disclosures of non-cash investing and financing information			
Conversion of preferred stock to common stock and additional paid-in capital	$ 129,577	$ —	$ —
Issuance of Series B convertible preferred stock upon extinguishment of 2016 Notes and 2017 Notes	$ —	$ —	$ 5,186
Capital transaction with a related party upon extinguishment of Notes	$ —	$ —	$ (204)
Purchases of property and equipment included in accounts payable	$ (16)	$ 28	$ —
Deferred initial public offering costs included in accounts payable and accrued liabilities	$ —	$ 1,309	$ 78
Reclassification of employee stock liability to equity upon vesting	$ 133		
Right-of-use asset obtained in exchange for lease obligation	$ 8,405	$ —	$ —
Modification of operating lease	$ (188)	$ —	$ —
Tenant improvements provided by landlord	$ 5,784	$ 6,648	$ —
Series C preferred stock issuance costs included in accounts payable and accrued liabilities	$ —	$ 92	$ —

The accompanying notes are an integral part of these financial statements.

1. Organization

Description of Business

Harpoon Therapeutics, Inc. (the "Company") is a clinical-stage immunotherapy company developing a novel class of T cell engagers that harness the power of the body's immune system to treat patients suffering from cancer and other diseases. T cell engagers are engineered proteins that direct a patient's own T cells to kill target cells that express specific proteins, or antigens, carried by the target cells. Using a proprietary Tri-specific T cell Activating Construct, ("TriTAC"), platform, the Company is developing a pipeline of novel T cell engagers, or TriTACs, initially focused on the treatment of solid tumors and hematologic malignancies. The Company was incorporated in Delaware in March 2015 and is headquartered in South San Francisco, California.

Initial Public Offering

On February 7, 2019, the Company's registration statement on Form S-1 relating to its initial public offering ("IPO") was declared effective by the Securities and Exchange Commission ("SEC") and the shares of its common stock began trading on the NASDAQ Global Select Market ("Nasdaq") on February 8, 2019. The public offering price of the shares sold in the IPO was $14.00 per share. The IPO closed in February 2019, pursuant to which the Company sold 5,769,201 shares of common stock, for gross proceeds of approximately $80.8 million, including the exercise in part of the underwriters' option to purchase additional shares. The Company received net proceeds from the IPO of approximately $70.7 million, after underwriting discounts, commissions and offering costs.

Immediately prior to the completion of the IPO on February 12, 2019, all outstanding shares of redeemable convertible preferred stock, including preferred stock warrants, were converted into 17,181,491 shares of common stock and $129.6 million was reclassified from temporary equity to additional paid in capital on the balance sheet. Subsequent to the closing of the IPO, there were no shares of redeemable convertible preferred stock outstanding.

Liquidity

Since inception, the Company has incurred significant losses and has negative cash flows from operations. As of December 31, 2019, the Company had an accumulated deficit of $118.2 million. Management expects to continue to incur additional substantial losses in the foreseeable future as a result of the Company's research and development activities.

As of December 31, 2019, the Company had cash, cash equivalents, and marketable securities of $155.1 million, which is available to fund future operations. The Company believes that the proceeds from the IPO, along with the Company's cash, cash equivalents and marketable securities as of December 31, 2019, provide sufficient capital resources to continue its operations for at least 12 months from the issuance date of these financial statements. The Company will need to raise additional capital to support the completion of its research and development activities. The Company's activities are subject to significant risks and uncertainties, including failing to secure additional funding to continue to operationalize the Company's current technology and to advance the development of its product candidates.

2. Summary of Significant Accounting Policies

Basis of Presentation

The financial statements have been prepared in accordance with U.S. generally accepted accounting principles.

Reverse Stock Split

On January 28, 2019, the Company filed an amendment to the Company's amended and restated certificate of incorporation to effect a reverse split of shares of the Company's common stock and convertible preferred stock on a 4.9175-for-one basis (the "Reverse Stock Split"). The par value and the authorized number of shares of the convertible preferred stock and common stock were not adjusted in connection with the Reverse Stock Split. All references to common stock, convertible preferred stock, warrants to purchase common stock, options to purchase common stock, early exercised options, restricted stock, share data, per share data and related information contained in the financial statements have been retrospectively adjusted to reflect the effect of the Reverse Stock Split for all periods presented.

Use of Estimates

The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities as of the date of the financial statements and the reported amounts of revenue and expenses during the reporting period. Significant estimates and assumptions made in the accompanying financial statements include, but are not limited to, the fair value of common stock, the fair value of stock options, the research period of the collaboration agreements with AbbVie Biotechnology Ltd., operating lease liabilities, income tax uncertainties and certain accruals. The Company evaluates its estimates and assumptions on an ongoing basis using historical experience and other factors and adjusts those estimates and assumptions when facts and circumstances dictate. Actual results could differ from those estimates.

Segment Reporting

Operating segments are identified as components of an enterprise about which separate discrete financial information is available for evaluation by the Company's Chief Operating Decision Maker in making decisions regarding resource allocation and assessing performance. To date, the Company has viewed its operations and manages its business as one segment operating primarily in the United States.

Cash, Cash Equivalents and Restricted Cash

The Company considers all highly liquid investments purchased with original maturities of three months or less from the purchase date to be cash equivalents. Cash equivalents consist primarily of amounts invested in money market accounts and are stated at fair value.

The Company maintained restricted cash of $0.5 million and $0.5 million as of December 31, 2019 and 2018, respectively. This amount is included within "Other assets" in the accompanying balance sheets and is comprised solely of a letter of credit required pursuant to the lease for the Company's corporate headquarters entered into in August 2018 as discussed in Note 7.

The following table provides a reconciliation of cash and cash equivalents and restricted cash reported within the balance sheets that sum to the total of the same amounts shown in the statement of cash flows.

	As of December 31,		
	2019	2018	2017
	(in thousands)		
Balance Sheets			
Cash and cash equivalents	$ 88,736	$ 89,493	$ 29,423
Restricted cash (included in other assets)	467	467	—
Cash, cash equivalents and restricted cash in Statements of Cash Flows	$ 89,203	$ 89,960	$ 29,423

Marketable Securities

The Company generally invests its excess cash in money market funds and investment grade short- to intermediate-term fixed income securities. Such investments are included in cash and cash equivalents, short-term marketable securities or long-term marketable securities on the balance sheets. Marketable securities with a maturity date greater than 90 days and less than one year at each balance sheet date are classified as short-term. Marketable securities with a maturity date greater than one year at each balance sheet date are classified as long-term. All of the Company's marketable securities are considered available-for-sale and are reported at fair value with unrealized gains and losses included as a component of stockholders' equity (deficit). The amortized cost of debt securities is adjusted for amortization of premiums and accretion of discounts to maturity, which is included in interest income, net on the statements of operations. Realized gains and losses and declines in value judged to be other-than-temporary, if any, on marketable securities are included in interest income, net on the statements of operations. The cost of securities sold is determined using specific identification.

The Company periodically evaluates whether declines in the fair values of its marketable securities below their amortized cost are other-than-temporary. This evaluation consists of several qualitative and quantitative factors regarding the severity and duration of the unrealized loss, as well as the Company's ability and intent to hold the marketable security until a forecasted recovery occurs. Additionally, the Company assesses whether it has plans to sell the marketable security or it is more likely than not it will be required to sell any marketable securities before recovery of its amortized cost basis. Factors considered include quoted market prices, recent financial results and operating trends, implied values from any recent transactions or offers of investee securities, credit quality of debt instrument issuers, other publicly available information that may affect the value of the marketable security, duration and severity of the decline in value, and the Company's strategy and intentions for holding the marketable security.

Concentration of Credit Risk

The Company is subject to credit risk from its portfolio of cash equivalents and marketable securities. The Company invests in money market funds through a major U.S. bank and is exposed to credit risk in the event of default by the financial institution to the extent of amounts recorded on the consolidated balance sheets. The Company invests in money market funds and investment grade short- to intermediate-term fixed income securities. Under its investment policy, the Company limits amounts invested in such securities by credit rating, maturity, industry group, investment type and issuer, except for securities issued by the U.S. government. The Company is not exposed to any significant concentrations of credit risk from these financial instruments. The goals of the Company's investment policy, in order of priority, are as follows: preservation of principal; liquidity of investments; fiduciary control of cash and investments; prevention of inappropriate concentrations of investments; obtaining the best yields. The Company minimizes the amount of credit exposure by investing cash that is not required for immediate operating needs in money market funds and marketable securities.

Leases

The Company evaluates arrangements at inception to determine if an arrangement is or contains a lease. Operating lease assets represent the Company's right to use an underlying asset for the lease term and operating lease liabilities represent the Company's obligation to make lease payments arising from the lease. Operating lease assets and liabilities are recognized at the commencement date of the lease based upon the present value of lease payments over the lease term. When determining the lease term, the Company includes options to extend or terminate the lease when it is reasonably certain that the Company will exercise that option. The Company uses an incremental borrowing rate that the Company would expect to incur for a fully collateralized loan over a similar term under similar economic conditions to determine the present value of the lease payments.

The lease payments used to determine the Company's operating lease assets may include lease incentives and stated rent increases and are recognized in the Company's operating lease assets in the balance sheets. Operating lease liabilities are accreted over the term of the lease using the incremental borrowing rate and the associated expense is recorded to operating expenses in the statement of operations and comprehensive loss. The Company recognizes lease expenses on a straight-line basis over the lease term. Variable lease payments are recognized as the associated obligation is incurred.

Fair Value Measurement

Fair value is defined as the exchange price that would be received for an asset or paid to transfer a liability, or an exit price, in the principal or most advantageous market for that asset or liability in an orderly transaction between market participants on the measurement date, and established a fair value hierarchy that requires an entity to maximize the use of observable inputs, where available, and minimize the use of unobservable inputs when measuring fair value.

The Company measures fair value based on a three-level hierarchy of inputs, of which the first two are considered observable and the last unobservable. Unobservable inputs reflect the Company's own assumptions about current market conditions. The three-level hierarchy of inputs is as follows:

Level 1—Observable inputs such as unadjusted, quoted prices in active markets for identical assets or liabilities at the measurement date;

Level 2—Inputs (other than quoted prices included in Level 1) are either directly or indirectly observable for the asset or liability. These include quoted prices for similar assets or liabilities in active markets and quoted prices for identical or similar assets or liabilities in markets that are not active; and

Level 3— Unobservable inputs that are supported by little or no market activity and that are significant to the fair value of the assets or liabilities.

To the extent that the valuation is based on models or inputs that are less observable or unobservable in the market, the determination of fair value requires more judgment. Accordingly, the degree of judgment exercised by the Company in determining fair value is greatest for instruments categorized in Level 3. A financial instrument's level within the fair value hierarchy is based on the lowest level of any input that is significant to the fair value measurement.

The carrying amounts reflected in the accompanying balance sheets for cash and cash equivalents, short-term marketable securities, prepaid expenses, other current assets, accounts payable, accrued expenses and other current liabilities approximate their fair values, due to their short-term nature.

Property and Equipment, Net

Property and equipment are stated at cost less accumulated depreciation and amortization. Depreciation is computed on a straight-line basis over the estimated useful lives of the related assets, generally three to five years. Leasehold improvements are amortized using the straight-line method over the shorter of the assets' estimated useful lives or the remaining term of the lease. Depreciation and amortization begin at the time the asset is placed in service. Maintenance and repairs are charged to operations as incurred. Upon sale or retirement of assets, the cost and related accumulated depreciation are removed from the balance sheet and the resulting gain or loss is reflected in operations.

Impairment of Long-Lived Assets

The Company evaluates its long-lived assets, including property and equipment, for impairment whenever events or changes in business circumstances indicate that the carrying amount of the assets or group of assets may not be fully recoverable. If indicators of impairment exist and the undiscounted future cash flows that the assets are expected to generate are less than the carrying amount of the assets, the Company reduces the carrying amount of the assets through an impairment charge to their estimated fair values based on a discounted cash flow approach or, when available and appropriate, to comparable market values. There were no impairments of long-lived assets for any of the periods presented.

Revenue Recognition

Effective January 1, 2017, the Company early adopted Accounting Standards Codification ("ASC") Topic 606, *Revenue from Contracts with Customers* ("Topic 606") on a full retrospective basis. This standard applies to all contracts with customers. In accordance with Topic 606, the Company recognizes revenue when its customer obtains control of promised goods or services, in an amount that reflects the consideration which the Company expects to receive in exchange for those goods or services. To determine revenue recognition for arrangements that the Company determines are within the scope of Topic 606, the Company performs the following five steps: (i) identify the contract(s) with a customer; (ii) identify the performance obligations in the contract; (iii) determine the transaction price; (iv) allocate the transaction price to the performance obligations in the contract; and (v) recognize revenue when (or as) the Company satisfies a performance obligation. The Company only applies the five-step model to contracts when it is probable that it will collect the consideration it is entitled to in exchange for the goods and services it transfers to the customer. At contract inception, the Company assesses the goods or services promised within each contract that falls under the scope of Topic 606, determines those that are performance obligations and assesses whether each promised good or service is distinct. The Company then recognizes as revenue the amount of the transaction price that is allocated to the respective performance obligation when (or as) the performance obligation is satisfied.

The Company enters into corporate collaborations under which it may obtain upfront license fees, research and development funding, and development, regulatory and commercial milestone payments and royalty payments. The Company's performance obligations under these arrangements may include licenses of intellectual property, distribution rights, research and development services, delivery of manufactured product and/or participation on joint steering committees.

Licenses of intellectual property: If the license to the Company's intellectual property is determined to be distinct from the other performance obligations identified in the arrangement, the Company recognizes revenue from upfront license fees allocated to the license when the license is transferred to the customer and the customer is able to use and benefit from the license. For licenses that are bundled with other promises, the Company utilizes judgement to assess the nature of the combined performance obligation to determine whether the combined performance obligation is satisfied over time or at a point in time and, if over time, the appropriate method of measuring proportional performance for purposes of recognizing revenue from non-refundable, up-front fees. The Company evaluates the measure of proportional performance each reporting period and, if necessary, adjusts the measure of performance and related revenue recognition. We recognize collaboration revenue by measuring the progress toward complete satisfaction of the performance obligation using an input measure. In order to recognize revenue over the research and development period, we measure actual costs incurred to date compared to the overall total expected costs to satisfy the performance obligation. Revenues are recognized as the program costs are incurred. We will re-evaluate the estimate of expected costs to satisfy the performance obligation each reporting period and make adjustments for any significant changes.

Milestone payments: At the inception of each arrangement that includes development, regulatory or commercial milestone payments, the Company evaluates whether the milestones are considered probable of being reached and estimates the amount to be included in the transaction price. Topic 606 suggests two alternatives to use when estimating the amount of variable consideration: the expected value method and the most likely amount method. Under the expected value method, an entity considers the sum of probability-weighted amounts in a range of possible consideration amounts. Under the most likely amount method, an entity considers the single most likely amount in a range of possible consideration amounts. Whichever method is used, it should be consistently applied throughout the life of the contract; however, it is not necessary for the Company to use the same approach for all contracts. The Company expects to use the most likely amount method for development and regulatory milestone payments. If it is probable that a significant revenue reversal would not occur, the associated milestone value is included in the transaction price. Milestone payments that are not within the Company's or the licensee's control, such as regulatory approvals, are not considered probable of being achieved until those approvals are received. The transaction price is then allocated to each performance obligation on a relative stand-alone selling price basis. The Company recognizes revenue as or when the performance obligations under the contract are satisfied. At the end of each subsequent reporting period, the Company re-evaluates the probability or achievement of each such milestone and any related constraint, and if necessary, adjusts its estimates of the overall transaction price. Any such adjustments are recorded on a cumulative catch-up basis, which would affect revenues and earnings in the period of adjustment.

Commercial milestones and royalties: For arrangements that include sales-based royalties, including milestone payments based on the level of sales, and in which the license is deemed to be the predominant item to which the royalties relate, the Company recognizes revenue when the related sales occur. To date, the Company has not recognized any royalty revenue resulting from its collaboration arrangements.

Upfront payments and fees are recorded as deferred revenue upon receipt or when due, and may require deferral of revenue recognition to a future period until the Company performs its obligations (i.e. research and development services) under these arrangements. Amounts due to the Company are recorded as accounts receivable when the Company's right to consideration is unconditional. Amounts recognized as revenue prior to receipt are recorded as contract assets included in prepaid expenses and other current assets on the balance sheet. If we expect to have an unconditional right to receive the consideration in the next twelve months, this will be classified in current assets.

Research and Development Expenses and Accrued Research and Development Costs

The Company expenses research and development costs as incurred. Research and development expenses consist of personnel costs for the Company's research and product development employees. Also included are non-personnel costs such as professional fees payable to third parties for preclinical studies, clinical trials, research services, production of materials for clinical trials, laboratory supplies and equipment maintenance and depreciation, intellectual property licenses and other consulting costs.

The Company estimates preclinical and clinical study and research expenses based on the services performed, pursuant to contracts with research institutions that conduct and manage preclinical studies, clinical trials and research services and manufacturing organizations in connection with the production of materials for clinical trials on its behalf. The Company estimates these expenses based on discussions with internal management personnel and external service providers as to the progress or stage of completion of services and the contracted fees to be paid for such services. The Company records the estimated costs of research and development activities based upon the estimated amount services provided but not yet invoiced, and includes these costs in development expenses. The Company accrues for these costs based on factors such as estimates of the work completed and in accordance with agreements established with its third-party service provides under the service agreements. The Company makes significant judgments and estimates in determining the accrued liabilities balance in each reporting period. As actual costs become known, the Company adjusts its accrued liabilities. The Company has not experienced any material differences between accrued costs and actual costs incurred. However, the status and timing of actual services performed may vary from the Company's estimates, resulting in adjustments to expense in future periods. Changes in these estimates that result in material changes to the Company's accruals could materially affect the Company's results of operations. Payments associated with licensing agreements to acquire exclusive license to develop, use, manufacture and commercialize products that have not reached technological feasibility and do not have alternate future use are expensed as incurred.

Payments made to third parties under these arrangements in advance of the performance of the related services by the third parties are recorded as prepaid expenses until the services are rendered. Such payments are evaluated for current or long-term classification based on when such services are expected to be received.

Stock-Based Compensation

The Company maintains a stock-based compensation plan as a long-term incentive for employees, consultants and members of the Company's board of directors (the "Board"). The plan allows for the issuance of non-statutory options ("NSOs") and incentive stock options to employees and NSOs to nonemployees.

Share-based payments are measured using fair-value-based measurements and recognized as compensation expense over the service period in which the awards are expected to vest. The Company's fair-value-based measurements of awards to employees and directors as of the grant date utilize the single-option award-valuation approach, and the Company uses the straight-line method for expense attribution. The fair-value-based measurements of options granted to nonemployees are remeasured at each period end until the options vest and are amortized to expense as earned. The valuation model used for calculating the estimated fair value of stock awards is the Black-Scholes option-pricing model. The Black-Scholes model requires the Company to make assumptions and judgments about the variables used in the calculations, including the expected term (weighted-average period of time that the options granted are expected to be outstanding), the expected volatility of the Company's common stock, the related risk-free interest rate and the expected dividend. The Company has elected to recognize forfeitures of share-based payment awards as they occur.

Effective January 1, 2018, the Company early adopted ASU No. 2018-07, *Compensation – Stock Compensation (Topic 718): Improvements to Nonemployee Share-Based Payment Accounting*. The new guidance requires equity-classified share-based payment awards issued to nonemployees to be measured on the grant date, instead of being measured through the performance completion date under the current guidance. For stock-based awards issued to non-employees, the Company records expense related to stock options based on the fair value of the options calculated using the Black-Scholes option-pricing model based on the measured grant date.

Convertible Preferred Stock

The Company records all shares of convertible preferred stock at their respective fair values less issuance costs on the dates of issuance. The convertible preferred stock is recorded outside of stockholders' equity (deficit) because, in the event of certain deemed liquidation events considered not solely within the Company's control, such as a merger, acquisition and sale of all or substantially all of the Company's assets, the convertible preferred stock will become redeemable at the option of the holders.

Income Taxes

Income taxes are accounted for under the asset and liability method. Under this method, deferred tax assets and liabilities are recognized for the future tax consequences attributable to differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases and operating loss and tax credit carryforwards. Deferred tax assets and liabilities are measured using enacted tax rates applied to taxable income in the years in which those temporary differences are expected to be realized. The effect on deferred tax assets and liabilities of a change in tax rates is recognized as income in the period that includes the enactment date. A valuation allowance is established when necessary to reduce deferred tax assets to the amount expected to be realized. Financial statement effects of uncertain tax positions are recognized when it is more-likely-than-not, based on the technical merits of the position, that it will be sustained upon examination. Interest and penalties related to unrecognized tax benefits are included as a component of other expense. To date, there have been no interest or penalties charged in relation to the unrecognized tax benefits.

The Company accounts for uncertain tax positions in accordance with ASC 740-10, *Accounting for Uncertainty in Income Taxes*. The Company assesses all material positions taken in any income tax return, including all significant uncertain positions, in all tax years that are still subject to assessment or challenge by relevant taxing authorities. Assessing an uncertain tax position begins with the initial determination of the position's sustainability and is measured at the largest amount of benefit that is greater than fifty percent likely of being realized upon ultimate settlement. As of each balance sheet date, unresolved uncertain tax positions must be reassessed, and the Company will determine whether (i) the factors underlying the sustainability assertion have changed and (ii) the amount of the recognized tax benefit is still appropriate. The recognition and measurement of tax benefits requires significant judgment. Judgment concerning the recognition and measurement of a tax benefit might change as new information becomes available.

The Company includes any penalties and interest expense related to income taxes as a component of provision for income tax as necessary. To date, there have been no interest or penalties charged in relation to the unrecognized tax benefits.

Net Loss Per Share

Basic net loss per share is calculated by dividing the net loss by the weighted-average number of shares of common stock outstanding during the period, without consideration for potentially dilutive securities. As discussed in Note 11, the unvested portion of early exercised stock options are excluded from the computation of weighted average shares as the continuing vesting of such shares is contingent on the holders' continued service to the Company. Diluted net loss per share is the same as basic net loss per share for each period presented, since the effects of potentially dilutive securities are antidilutive given the net loss of the Company.

Comprehensive Income (Loss)

Comprehensive loss includes net loss and certain changes in stockholders' equity (deficit) that are excluded from net loss, primarily unrealized gains or losses on the Company's marketable securities.

Deferred Offering Costs

At December 31, 2018, the Company had $3.0 million of deferred offering costs included in other assets on the balance sheet, consisting of legal, accounting and other fees and costs directly attributable to the IPO, which was completed in February 2019. The deferred offering costs were offset against the gross proceeds of the IPO in February 2019.

Emerging Growth Company Status

The Company is an emerging growth company, as defined in the Jumpstart Our Business Startups Act of 2012 (the "JOBS Act"). Under the JOBS Act, emerging growth companies can delay adopting new or revised accounting standards issued subsequent to the enactment of the JOBS Act until such time as those standards apply to private companies. The Company has elected to use this extended transition period for complying with new or revised accounting standards that have different effective dates for public and private companies until the earlier of the date that the Company (i) is no longer an emerging growth company or (ii) affirmatively and irrevocably opts out of the extended transition period provided in the JOBS Act. As a result, the accompanying financial statements may not be comparable to companies that comply with the new or revised accounting pronouncements as of public company effective dates.

As described in "Recently Adopted Accounting Pronouncements" below, the Company early adopted ASU No. 2014-09, Revenue from Contracts with Customers (Accounting Standards Codification Topic 606), ASU No. 2016-09, Stock Compensation—Improvements to Employee Share-Based Payment Accounting, ASU No. 2018-07, Compensation – Stock Compensation (Topic 718): Improvements to Nonemployee Share-Based Payment Accounting, and ASU No. 2016-02, (Topic 842) Leases, as the JOBS Act does not preclude an emerging growth company from adopting a new or revised accounting standard earlier than the time that such standard applies to private companies. The Company expects to use the extended transition period for any other new or revised accounting standards during the period in which it remains an emerging growth company.

Recently Adopted Accounting Pronouncements

In February 2016, the Financial Accounting Standards Board ("FASB") issued ASU No. 2016-02 (Topic 842), Leases ("ASU 2016-02"). ASU 2016-02 requires an entity to recognize assets and liabilities arising from a lease for both financing and operating leases. ASU 2016-02 requires new qualitative and quantitative disclosures to help investors and other financial statement users better understand the amount, timing, and uncertainty of cash flows arising from leases. As a result of the Company having elected the extended transition period for complying with new or revised accounting standards pursuant to Section 107(b) of the JOBS Act, ASU 2016-02 is effective for the Company for the year ending December 31, 2020 and all interim periods thereafter. Effective January 1, 2019, the Company early adopted ASU No. 2016-02 using the alternative transition approach provided by ASU No. 2018-11. The Company elected certain practical expedients permitted under the transition guidance, including the election to carryforward historical lease classification. The Company also elected the short-term lease practical expedient, which allowed the Company to not recognize leases with a term of less than 12 months on the balance sheets. In addition, the Company elected the lease and non-lease components practical expedient, which allowed the Company to calculate the present value of the fixed payments without performing an allocation of lease and non-lease components. Adoption of the new standard resulted in recording operating lease right-of-use assets and operating lease liabilities of approximately $8.4 million and $15.1 million, respectively, on the balance sheets as of January 1, 2019. The lease liabilities represent the present value of the remaining lease payments of the Company's Tizona Lease and Cove Lease (see Note 7), discounted using the Company's incremental borrowing rate as of January 1, 2019. The corresponding right-of-use lease assets are recorded based on the lease liabilities, adjusted for the unamortized lease incentives received and the cumulative difference between rent expense and amounts paid under the Tizona Lease and Cove Lease. The adoption of ASU 2016-02 did not have a material impact on either the statement of operations or statement of cash flows for the year ended December 31, 2019.

In February 2018, the FASB issued ASU No. 2018-02, Income Statement – Reporting Comprehensive Income (Topic 220): Reclassification of Certain Tax Effects from Accumulated Other Comprehensive Income, which provided amended guidance to allow a reclassification from accumulated other comprehensive income to retained earnings for stranded tax effects resulting from the Tax Cuts and Jobs Act (the "Tax Act"). The Company adopted the new standard on January 1, 2019 and did not have income tax effects of the Tax Act related to unrealized gains and losses on its marketable securities. The adoption of this standard did not have an impact on the Company's financial statements.

Recently Issued Accounting Pronouncements

In June 2016, the FASB issued ASU 2016-13, *Financial Instruments - Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments* and subsequent amendments to the initial guidance: *ASU 2018-19* and *ASU 2019-04* (collectively, Topic 326). Topic 326 requires measurement and recognition of expected credit losses for financial assets held. The amendments apply to entities which hold financial assets that are not accounted for at fair value through net income as well as loans, debt securities, accounts receivables and any other financial assets not excluded from the scope that have the contractual right to receive cash. Topic 326 requires entities to record expected credit losses for certain financial instruments, including available-for-sale securities, as an allowance that reflect the entity's current estimate of credit losses expected to be incurred. For available-for-sale debt securities in unrealized loss positions, ASU 2016-13 requires allowances to be recorded instead of reducing the amortized cost of the investment. Under ASU 2019-10, *Financial Instruments—Credit Losses (Topic 326), Derivatives and Hedging (Topic 815), and Leases (Topic 842): Effective Dates*, the effective date for ASU 2016-13 has been deferred for credit losses for SEC filers that are eligible as a smaller reporting company. As such, the amended effective date for ASU 2016-13 is January 1, 2023. The Company is currently evaluating the effect of the adoption of this guidance on its financial statements.

In August 2018, the FASB issued ASU No. 2018-13, *Fair Value Measurement (Topic 820): Disclosure Framework – Changes to the Disclosure Requirements for Fair Value Measurement*, which modifies the disclosure requirements on fair value measurements. This guidance is effective for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2019. Early adoption is permitted. The Company is currently evaluating the effect the new guidance will have on its financial statements.

3. Fair Value Measurement

The following table presents information about the Company's financial assets that are measured at fair value and indicates the fair value hierarchy of the valuation:

	Fair Value Measurements at December 31, 2019			
	Total	Level 1	Level 2	Level 3
	(in thousands)			
Assets				
Cash Equivalents:				
Money market funds	$ 29,450	$ 29,450	$ —	$ —
U.S. government agency securities	7,597	—	7,597	—
Short-term marketable securities				
U.S. government treasuries	—	—	—	—
U.S. government securities	30,066	—	30,066	—
Corporate debt securities	15,552	—	15,552	—
U.S. government agency securities	13,719	—	13,719	—
Long-term marketable securities				
Corporate debt securities	1,508	—	1,508	—
U.S. government securities	5,049	—	5,049	—
U.S. government agency securities	499	—	499	—
Total cash equivalents and marketable securities	$ 103,440	$ 29,450	$ 73,990	$ —

	Fair Value Measurements at December 31, 2018			
	Total	Level 1	Level 2	Level 3
	(in thousands)			
Assets				
Money market funds	$ 60,396	$ 60,396	$ —	$ —
Total cash equivalents	$ 60,396	$ 60,396	$ —	$ —

The Company's Level 2 securities are valued using third-party pricing sources. The pricing services utilize industry standard valuation models, including both income- and market-based approaches, for which all significant inputs are observable, either directly or indirectly.

The Company has no Level 3 assets or liabilities as of December 31, 2019 or 2018. There were no transfers between Level 1 and Level 2 during the years ended December 31, 2019 and 2018.

The Company did not have any financial liabilities subject to fair value measurements on a recurring basis as of December 31, 2019 and 2018.

4. Available-for-Sale Securities

All marketable securities were considered available-for-sale at December 31, 2019. The amortized cost, gross unrealized holding gains or losses and fair value of the Company's marketable securities by major security type are summarized in the tables below:

	December 31, 2019			
	Amortized Cost	Gross Unrealized Gain	Gross Unrealized Loss	Fair Value
	(in thousands)			
Cash equivalents				
U.S. government agency securities	$ 7,597	—	—	$ 7,597
Money market funds	29,450	—	—	29,450
Total cash equivalents	37,047	—	—	37,047
Short-term marketable securities:				
U.S. government treasuries	—	—	—	—
U.S. government agency securities	13,716	3	—	13,719
U.S. government securities	30,072	—	(6)	30,066
Corporate debt securities	15,509	43	—	15,552
Total short-term marketable securities	59,297	46	(6)	59,337
Long-term marketable securities:				
U.S. government agency securities	499	—	—	499
U.S. government securities	5,045	4	—	5,049
Corporate debt securities	1,511	—	(3)	1,508
Total long-term marketable securities	7,055	4	(3)	7,056
Total	$ 103,399	$ 50	$ (9)	$ 103,440

As of December 31, 2019, some of the Company's marketable securities were in an unrealized loss position. The Company determined that it did have the ability and intent to hold all marketable securities that have been in a continuous loss position until maturity or recovery, thus there has been no recognition of any other-than-temporary impairment in the year ended December 31, 2019. All marketable securities with unrealized losses at December 31, 2019 balance sheet date have been in a loss position for less than twelve months or the loss is not material.

All of the Company's marketable securities have an effective maturity of less than two years.

5. Balance Sheet Components

Property and Equipment, Net

Property and equipment, net consists of the following:

	December 31,	
	2019	2018
	(in thousands)	
Laboratory equipment	$ 3,757	$ 2,402
Furniture and fixtures	576	312
Computer equipment and software	91	32
Leasehold improvements	8,873	360
Construction in progress	—	906
	13,297	4,012
Less: Accumulated depreciation and amortization	(1,914)	(1,014)
Total property and equipment, net	$ 11,383	$ 2,998

Depreciation and amortization expense for property and equipment amounted to $1.6 million, $0.7 million and $0.4 million for the years ended December 31, 2019, 2018, and 2017, respectively.

Accrued Liabilities

Accrued liabilities consist of the following:

	December 31,	
	2019	2018
Accrued research and development	$ 3,893	$ 504
Accrued personnel costs	2,575	1,593
Accrued professional and consulting fees	684	333
Accrued offering costs	—	709
Other	343	202
Total accrued liabilities	$ 7,495	$ 3,341

6. Convertible Notes

In May 2017, the outstanding principal balance of the Company's convertible promissory notes issued in November 2016 (the "2016 Notes") and January 2017 (the "2017 Notes"), and the then-outstanding balance of accrued interest, converted into 811,103 shares of the Company's Series B convertible preferred stock in conjunction with the Series B preferred stock financing. The conversion of the 2016 Notes and the 2017 Notes into shares of Series B convertible preferred stock was accounted for as an extinguishment. Upon the closing of the IPO, all shares of convertible preferred stock then outstanding were automatically converted into shares of common stock. The Company had no convertible preferred stock outstanding as of December 31, 2019.

Warrants Issued with 2016 and 2017 Notes

As of December 31, 2018, warrants for the purchase of an aggregate of 565,270 shares of the Company's common stock were outstanding and exercisable. In connection with the IPO, all of these warrants automatically net exercised at the IPO price of $14.00 per share, resulting in the issuance of 563,043 shares of common stock.

7. Commitments and Contingencies

Leases

In February 2017, the Company entered into an operating lease agreement with Tizona Therapeutics, Inc. ("Tizona Lease") for its headquarters in South San Francisco, California. One member of the Board is also the Executive Chairman of Tizona and, as such, Tizona is deemed to be a related party. The lease term was for 36 months. The lease agreement included escalation clauses for increased rent over the lease term. In addition to rental payments, the lease required the Company to pay property taxes, insurance, maintenance and repair costs. Rent expense was recognized using the straight-line method over the term of the lease. The Company recorded a deferred rent liability calculated as the difference between rent expense and cash rental payments.

In June 2019, the Company entered into a sublease termination agreement with Tizona (the "Termination Agreement") with the purpose of terminating the existing Tizona Lease. Under the Termination Agreement, the Company and Tizona agreed to terminate the obligations, liabilities and benefits under the Tizona Lease as of the reduced lease term date of July 31, 2019. In addition, the Company paid a termination fee of $0.4 million to Tizona in July of 2019. The Company is no longer a subtenant to Tizona under the Tizona Lease as of December 31, 2019. As such, there is no operating lease liability or operating lease right-of-use asset balance related to this lease as of December 31, 2019.

In August 2018, the Company entered into a lease agreement for the office and laboratory space in South San Francisco, California (the "Cove Lease"). The lease has an initial term of eight years, beginning on the lease commencement date, with an option to extend the lease for an additional period of eight years. The lease commencement date was July 1, 2019 at which time the Company took occupancy. Pursuant to the terms of the lease, the Company is entitled to a tenant improvement allowance of approximately $5.2 million with the option for an additional tenant improvement allowance of approximately $1.4 million. The additional tenant improvement allowance of $1.4 million, which was exercised in December 2018, is treated as a loan from the landlord and is expected to be paid back (including interest) by the Company through additional rental payments. As of December 31, 2019, the full tenant improvement allowance of $6.6 million was utilized under this lease, which was recorded as leasehold improvements and a reduction to the tenant improvement allowance receivable on the balance sheet.

The Cove Lease includes an option to renew, exercisable at the Company's sole discretion, with a renewal term for an additional period of eight years. As of December 31, 2019, the Company has not determined whether it will exercise its option to extend the lease term. Therefore, the operating lease assets and lease liabilities only contemplate the initial lease terms. The Cove Lease qualifies as an operating lease. The following table summarizes the presentation in the Company's condensed balance sheets of its operating lease (in thousands):

	As of December 31, 2019
Assets:	
Operating lease right-of-use assets	$ 7,015
Liabilities	
Operating lease liabilities	$ 1,217
Operating lease liabilities, net of current portion	13,727
Total operating lease liabilities	$ 14,944

The Company incurred $0.4 million, $0.2 million and $0.2 million in variable lease costs for each of the years ended December 31, 2019, 2018 and 2017, respectively.

Future minimum lease payments under the Cove Lease as of December 31, 2019 are as follows (in thousands):

As of December 31, 2019	**Operating Lease Commitments**
2020	$ 2,487
2021	2,566
2022	2,647
2023	2,731
2024	2,817
Thereafter	7,433
Total future minimum lease payments	20,681
Less: Present value adjustment for minimum lease commitments	(5,737)
Total	$ 14,944

As of December 31, 2019, the weighted average remaining lease term was 7.50 years and the weighted average incremental borrowing rate used to determine the operating lease liability was 8.95%.

Rent expense was $2.5 million $1.2 million and $0.8 million for the years ended December 31, 2019, 2018 and 2017, respectively. Amortization of the right-of-use lease assets was $1.2 million, zero and zero for the years ended December 31, 2019, 2018 and 2017, respectively.

Indemnification

In the ordinary course of business, the Company enters into agreements that may include indemnification provisions. Pursuant to such agreements, the Company may indemnify, hold harmless and defend an indemnified party for losses suffered or incurred by the indemnified party. Some of the provisions will limit losses to those arising from third-party actions. In some cases, the indemnification will continue after the termination of the agreement. The maximum potential amount of future payments the Company could be required to make under these provisions is not determinable. The Company has never incurred material costs to defend lawsuits or settle claims related to these indemnification provisions. The Company has also entered into indemnification agreements with its directors and officers that may require the Company to indemnify its directors and officers against liabilities that may arise by reason of their status or service as directors or officers to the fullest extent permitted by Delaware corporate law. The Company currently has directors' and officers' insurance.

8. Collaboration & License Agreements

Development and Option with AbbVie

On November 20, 2019, the Company entered into a Development and Option Agreement with AbbVie in connection with the Company's HPN217 program, which targets B cell maturation antigen, BCMA. Pursuant to such agreement, the Company granted to AbbVie an option to a worldwide, exclusive license under the Company's patents and know-how applicable to the HPN217 program to develop, manufacture, and commercialize products arising from the HPN217 program and targeting BCMA, or HPN217 Products. Under the Development and Option Agreement, the Company filed an IND for HPN217, and will conduct clinical development activities pursuant to a mutually agreed development plan, including conducting a Phase 1/2 clinical trial of HPN217, in order for AbbVie to determine whether it wishes to exercise its option to take a worldwide, exclusive license to such HPN217 program.

Under the Development and Option Agreement, AbbVie may exercise its license option at any time during a period commencing on the effective date of the agreement and expiring after a specified period following delivery by the Company of a specified data package arising from the first Phase 1/2 trial for the HPN217 Product. Following AbbVie's exercise of its option, and except for completion of certain development activities by the Company under the development plan, AbbVie will be solely responsible, at its cost, for the development, manufacture and commercialization of HPN217 Products. AbbVie is required to use commercially reasonable efforts to develop and obtain regulatory approval for one HPN217 Product, for at least one indication, for use in each of the United States and specified European markets.

Upon execution of the Development and Option Agreement, the Company received an upfront payment of $30.0 million. Additionally, AbbVie is expected to pay a development milestone payment of up to $50.0 million as a result of dosing the first patient in the Phase 1/2 clinical trial of HPN217 within a specified time period, which the Company expects to occur in the first half of 2020.

If AbbVie exercises its option, AbbVie will pay the Company an option exercise fee of $200.0 million. Following option exercise, AbbVie will be required to make further payments to the Company of up to $230.0 million in the aggregate for the achievement of specified development, regulatory and commercial sales milestones for HPN217 Products. The Company will also receive tiered royalties on net sales by AbbVie, its affiliates and sublicensees of HPN217 Products at percentages ranging from the high single digits to the very low double digits, subject to specified offsets and reductions. Royalties will be payable under the Development and Option Agreement on a product-by-product and country-by-country basis commencing on the date of first commercial sale of each HPN217 Product, and ending on the later of expiration of all valid claims of specified licensed patents in such country, expiration of regulatory exclusivity in such country, or ten years following first commercial sale of such HPN217 Product in such country.

The Development and Option Agreement will terminate upon the date of the expiration of all AbbVie's royalty payment obligations in all countries, or upon expiration of the license option period and the failure of AbbVie to exercise its license option. The Development and Option Agreement may be terminated by either party immediately for the insolvency of the other party or on 90 days' written notice for an uncured material breach of the Development and Option Agreement by the other party. AbbVie may also terminate the Development and Option Agreement in its entirety or on a country-by-country basis for any reason on 90 days' written notice to the Company.

The Company assessed the Development and Option Agreement in accordance with Topic 606 and concluded that AbbVie is a customer under this agreement. The Company identified the following performance obligation at the inception of the Development and Option Agreement consisting of the initial development activities.

The Company evaluated AbbVie's option to obtain a worldwide exclusive license for HPN217 to determine whether it provides AbbVie with any material rights. The Company concluded that the options were not issued at a significant and incremental discount, and therefore do not provide material rights. As such, the option is excluded as a performance obligation at the outset of the arrangement.

At the inception of the agreement, the transaction price included the $30.0 million up-front consideration received in December 2019 and a development milestone of up to $50.0 million to be received upon dosing of the first patient in the HPN217 Phase 1/2 clinical trial within a specified time period, for a total transaction price of $80.0 million. The Company has determined that achieving this milestone is probable such that a significant reversal of cumulative revenue would not occur for the $50.0 million development milestone. The remaining development, commercialization, and sales milestones along with sales-based royalties were not included in the transaction price, as these milestone amounts were fully constrained on the probability of achievement. The Company will reevaluate the transaction price at the end of each reporting period and as uncertain events are resolved or other changes in circumstances occur, and, if necessary, adjust its estimate of the transaction price.

The transaction price of $80.0 million, was all allocated to a single unit of accounting. The initial development activities are considered a single unit of accounting. The Company recognizes revenue associated with the performance obligation as the initial development activities are performed using an input method, according to the costs incurred as related to the estimated costs for the development and regulatory activities to be performed through the completion of a Phase 1/2 clinical trial of HPN217. The transfer of control occurs over this time period and, in management's judgment, is the best measure of progress towards satisfying the performance obligation. Such estimates are reviewed by the Company on a periodic basis and, if necessary, the Company will adjust the measure of performance and related revenue recognition.

The Company recognized $1.7 million of revenue for the year ended December 31, 2019, of which $1.1 million was recognized as a contract asset, included in prepaid expenses and other current assets on the balance sheet, related to the amount of revenue recognized prior to the receipt of the $50.0 million development milestone noted above. As of December 31, 2019, the Company has recorded $29.3 million in deferred revenue, of which $23.8 million is classified as long-term and $5.6 million as short-term deferred revenue, in the accompanying balance sheet.

As of December 31, 2019, the Company will recognize royalty revenue in the period of sale of the related products, if any, based on the underlying contract terms. No such amounts were recognized during the year ended December 31, 2019.

Amended and Restated Discovery Collaboration Agreement with AbbVie

On November 20, 2019, the Company entered into an Amended and Restated Discovery Collaboration and License Agreement, or the Restated Collaboration Agreement, with AbbVie, which agreement amends and restates the Discovery Collaboration and License Agreement entered into between the Company and AbbVie, dated October 10, 2017 and amended April 3, 2019, or the Original Collaboration Agreement. Pursuant to the Original Collaboration Agreement, the Company granted to AbbVie worldwide exclusive rights to develop and commercialize products that incorporate our proprietary TriTAC technology together with soluble TCRs provided by AbbVie that bind to targets accepted by the parties. Under the terms of the Original Collaboration Agreement, AbbVie was allowed to designate up to two targets, which it selected in 2017 and 2019, respectively. Pursuant to the Restated Collaboration Agreement, the worldwide, exclusive license granted to AbbVie under the Original Collaboration Agreement to develop and commercialize products that incorporate our proprietary Tri-specific T-cell Activating Construct, or TriTAC, platform technology together with soluble T cell receptors, or TCRs, provided by AbbVie has been expanded to cover products that incorporate antibodies provided by AbbVie or by us. The expansion of the collaboration also allows AbbVie to designate up to six additional targets, selected during a specified period following the effective date, to be the subject of activities under the collaboration. During a period of up to four years following the date of AbbVie's designation of each target for the products, and confirmation of target availability, the Company and AbbVie will conduct certain research and discovery activities under a mutually agreed discovery and research plan in connection with the creation and evaluation of constructs comprising our proprietary TriTAC technology, in conjunction with the soluble TCR or antibody sequences directed at the agreed upon targets of interest. The Company may not, including through any third party, develop or commercialize any competing product that binds to any of the included targets. As was the case under the Original Collaboration Agreement, following the discovery phase, AbbVie will be solely responsible, at its cost, for the development, manufacture and commercialization of the products that arise from the activities under the discovery plan. AbbVie is required to use commercially reasonable efforts to develop and commercialize one such product directed to each target for which the discovery activities were completed in each Major Market (as defined in the Restated Collaboration Agreement).

In addition to the upfront payment of $17 million already paid under the Original Collaboration Agreement, under the Restated Collaboration Agreement, the Company received an upfront payment of $20 million for AbbVie's right to select two additional targets and an option to select up to four further targets. AbbVie will be required to make payments to the Company, upon target selection, of $10 million for each target, up to four further targets selected by AbbVie. For each of the up to eight targets selected, the Company will receive up to $300 million in the aggregate for the achievement of specified development, regulatory and commercial sales milestones for licensed products indicated for human therapeutic or prophylactic use, totaling up to $2.4 billion in the aggregate, if such licensed products are successfully progressed against all-included targets and indications. The Company will also be eligible to receive tiered royalties on net sales by AbbVie, its affiliates and sublicensees of licensed products at percentages in the mid-single digits, subject to specified offsets and reductions. Royalties will be payable under the Restated Collaboration Agreement on a product-by-product and country-by-country basis commencing on the date of first commercial sale of each product, and ending on the later of expiration of all valid claims of specified licensed patents in such country, expiration of regulatory exclusivity in such country or ten years following first commercial sale of such product in such country. If licensed products are developed and commercialized for diagnostic or veterinary use, or certain screening or monitoring uses, the parties have agreed to negotiate an appropriate reduction in the economic terms applicable to such non-therapeutic and prophylactic applications.

The Restated Collaboration Agreement will terminate upon the date of the expiration of all AbbVie's royalty payment obligations in all countries. The Restated Collaboration Agreement may be terminated by either party immediately for the insolvency of the other party or on 90 days' written notice for an uncured material breach of such agreement by the other party. AbbVie may also terminate the Restated Collaboration Agreement in its entirety or on a target-by-target or country-by-country basis for any reason on 30 days' written notice to the Company. In addition, AbbVie may terminate the Restated Collaboration Agreement immediately in its entirety or on a target-by-target basis if AbbVie considers in good faith that there has been a failure of the discovery or development efforts with respect to such target, or that further development or commercialization of products directed to such target is not advisable as a result of a serious safety issue.

The Company assessed the Collaboration and Restated Collaboration Agreement in accordance with Topic 606 and concluded that AbbVie is a customer under both agreements. The Company concluded that there are multiple promises under both the Collaboration and Restated Collaboration Agreement which include (1) research and development activities; (2) regulatory documentation and know-how; and (3) the license to the related technology. The Company combined these promises into a single performance obligation, as the Company is obliged to render specialized services for the research program, and other promises have either no significant value or are not distinct. The Company estimates that the $17.0 million upfront payment under the Original Collaboration Agreement will be recognized over a period in which ongoing research and development activities are incurred based on the projected activities to be performed over each reporting period relative to the total estimated performance period. Such estimates are reviewed by the Company on a periodic basis and, if necessary, the Company will adjust the measure of performance and related revenue recognition.

At the inception of the Original Collaboration Agreement, the Company determined that the transaction price was $17.0 million, which was all allocated to the two initial targets. The Company has evaluated the transaction price and has determined $17.0 million is still appropriate as of December 31, 2019. For the year ended December 31, 2019 and 2018, $4.0 million and $4.3 million of revenue has been recognized in the accompanying statement of operations and comprehensive loss, respectively.

At the inception of the Restated Collaboration Agreement, the Company determined that the transaction price included the $20.0 million upfront payment received in December 2019. The Company allocates $10.0 million to each additional target selected. The company estimates that the $20.0 million upfront payment under the Restated Collaboration Agreement will be recognized over a period in which ongoing research and development activities are incurred based on the projected activities to be performed over each reporting period relative to the total estimated performance period. Such estimates are reviewed by the Company on a periodic basis and, if necessary, the Company will adjust the measure of performance and related revenue recognition. As of December 31, 2019, AbbVie has not yet selected a target under the Restated Collaboration Agreement, as such, no revenue was recognized and the upfront payment of $20.0 million is recorded as deferred revenue as of December 31, 2019.

As of December 31, 2019, the Company has recorded $28.0 million in deferred revenue, of which $22.4 million is classified as long-term and $5.6 million as short-term deferred revenue, in the accompanying balance sheet.

The Company determined that future contingent payments that may be received related to development and regulatory milestones under the Restated Collaboration Agreement are based on the performance of AbbVie and are constrained due to the fact that it was not probable that a significant reversal of cumulative revenue would not occur, as their achievement is highly dependent on the successful completion of the research activities. Accordingly, revenue for the achievement of these milestones will be recognized in the period that it is deemed probable that the milestone will be achieved. Any consideration related to commercialization and sales milestones, and sales-based royalties will be recognized when the related sales occur as they were determined to relate predominantly to the license granted to AbbVie and have been excluded from the transaction price. The Company will re-evaluate the transaction price in each reporting period as uncertain events are resolved or other changes in circumstances occur.

As of December 31, 2019, the Company has not recognized or earned any milestone payments under the Original Collaboration and Restated Collaboration Agreement. The Company will recognize royalty revenue in the period of sale of the related products, based on the underlying contract terms. No such amounts were recognized during the year ended December 31, 2019.

License Agreement with Werewolf Therapeutics, Inc.

In March 2018, the Company entered into an assignment and license agreement (the "Werewolf Agreement") with Werewolf Therapeutics, Inc. ("Werewolf"). Werewolf is affiliated with a holder of more than 5% of the Company's capital stock, and one member of the Board was, at the time, also the interim Chief Executive Officer of Werewolf and as such, Werewolf was deemed to be a related party. Pursuant to the Werewolf Agreement, the Company assigned certain patents and granted to Werewolf a non-exclusive, royalty-bearing, sublicensable license under certain other patents. In addition, Werewolf assigned certain patents to the Company. Under the Werewolf Agreement, the Company received an upfront fee of $0.5 million. If Werewolf commercializes products covered by the licensed patents, then beginning on the first sale of such products, the Company will be eligible to receive a royalty on net sales of such products by Werewolf, its affiliates and licensees at a percentage in the low single digits, subject to a minimum annual royalty payment at an amount in the low hundreds of thousands of dollars.

The Company assessed the Werewolf Agreement in accordance with Topic 606 and concluded that Werewolf is a customer, and there is only one promise and a performance obligation to deliver intellectual property license. The upfront fee of $0.5 million was recognized upfront during the year ended December 31, 2018 upon delivery of the license to Werewolf and royalties on net sales will be recognized when the underlying sales occur.

On December 20, 2019, the Company and Werewolf amended the Werewolf Agreement by entering into a Second Amended and Restated Assignment and License Agreement (the "Amended Werewolf Agreement") to include the grant to Werewolf of an exclusive, royalty-bearing, sublicensable license under certain patents owned by the Company and relating to certain proteins, to make, use, and commercialize products that are covered by such patents in the field of molecules comprising a certain protein. This license provides Werewolf with certain rights to enforce and defend these licensed patents. If Werewolf commercializes products covered by these licensed patents, then beginning on the first sale of such products, Werewolf will be obligated to pay to the Company a royalty on net sales of such products by Werewolf, its affiliates and licensees at a percentage in the low single digits, and this royalty cannot be added to any other royalty owed to the Company under the Amended Werewolf Agreement. In addition, each party granted to the other a non-exclusive, royalty-free, sublicensable, perpetual license under certain other patents relating to a certain binding domain of a certain protein, to make, use, and commercialize products that are covered by such patents in a field defined by a certain type of molecule for each party. The Amended Werewolf Agreement also includes a mutual release of claims regarding certain patent prosecution matters.

No royalty revenue was recognized under the Werewolf Agreement during the year ended December 31, 2019 or 2018.

Collaboration and License Revenue

For the years ended December 31, 2019, 2018 and 2017, collaboration and license revenue in the accompanying statements of operations and comprehensive loss is comprised of the following:

Collaboration and License Revenue	**2019**	**2018**	**2017**
AbbVie Restated Collaboration Agreement	$ 4,039	$ 4,250	$ 708
AbbVie Development and Option Agreement	1,738	—	—
Werewolf License Agreement	—	500	—
Total collaboration and license revenue	$ 5,777	$ 4,750	$ 708

9. Convertible Preferred Stock

In May 2017, the Company entered into a Series B Preferred Stock Purchase Agreement (the "Series B Agreement"), pursuant to which the Company issued 3,128,540 shares of its Series B convertible preferred stock at a purchase price of $6.39 per share for net proceeds of $19.7 million, of which $7.5 million was sold to related party investors of the Company. In addition, as discussed in Note 6, the Company issued an aggregate of 811,103 shares of Series B convertible preferred stock upon the extinguishment of the 2016 Notes and the 2017 Notes in an aggregate of $5.2 million.

In November 2018, the Company entered into a Series C Preferred Stock Purchase Agreement, pursuant to which the Company issued and sold approximately 6,499,935 million shares of its Series C convertible preferred stock at a purchase price of $10.77 per share for net proceeds of approximately $69.7 million, of which approximately $29.0 million was sold to related party investors of the Company.

Convertible preferred stock consists of the following:

	As of December 31, 2018			
	Shares Authorized	**Shares Issued and Outstanding**	**Carrying Value**	**Aggregate Liquidation Preference**
	(In thousands, except share data)			
Series A	15,000,000	3,050,329	$ 14,926	$ 15,008
Series B	35,000,000	7,068,184	44,906	45,166
Series C	32,000,000	6,499,935	69,745	70,004
	82,000,000	16,618,448	$ 129,577	$ 130,178

The Company classifies the convertible preferred stock outside of total stockholders' deficit because, in the event of certain "liquidation events" that are not solely within the control of the Company (including a merger, acquisition or sale of all or substantially all of the Company's assets), the shares would become redeemable at the option of the holders. The Company did not adjust the carrying values of the convertible preferred stock to the deemed liquidation values of such shares since a liquidation event was not probable at either of the reporting dates. Subsequent adjustments to increase or decrease the carrying values to the ultimate liquidation values will be made only if and when it becomes probable that such a liquidation event will occur.

On the completion of the IPO (see Note 1), all outstanding shares of convertible preferred stock were automatically converted into 16,618,448 shares of common stock. As of December 31, 2019, the Company did not have any convertible preferred stock issued or outstanding.

10. Equity

Stock Incentive Plans

2019 Equity Incentive Plan

The board of directors adopted, and the Company's stockholders approved the Company's 2019 Equity Incentive Plan (the "2019 Plan") in January 2019, which became effective as of immediately prior to the execution of the underwriting agreement for the Company's IPO in February 2019, after which, no further grants were made under the Company's 2015 Plan. Initially, the aggregate number of shares of our common stock that may be issued pursuant to stock awards under our 2019 Plan is 5,656,381, which is the sum of (1) 2,200,000 shares plus (2) the number of shares reserved, and remaining available for issuance, under our 2015 Plan at the time our 2019 Plan became effective and (3) the number of shares subject to stock options or other stock awards granted under our 2015 Plan that would have otherwise returned to our 2015 Plan (such as upon the expiration or termination of a stock award prior to vesting. The number of shares of our common stock reserved for issuance under our 2019 Plan will automatically increase on January 1 of each year, beginning on January 1, 2020 and continuing through and including January 1, 2029, by 5% of the total number of shares of our capital stock outstanding on December 31 of the preceding calendar year, or a lesser number of shares determined by our board of directors. The maximum number of shares that may be issued upon the exercise of incentive stock options under our 2019 Plan is 8,000,000 shares.

2015 Equity Incentive Plan

In 2015, the Company adopted the 2015 Equity Incentive Plan (the "2015 Plan"). The 2015 Plan provided for the Company to sell or issue common stock or restricted common stock, or to grant incentive stock options or nonqualified stock options for the purchase of common stock, to employees, members of the Board and consultants of the Company under terms and provisions established by the Board. Under the terms of the 2015 Plan, options may have been granted at an exercise price not less than fair market value. The Company generally grants stock-based awards with service conditions only. Options granted typically vest over a four-year period but may be granted with different vesting terms. In January 2019, the Company's board of directors adopted and stockholders approved the Company's 2019 Plan (noted above), which became effective immediately prior to the execution of the underwriting agreement for the Company's IPO in February 2019, at which point the 2015 Plan was terminated and no further grants were made under the Company's 2015 Plan. However, all outstanding stock awards granted pursuant to the 2015 Plan will continue to be subject to the terms and conditions as set forth in the agreements evidencing such stock award.

Stock Option Activity

The following summarizes option activity under the 2019 Plan and the 2015 Plan:

	Number of Outstanding Options	Weighted Average Exercise Price	Weighted Average Remaining Contractual Life (in years)	Aggregate Intrinsic Value (in thousands)
Balance as of December 31, 2017	1,791,299	1.13	9.24	881
Options granted	1,762,147	2.06		
Options exercised	(198,943)	1.35		
Options cancelled	(30,515)	1.29		
Balance as of December 31, 2018	3,323,988	1.61	9.07	1,675
Options granted	322,412	13.21		
Options exercised	(572,436)	1.40		
Options cancelled	(88,864)	1.89		
Balance as of December 31, 2019	**2,985,100**	2.89	8.27	35,509
Vested and expected to vest as of December 31, 2019	2,985,100	2.89	8.27	35,509
Exercisable as of December 31, 2019	881,790	1.80	7.69	11,456

As of December 31, 2019, 2,098,843 shares were reserved by the Company to grant under the 2019 Plan. The aggregate intrinsic values of options outstanding, vested and exercisable, and vested and expected to vest were calculated as the difference between the exercise price of the options and the estimated fair value of the Company's common stock, as determined by the Board of Directors. The intrinsic value of options exercised for the years ended December 31, 2019, 2018 and 2017 was $7.6 million, $0.1 million, and zero, respectively. There is no future tax benefit related to options exercised, as the Company has accumulated net operating losses at December 31, 2019, 2018 and 2017.

During the years ended December 31, 2019, 2018 and 2017, the estimated weighted-average grant-date fair value of the employee options vested was $0.97, $0.81, and $0.72 per share, respectively, and the estimated weighted-average grant-date fair value of employee options granted was $9.26, $1.41, and $0.92 per share, respectively.

Stock-Based Compensation

The fair value of employee and director stock option awards was estimated at the date of grant using a Black-Scholes option-pricing model with the following weighted-average assumptions:

	Year Ended December 31,		
	2019	2018	2017
Expected term (years)	5.86	6.06	6.33
Expected volatility	77.71%	76.08%	73.39%
Risk-free interest rate	2.17%	2.89%	2.03%
Expected dividend	0%	0%	0%

Prior to our IPO in February 2019, and due to no public market for the Company's common stock, the fair value of the shares of common stock underlying stock options has historically been determined by the Board based on the fair value of the common stock at the time of grant of the option by considering a number of objective and subjective factors including important developments in the Company's operations, valuations performed by an independent third party, sales of convertible preferred stock, actual operating results and financial performance, the conditions in the biotechnology industry and the economy in general, the stock price performance and volatility of comparable public companies, and the lack of liquidity of the Company's common stock, among other factors. Subsequent to the completion of our IPO, the fair value of common stock underlying stock option is based on the closing price of our common stock as reported on the date of grant on the primary stock exchange on which our common stock is traded.

The Black-Scholes option-pricing model requires the use of highly subjective assumptions which determine the fair value of stock-based awards. These assumptions include:

Expected Term—The expected term represents the period that stock-based awards are expected to be outstanding. The expected term for option grants is determined using the simplified method. The simplified method deems the term to be the average of the time-to-vesting and the contractual life of the stock-based awards.

Expected Volatility— The Company uses an average historical stock price volatility of comparable public companies within the biotechnology and pharmaceutical industry that were deemed to be representative of future stock price trends as the Company does not have sufficient trading history for its common stock. The Company will continue to apply this process until a sufficient amount of historical information regarding the volatility of its own stock price becomes available.

Risk-Free Interest Rate—The risk-free interest rate is based on the U.S. Treasury zero coupon issues in effect at the time of grant for periods corresponding with the expected term of option.

Expected Dividend—The Company has never paid dividends on its common stock and has no plans to pay dividends on its common stock. Therefore, the Company used an expected dividend yield of zero.

Total stock-based compensation was as follows:

	Year Ended December 31,		
	2019	2018	2017
	(in thousands)		
Research and development	$ 656	$ 325	$ 145
General and administrative	1,415	347	222
Total stock-based compensation	$ 2,071	$ 672	$ 367

Stock-based compensation related to non-employee awards, which is included in the table above, was $0.2 million, $0.1 million, and $0.1 million for the years ended December 31, 2019, 2018 and 2017, respectively.

In addition to the stock-based compensation expense showing in the above table, as of December 31, 2019, there is an additional $3.9 million of unrecognized stock-based compensation related to unvested stock options that is expected to be recognized over a weighted-average period of 2.7 years.

2019 Employee Stock Purchase Plan

The board of directors adopted, and the Company's stockholders approved, the 2019 Employee Stock Purchase Plan, (the "2019 ESPP") in January 2019. The 2019 ESPP became effective in February 2019.

The initial reserve for purchase by participating employees under the 2019 ESPP an aggregate number of shares of common stock shall not exceed 250,000 shares. The maximum aggregate number of shares of common stock that may be issued under the 2019 ESPP is 750,000 shares. Additionally, the number of shares of common stock reserved for issuance under the 2019 ESPP will increase automatically each year, beginning on January 1, 2020 and continuing through and including January 1, 2029, in an amount equal to the lesser of (i) 1% of the total number of shares of the Registrant's capital stock outstanding on December 31 of the preceding calendar year, (ii) 750,000 shares of Common Stock and (iii) a number of shares of Common Stock designated by action of the Registrant's board of directors prior to the first day of any calendar year. The board of directors may act prior to the first day of any calendar year to provide that there will be no January 1 increase or that the increase will be for a lesser number of shares than would otherwise occur. Shares subject to purchase rights granted under the 2019 ESPP that terminate without having been exercised in full, the shares of Common Stock not purchased under such Purchase Right will again become available for issuance under the Plan.

An employee may not be granted rights to purchase stock under the 2019 ESPP if such employee (i) immediately after the grant would own stock possessing 5% or more of the total combined voting power or value of all classes of stock of the Company or (ii) holds rights to purchase stock under the 2019 ESPP that would accrue at a rate that exceeds $25,000 worth of our stock for each calendar year that the rights remain outstanding.

The administrator may approve offerings with a duration of not more than 27 months, and may specify one or more shorter purchase periods within each offering. Each offering will have one or more purchase dates on which shares of common stock will be purchased for the employees who are participating in the offering. The administrator, in its discretion, will determine the terms of offerings under the 2019 ESPP.

The 2019 ESPP permits participants to purchase shares of our common stock through payroll deductions with up to 15% of their earnings. The purchase price of the shares will be not less than 85% of the lower of the fair market value of our common stock on the first day of an offering or on the date of purchase.

	Year Ended December 31, 2019
Expected term (years)	0.5
Expected volatility	64.23%
Risk-free interest rate	1.80%
Expected dividend	0%

Restricted Stock

In 2015, the Company issued restricted stock awards to employees and directors under the 2015 Plan at a purchase price of $0.0005 per share. The shares related to restricted stock awards are subject to a lapsing repurchase right upon termination of employment at the original purchase price. In order to vest, the holders are required to provide continued service to the Company. For accounting purposes, unvested restricted stock awards are not considered issued and outstanding and therefore are not reflected as issued and outstanding in the accompanying statements of convertible preferred stock and stockholders' equity (deficit) until the awards vest.

A summary of restricted stock activity is shown in the below table:

	Number of of Restricted Stock Outstanding
Restricted shares- December 31, 2017	113,157
Restricted stock awards vested	(81,623)
Unvested shares repurchased	(9,356)
Restricted shares- December 31, 2018	22,178
Restricted stock awards vested	(22,178)
Unvested shares repurchased	—
Restricted shares- December 31, 2019	—

Early Exercised Stock Options

The terms of the 2015 Plan permit option holders to exercise stock options before they are vested, subject to certain limitations. The shares related to early exercised stock options are subject to our lapsing repurchase right upon termination of employment at the original purchase price. In order to vest, the holders are required to provide continued service to the Company. The proceeds are initially recorded in other current liabilities and are reclassified to common stock and paid-in capital as the repurchase right lapses. As of December 31, 2019 and 2018, there was $55,000 and $188,000, respectively, recorded in other current liabilities relating to shares subject to repurchase. For accounting purposes, unvested early exercised shares are not considered issued and outstanding until the awards vest. As a result of early exercises under the 2015 Plan, 56,211, and 149,565 shares had not vested and were subject to repurchase as of December 31, 2019 and 2018, respectively.

Note Receivable from Stockholder

In August 2016, the Company received a recourse promissory note from our then CEO and President, in connection with this individual's purchase of 152,516 shares of our common stock at a price of $0.59 per share. The principal amount of the note was approximately $90,000, and accrued simple interest at a rate of 1.22% per year. The note, along with accrued interest, can be prepaid without penalty and is due on the earlier of (i) August 29, 2022, (ii) the pricing of an IPO or the closing of an acquisition of the Company, in either case if the note's existence would violate any applicable law, (iii) the date the Company determines that any change in the Company's status or the individual's status would cause the note to be deemed a prohibited extension of credit under Section 402 of the Sarbanes-Oxley Act of 2002, as amended, or any applicable law or (iv) on demand by the Company in certain circumstances. In 2016, upon the individual ceasing to be employed by the Company, the Company repurchased 105,067 shares of common stock at a price per share of $0.59 per share for a total cash payment of $62,000. As of December 31, 2016 and 2017, the outstanding loan balance was $28,000, which is recorded as a component of total stockholders' deficit in the accompanying balance sheets. As of December 31, 2018 the outstanding balance of $28,000 was cancelled and the cancellation was recorded as stock-based compensation on the Company's statement of operations and comprehensive loss.

11. Income Taxes

	December 31, 2019	December 31, 2018
Computed expected tax benefit (at federal statutory income tax rate of 21%)	$ (11,584)	$ (5,747)
State tax	(4,599)	(2,686)
Stock compensation	(490)	87
Tax credits	587	1,802
Change in valuation allowance	16,059	6,497
Other	27	47
Federal rate change (pursuant to the Tax Act)	—	—
Total provision for income taxes	$ —	$ —

Since inception, the Company has only generated pretax losses. For the years ended December 31, 2019 and 2018, the Company recorded no provision for income taxes due to the losses incurred. Significant components of the Company's deferred tax assets and liabilities as of December 31, 2019 and 2018 consisted of the following:

	December 31, 2019	December 31, 2018
	(in thousands)	
Deferred tax assets:		
Net operating loss carry forwards	$ 26,730	$ 10,351
Stock-based compensation	368	91
Deferred revenue	2,239	3,370
Tax credits	—	—
Lease liability	4,190	—
Other	674	469
Total deferred tax assets	34,201	14,281
Less: valuation allowance	(32,113)	(14,173)
Net deferred tax assets	2,088	108
Fixed assets	(125)	(108)
Right-of-use asset	(1,963)	—
Net deferred tax assets	$ —	$ —

The Company's accounting for deferred taxes involves the evaluation of a number of factors concerning the realizability of its net deferred tax assets. The Company primarily considered such factors as its history of operating losses, the nature of the Company's deferred tax assets, and the timing, likelihood and amount, if any, of future taxable income during the periods in which those temporary differences and carryforwards become deductible. At present, the Company does not believe that it is more likely than not that the deferred tax assets will be realized; accordingly, a full valuation allowance has been established and no deferred tax asset is shown in the accompanying balance sheets. The valuation allowance increased by approximately $17.9 million and $6.5 million during the years ended December 31, 2019 and 2018.

The Company has net operating carryforwards for federal and California income tax purposes of approximately $190.9 million and $74.0 million as of December 31, 2019 and 2018. The federal net operating loss carryforwards of $23.1 million, if not utilized, will expire beginning in 2035 and $72.5 million is carryforward indefinitely with the yearly net operating loss utilization limited to 80 percent of taxable income. The state net operating loss carryforwards of $95.3 million, if not utilized, will expire beginning in 2035.

The Company has research and development credit carryforwards for federal and California income tax purposes of approximately $6.4 million and $3.8 million as of December 31, 2019 and 2018. The federal credit carryforwards of $3.9 million, if not utilized, will expire beginning in 2035. The state credit carryforwards indefinitely.

Federal and California tax laws impose significant restrictions on the utilization of net operating loss carryforwards in the event of a change in ownership of the Company, as defined by Internal Revenue Code Section 382 ("Section 382"). The Company believes a change in ownership, as defined by Section 382, has occurred but a formal study has not been completed. In addition, in the future the Company may experience ownership changes, which may limit the utilization of net operating loss carryforwards or other tax attributes.

The Company has not reflected any benefit of such net operating loss carryforwards in the accompanying financial statements. The Company has established a full valuation allowance against its deferred tax assets due to the uncertainty surrounding the realization of such assets.

Uncertain Tax Benefits

The Company recognizes uncertain tax positions when it is more likely than not, based on the technical merits, that the position will not be sustained upon examination. No liability related to uncertain tax positions is recorded on the financial statements related to uncertain tax positions.

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

	December 31,		
	2019	2018	2017
	(in thousands)		
Unrecognized tax benefits at January 1	$ 3,438	$ 422	$ 197
Additions for tax positions taken in the current year	2,656	3,016	225
Reductions for tax positions taken in the prior year	(250)	—	—
Unrecognized tax benefits at December 31	$ 5,844	$ 3,438	$ 422

The Company does not anticipate any significant changes to unrecognized tax benefits over the next 12 months. The Company recognizes interest and penalties related to uncertain tax positions in income tax expense. To the extent accrued interest and penalties do not ultimately become payable, amounts accrued will be reduced and reflected as a reduction of the provision for income taxes in the period that such determination is made. Interest and penalties have not been accrued for 2019, 2018 and 2017.

The Company files income tax returns in the United States and California. The years 2015 through 2019 remain open to U.S. federal and state examination to the extent of the utilization of net operating loss and credit carryovers. As of December 31, 2019, the Company is not under examination by the Internal Revenue Services or any state tax jurisdiction.

12. Net Loss Per Share

The following outstanding potentially dilutive common stock equivalents have been excluded from the calculation of diluted net loss per share for the periods presented due to their anti-dilutive effect:

	As of December 31,		
	2019	2018	2017
Convertible preferred stock (as converted)	—	16,618,448	6,989,973
Common stock options issued and outstanding	2,985,100	3,323,988	1,791,299
ESPP shares issuable and outstanding	11,523	—	—
Restricted Stock subject to future vesting	—	22,178	113,157
Early exercised stock options subject to future vesting	56,211	149,565	132,180
Warrants to purchase shares of common stock	—	565,270	565,270
Total	3,052,834	20,679,449	9,591,879

The following table summarizes the computation of basic and diluted net loss per share attributable to common stockholders of the Company (in thousands, except per share data):

	As of December 31,		
	2019	2018	2017
Net loss	(55,572)	(27,366)	(16,830)
Weighted-average shares used to compute basic and diluted net loss per share	21,746,461	1,066,877	894,901
Basic and diluted net loss per common share	(2.56)	(25.65)	(18.81)

13. Quarterly Results (Unaudited)

The following table is in thousands, except per share amounts:

	Quarters Ended			
	March 31, 2019	June 30, 2019	September 30, 2019	December 31, 2019
Statement of operations data:				
Revenue				
Collaboration and license revenue	$ 1,063	$ 1,063	$ 1,417	$ 2,234
Total revenue	1,063	1,063	1,417	2,234
Operating expenses				
Research and development	9,382	9,971	9,533	12,706
General and administrative	5,832	3,734	8,493	4,333
Total operating expenses	15,214	13,705	18,026	17,039
Loss from operations	(14,151)	(12,642)	(16,609)	(14,805)
Interest income	576	840	728	532
Other expense	(4)	(15)	(26)	4
Net loss	$ (13,579)	$ (11,817)	$ (15,907)	$ (14,269)
Other comprehensive loss:				
Net unrealized gain (loss) on marketable securities	26	84	(25)	(42)
Comprehensive loss	$ (13,553)	$ (11,733)	$ (15,932)	$ (14,311)
Net loss per share, basic and diluted	(1.01)	(0.49)	(0.65)	(0.58)
Weighted-average common shares used in computing net loss per share, basic and diluted	13,475,222	24,294,211	24,457,402	24,606,894

	Quarters Ended			
	March 31, 2018	June 30, 2018	September 30, 2018	December 31, 2018
Statement of operations data:				
Revenue				
Collaboration and license revenue	$ 1,561	$ 1,063	$ 1,063	$ 1,063
Total revenue	1,561	1,063	1,063	1,063
Operating expenses				
Research and development	5,533	6,151	5,967	8,717
General and administrative	982	967	1,942	2,215
Total operating expenses	6,515	7,118	7,909	10,932
Loss from operations	(4,954)	(6,055)	(6,846)	(9,869)
Interest income	73	66	108	148
Other expense	(2)	(5)	(22)	(8)
Net loss	$ (4,883)	$ (5,994)	$ (6,761)	$ (9,729)
Net loss per share, basic and diluted	(5.04)	(5.89)	(6.23)	(8.15)
Weighted-average common shares used in computing net loss per share, basic and diluted	969,235	1,017,336	1,084,477	1,193,797

DESCRIPTION OF THE REGISTRANT'S SECURITIES REGISTERED PURSUANT TO SECTION 12 OF THE SECURITIES EXCHANGE ACT OF 1934

Harpoon Therapeutics, Inc. has one class of securities registered under Section 12 of the Securities Exchange Act of 1934, as amended (the "Exchange Act"): our common stock. The following description of our common stock is a summary and does not purport to be complete. It is subject to and qualified in its entirety by reference to our amended and restated certificate of incorporation, our amended and restated bylaws and our amended and restated investors' rights agreement, each of which are filed as exhibits to the Annual Report on Form 10-K, of which this exhibit is a part, and to the applicable provisions of Delaware law. We encourage you to read our amended and restated certificate of incorporation, our amended and restated bylaws, our amended and restated investors' rights agreement and the applicable provisions of Delaware law for more information.

General

Our authorized capital stock consists of 160,000,000 shares, all with a par value of $0.0001 per share, of which 150,000,000 shares are designated as common stock and 10,000,000 shares are designated as preferred stock.

Common Stock

Voting Rights

Each holder of common stock is entitled to one vote for each share on all matters submitted to a vote of our stockholders. The affirmative vote of holders of at least 66 2/3% of the voting power of all of the then-outstanding shares of capital stock, voting as a single class, is required to amend certain provisions of our amended and restated certificate of incorporation, including provisions relating to amending our amended and restated bylaws, the classified nature of our board of directors, the size of our board of directors, the removal of members of our board of directors, the liability of members of our board of directors, vacancies on our board of directors, special meetings of our board of directors and our stockholders, stockholder notices, actions by written consent and exclusive jurisdiction.

Except as otherwise provided by statute or by applicable stock exchange rules, or by our amended and restated certificate of incorporation or our amended and restated bylaws, in all matters other than the election of directors, the affirmative vote of the majority of voting power of the shares present in person, by remote communication, if applicable, or represented by proxy at the meeting and entitled to vote generally on the subject matter shall be the act of the stockholders. Except as otherwise provided by statute or by applicable stock exchange rules, or by our amended and restated certificate of incorporation or our amended and restated bylaws, directors shall be elected by a plurality of the votes of the shares present in person, by remote communication, if applicable, or represented by proxy at the meeting and entitled to vote generally on the election of directors.

Dividends

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

Liquidation

In the event of our liquidation, dissolution or winding up, holders of common stock will be entitled to share ratably in the net assets legally available for distribution to stockholders after the payment of all of our debts and other liabilities, subject to the satisfaction of any liquidation preference granted to the holders of any outstanding shares of preferred stock.

Rights and Preferences

Holders of common stock have no preemptive, conversion or subscription rights, and there are no redemption or sinking fund provisions applicable to our common stock.

The rights, preferences and privileges of the holders of common stock are subject to, and may be adversely affected by, the rights of the holders of shares of any series of preferred stock that we may designate and issue in the future. Our board of directors has the authority, without further action by our stockholders, to issue up to 10,000,000 shares of preferred stock in one or more series, to establish from time to time the number of shares to be included in each such series, to fix the rights, preferences and privileges of the shares of each wholly unissued series and any qualifications, limitations or restrictions thereon, and to increase or decrease the number of shares of any such series, but not below the number of shares of such series then outstanding. Our board of directors may authorize

the issuance of preferred stock with voting or conversion rights that could adversely affect the voting power or other rights of the holders of common stock. The issuance of preferred stock, while providing flexibility in connection with possible acquisitions and other corporate purposes, could, among other things, have the effect of delaying, deferring or preventing a change in our control that may otherwise benefit holders of our common stock and may adversely affect the market price of our common stock and the voting and other rights of the holders of common stock. We have no current plans to issue any shares of preferred stock.

Stock Options

As of December 31, 2019, 2,985,100 shares of common stock were issuable upon the exercise of outstanding stock options at a weighted-average exercise price of $2.89 per share.

Registration Rights

Certain holders of shares of our common stock are entitled to rights with respect to the registration of their shares under the Securities Act. The shares subject to such registration rights are referred to as registrable securities. These registration rights are contained in our amended and restated investors' rights agreement and are described in additional detail below.

The registration of shares of our common stock pursuant to the exercise of the registration rights described below would enable the holders to trade these shares without restriction under the Securities Act when the applicable registration statement is declared effective. Generally, in an underwritten offering, the managing underwriter, if any, has the right, subject to specified conditions, to limit the number of shares the holders of registrable securities may include.

Demand Registration Rights

The holders of at least 35% of the registrable securities outstanding may request that we register all or a portion of their registrable securities. Such request for registration must cover shares with an anticipated aggregate offering price of at least $5.0 million. We will not be required to effect more than two registrations on Form S-1 pursuant to these demand rights.

Piggyback Registration Rights

In the event that we propose to register any of our securities under the Securities Act, either for our own account or for the account of other security holders, the holders of registrable securities will be entitled to certain piggyback registration rights allowing the holders to include their shares in such registration, subject to certain marketing and other limitations. As a result, whenever we propose to file a registration statement under the Securities Act, other than with respect to a demand registration or a registration statement on Forms S-4 or S-8, the holders of registrable securities are entitled to notice of the registration and have the right to include their registrable securities in the registration, subject to limitations that the underwriters may impose on the number of shares included in the offering.

S-3 Registration Rights

The holders of 15% of the registrable securities outstanding can make a request that we register their shares on Form S-3 if we are qualified to file a registration statement on Form S-3 under the Securities Act. Such request for registration must cover shares with an anticipated aggregate offering price of at least $1.0 million. We will not be required to effect more than two registrations on Form S-3 within any 12-month period.

Expenses of Registration

We will pay the expenses of the holders of the shares registered pursuant to the registration rights described above, including the reasonable fees and disbursements, not to exceed $30,000, of one counsel for the selling holders.

Termination of Registration Rights

The registration rights described above will terminate upon the earliest to occur of (i) February 12, 2022, which is the third anniversary of our initial public offering; or (ii) with respect to any particular holder of registrable securities, at such time that such holder can sell its shares, under Rule 144 under the Securities Act or otherwise, during any three-month period without registration.

Anti-Takeover Provisions of Delaware Law and Our Charter Documents

Section 203 of the Delaware General Corporation Law

We are subject to Section 203 of the DGCL, which prohibits a Delaware corporation from engaging in any business combination with any interested stockholder for a period of three years after the date that such stockholder became an interested stockholder, with the following exceptions:

- before such date, the board of directors of the corporation approved either the business combination or the transaction that resulted in the stockholder becoming an interested stockholder;

- upon completion of the transaction that resulted in the stockholder becoming an interested stockholder, the interested stockholder owned at least 85% of the voting stock of the corporation outstanding at the time the transaction began, excluding for purposes of determining the voting stock outstanding (but not the outstanding voting stock owned by the interested stockholder) those shares owned (i) by persons who are directors and also officers and (ii) employee stock plans in which employee participants do not have the right to determine confidentially whether shares held subject to the plan will be tendered in a tender or exchange offer; or
- on or after such date, the business combination is approved by the board of directors and authorized at an annual or special meeting of the stockholders, and not by written consent, by the affirmative vote of at least 66 2/3% of the outstanding voting stock that is not owned by the interested stockholder.

In general, Section 203 defines a "business combination" to include the following:

- any merger or consolidation involving the corporation and the interested stockholder;
- any sale, transfer, pledge or other disposition of 10% or more of the assets of the corporation involving the interested stockholder;
- subject to certain exceptions, any transaction that results in the issuance or transfer by the corporation of any stock of the corporation to the interested stockholder;
- any transaction involving the corporation that has the effect of increasing the proportionate share of the stock or any class or series of the corporation beneficially owned by the interested stockholder; and
- the receipt by the interested stockholder of the benefit of any loans, advances, guarantees, pledges or other financial benefits by or through the corporation.

In general, Section 203 defines an "interested stockholder" as an entity or person who, together with such person's affiliates and associates, beneficially owns, or within three years prior to the time of determination of interested stockholder status did own, 15% or more of the outstanding voting stock of the corporation.

Section 203 could prohibit or delay mergers or other takeover or change in control attempts and, accordingly, may discourage attempts to acquire us even though such a transaction may offer our stockholders the opportunity to sell their stock at a price above the prevailing market price.

Amended and Restated Certificate of Incorporation and Amended and Restated Bylaws

Among other things, our amended and restated certificate of incorporation and amended and restated bylaws:

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

- do not provide for cumulative voting rights, therefore allowing the holders of a plurality of the shares of common stock entitled to vote in any election of directors to elect all of the directors standing for election, if they should so choose.

The amendment of any of these provisions requires approval by the holders of at least 66 2/3% of the voting power of all of our then-outstanding common stock entitled to vote generally in the election of directors, voting together as a single class.

The combination of these provisions make it more difficult for our existing stockholders to replace our board of directors as well as for another party to obtain control of us by replacing our board of directors. Because our board of directors has the power to retain and discharge our officers, these provisions could also make it more difficult for existing stockholders or another party to effect a change in management. In addition, the authorization of undesignated preferred stock makes it possible for our board of directors to issue preferred stock with voting or other rights or preferences that could impede the success of any attempt to change our control.

These provisions are intended to enhance the likelihood of continued stability in the composition of our board of directors and its policies and to discourage coercive takeover practices and inadequate takeover bids. These provisions are also designed to reduce our vulnerability to hostile takeovers and to discourage certain tactics that may be used in proxy fights. However, such provisions could have the effect of discouraging others from making tender offers for our shares and may have the effect of delaying changes in our control or management. As a consequence, these provisions may also inhibit fluctuations in the market price of our stock that could result from actual or rumored takeover attempts. We believe that the benefits of these provisions, including increased protection of our potential ability to negotiate with the proponent of an unfriendly or unsolicited proposal to acquire or restructure our company, outweigh the disadvantages of discouraging takeover proposals, because negotiation of takeover proposals could result in an improvement of their terms.

Choice of Forum

Our amended and restated certificate of incorporation provides that the Court of Chancery of the State of Delaware (or, if and only if the Court of Chancery of the State of Delaware lacks subject matter jurisdiction, any state court located within the State of Delaware or, if and only if all such state courts lack subject matter jurisdiction, the federal district court for the District of Delaware), to the fullest extent permitted by applicable law, is the exclusive forum for any derivative action or proceeding brought on our behalf, any action asserting a breach of fiduciary duty, any action asserting a claim against us arising pursuant to the DGCL, our certificate of incorporation or our bylaws, or any action asserting a claim against us that is governed by the internal affairs doctrine. However, this exclusive forum provision would not apply to suits brought to enforce a duty or liability created by the Exchange Act. Furthermore, this provision applies to Securities Act claims and Section 22 of the Securities Act creates concurrent jurisdiction for federal and state courts over all suits brought to enforce any duty or liability created by the Securities Act or the rules and regulations thereunder. Accordingly, there is uncertainty as to whether a court would enforce such provision, and our stockholders will not be deemed to have waived our compliance with the federal securities laws and the rules and regulations thereunder.

Listing

Our common stock is listed on the Nasdaq Global Select Market under the trading symbol “HARP.”

Transfer Agent and Registrar

The transfer agent and registrar for our common stock is Computershare Trust Company, N.A.

Confidential ***Execution Copy***

CERTAIN CONFIDENTIAL INFORMATION CONTAINED IN THIS DOCUMENT, MARKED BY [***], HAS BEEN OMITTED BECAUSE IT IS BOTH NOT MATERIAL AND WOULD BE COMPETITIVELY HARMFUL IF PUBLICLY DISCLOSED.

AMENDED AND RESTATED
DISCOVERY COLLABORATION AND LICENSE AGREEMENT

between

HARPOON THERAPEUTICS, INC.

and

ABBVIE BIOTECHNOLOGY LTD.

Dated as of 20 November, 2019

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AMENDED AND RESTATED
DISCOVERY COLLABORATION AND LICENSE AGREEMENT

This Amended and Restated Discovery Collaboration and License Agreement (the "**Agreement**") is made and entered into effective as of 20 November, 2019 (the "**Amended Effective Date**") by and between Harpoon Therapeutics, Inc., a Delaware corporation ("**Harpoon**"), and AbbVie Biotechnology Ltd., a Bermuda corporation ("**AbbVie**"). Harpoon and AbbVie are sometimes referred to herein individually as a "**Party**" and collectively as the "**Parties**."

RECITALS

WHEREAS, AbbVie and Harpoon entered into that certain Discovery Collaboration and License Agreement (the "**Original Agreement**") effective as of October 10, 2017 (the "**Effective Date**"), under which Harpoon granted a license to AbbVie under certain intellectual property rights with respect to the development of T-Cell Receptor Constructs (as defined therein) to develop and commercialize Licensed Products (as defined therein);

WHEREAS, the Original Agreement was amended by that certain First Amendment to the Discovery Collaboration and License Agreement effective as of April 3, 2019; and

WHEREAS, the Parties now desire to amend and restate the Original Agreement, as amended, to, among other things, (a) increase the number of additional targets which AbbVie has the right to nominate under the Agreement and (b) expand the scope of the Agreement to cover Antibody Constructs, in each case, in accordance with the terms and conditions set forth below.

NOW, THEREFORE, in consideration of the premises and the mutual promises and conditions hereinafter set forth, and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Parties, intending to be legally bound, do hereby agree as follows:

ARTICLE 1
DEFINITIONS

Unless otherwise specifically provided herein, the following terms shall have the following meanings:

1.1 "**AbbVie**" has the meaning set forth in the preamble hereto.

1.2 "**AbbVie Background Know-How**" means all Information that is (a) not generally known, (b) developed or invented as a result of performing activities outside the scope of this Agreement, and (c) either (i) Controlled by AbbVie or any of its Affiliates on the Effective Date or during the Term and reasonably necessary or useful for the Development, Manufacture, or Commercialization of a Discovery T-Cell Receptor, Discovery T-Cell Receptor Construct or a Licensed Product containing or comprising a Discovery T-Cell Receptor Construct or (ii) Controlled by AbbVie or any of its Affiliates on the Amended Effective Date or thereafter during the Term and reasonably necessary or useful for the Development, Manufacture, or Commercialization of a Discovery Antibody, Discovery Antibody Construct or a Licensed Product containing or comprising a Discovery Antibody Construct. For clarity, AbbVie Background Know-How includes such Information Controlled by AbbVie that is related to (1) a Discovery T-

Cell Receptor existing prior to the Effective Date or developed or invented thereafter as a result of performing activities outside the scope of the activities contemplated by this Agreement or (2) a Discovery Antibody existing prior to the Amended Effective Date or developed or invented thereafter as a result of performing activities outside the scope of the activities contemplated by this Agreement and in each case (clauses (1) and (2)) shall exclude such Information Controlled by AbbVie that is related to TriTAC Constructs.

1.3 "**AbbVie Background Patents**" means all Patents that (a) (i) are Controlled by AbbVie or any of its Affiliates on the Effective Date or during the Term and (ii) claim or cover AbbVie Background Know-How covered by clause (c)(i) of Section 1.2 or (b) (i) are Controlled by AbbVie or any of its Affiliates on the Amended Effective Date or thereafter during the Term and (ii) claim or cover AbbVie Background Know-How covered by clause (c)(ii) of Section 1.2.

1.4 "**AbbVie In-License Agreement**" means any agreement entered into during the Term between AbbVie and a Third Party under which payments by AbbVie or its Affiliates are required to Exploit any Discovery Construct or Licensed Product, including any agreement entered into pursuant to Section 8.6, as such agreements may be amended from time-to-time, but excluding any agreement granting or assigning any rights with respect to [***] or any [***] AbbVie or its Affiliates or Sublicensees.

1.5 "**AbbVie Indemnitees**" has the meaning set forth in Section 12.2.

1.6 "**AbbVie Program Know-How**" means all Program Know-How to the extent (a) specifically related to (i) a Discovery T-Cell Receptor, (ii) a Discovery Antibody or (iii) an Accepted Target (including [***]), or (b) conceived, discovered, developed or otherwise made solely by or on behalf of AbbVie or its Affiliates except to the extent included in Sections 1.83(a) or 1.130.

1.7 "**AbbVie Program Patents**" means Program Patents that claim or cover AbbVie Program Know-How.

1.8 [***] means the [***] set forth on [***].

1.9 "**AbbVie Withholding Tax Action**" has the meaning set forth in Section 7.9.2.

1.10 "**Acceptance**" means, with respect to a Drug Approval Application, receipt of written notice from the applicable Regulatory Authority indicating that such Drug Approval Application has been accepted for filing and further review.

1.11 "**Accepted Target**" has the meaning set forth in Section 2.1.5.

1.12 "**Accepted Target Deliverables**" has the meaning set forth in Section 4.2.

1.13 "**Accounting Standards**" means, with respect to a Party, that such Party shall maintain records and books of accounts in accordance with United States Generally Accepted Accounting Principles.

1.14 "**Acquisition**" means, with respect to a Party, a merger, acquisition (whether of all of the stock or all or substantially all of the assets of a Person or any operating or business division of a Person) or similar transaction by or with the Party, other than a Change in Control of the Party.

1.15 "**Adverse Ruling**" has the meaning set forth in Section 13.2.1.

1.16 "**Affiliate**" means, with respect to a Party, any Person that, directly or indirectly, through one (1) or more intermediaries, controls, is controlled by or is under common control with such Party. For purposes of this definition, "control" and, with correlative meanings, the terms "controlled by" and "under common control with" means (a) the possession, directly or indirectly, of the power to direct the management or policies of a Person, whether through the ownership of voting securities, by contract relating to voting rights or corporate governance, or otherwise; or (b) the ownership, directly or indirectly, of more than fifty percent (50%) of the voting securities or other ownership interest of a Person (or, with respect to a limited partnership or other similar entity, its general partner or controlling entity). The Parties acknowledge that in the case of certain entities organized under the laws of certain countries outside of the United States, the maximum percentage ownership permitted by law for a foreign investor may be less than fifty percent (50%), and that in such case such lower percentage shall be substituted in the preceding sentence, provided that such foreign investor has the power to direct the management or policies of such entity.

1.17 "**Agreement**" has the meaning set forth in the preamble hereto.

1.18 "**Alliance Manager**" has the meaning set forth in Section 3.2.5.

1.19 "**Amended Effective Date**" means the effective date of this Agreement as set forth in the preamble hereto.

1.20 "**Antibody**" means an immunoglobulin molecule [***].

1.21 "**Antibody Construct**" means a TriTAC Construct [***].

1.22 "**Antibody Discovery Research Plan**" has the meaning set forth in Section 1.57.2.

1.23 "**Antibody Sequence Information**" has the meaning set forth in Section 4.1.

1.24 "**Applicable Law**" means federal, state, local, national and supra-national laws, statutes, rules, and regulations, including any rules, regulations, guidelines, or other requirements of the Regulatory Authorities, major national securities exchanges or major securities listing

organizations, that may be in effect from time to time during the Term and applicable to a particular activity or country or other jurisdiction hereunder.

1.25 "**Audit Expert**" has the meaning set forth in Section 7.13.

1.26 "**Bankruptcy Code**" has the meaning set forth in Section 13.5.1.

1.27 "**Binds**" means, with respect to a first moiety that binds to a second moiety, having a binding affinity between the first moiety and second moiety that is [***].

1.28 "**Biosimilar Application**" has the meaning set forth in Section 8.3.3.

1.29 "**Biosimilar Competition**" has the meaning set forth in Section 7.6.3.

1.30 "**Biosimilar Product**" means, with respect to a particular Discovery Construct or Licensed Product in a particular country, a biologic product that is substantially similar to or interchangeable with such Discovery Construct or Licensed Product and any related formulations thereof, so as to permit the biosimilar applicant to rely for approval by the applicable Regulatory Authority on such Discovery Construct or Licensed Product as the reference product, or otherwise reference such Discovery Construct or Licensed Product for approval by the applicable Regulatory Authority. A Licensed Product licensed, marketed, sold, manufactured or produced by AbbVie or its Affiliates or Sublicensees will not constitute a Biosimilar Product.

1.31 "**BLA**" has the meaning set forth in the definition of "Drug Approval Application."

1.32 "**Board of Directors**" has the meaning set forth in the definition of "Change in Control."

1.33 "**Breaching Party**" has the meaning set forth in Section 13.2.1.

1.34 "**Business Day**" means a day other than a Saturday or Sunday on which banking institutions in New York, New York are open for business.

1.35 "**Calendar Quarter**" means each successive period of three (3) calendar months commencing on January 1, April 1, July 1 and October 1, except that the first Calendar Quarter of the Term shall commence on the Effective Date and end on the day immediately prior to the first to occur of January 1, April 1, July 1 or October 1 after the Effective Date, and the last Calendar Quarter shall end on the last day of the Term.

1.36 "**Calendar Year**" means each successive period of twelve (12) calendar months commencing on January 1 and ending on December 31, except that the first Calendar Year of the Term shall commence on the Effective Date and end on December 31 of the year in which the Effective Date occurs and the last Calendar Year of the Term shall commence on January 1 of the year in which the Term ends and end on the last day of the Term.

1.37 "**Change in Control**" with respect to a Party, shall be deemed to have occurred if any of the following occurs after the Effective Date:

1.37.1 any "person" or "group" (as such terms are defined below) (a) is or becomes the "beneficial owner" (as defined below), directly or indirectly, of shares of capital stock or other interests (including partnership interests) of such Party then outstanding and normally entitled (without regard to the occurrence of any contingency) to vote in the election of the directors, managers or similar supervisory positions ("**Voting Stock**") of such Party representing fifty percent (50%) or more of the total voting power of all outstanding classes of Voting Stock of such Party or (b) has the power, directly or indirectly, to elect a majority of the members of the Party's board of directors, or similar governing body ("**Board of Directors**"), excluding in each case (clauses (a) and (b)) [***]; or

1.37.2 such Party enters into a merger, consolidation or similar transaction with another Person (whether or not such Party is the surviving entity) and as a result of such merger, consolidation or similar transaction (a) the members of the Board of Directors of such Party immediately prior to such transaction constitute less than a majority of the members of the Board of Directors of such Party or such surviving Person immediately following such transaction or (b) the Persons that beneficially owned, directly or indirectly, the shares of Voting Stock of such Party immediately prior to such transaction cease to beneficially own, directly or indirectly, shares of Voting Stock of such Party representing at least a majority of the total voting power of all outstanding classes of Voting Stock of the surviving Person in substantially the same proportions as their ownership of Voting Stock of such Party immediately prior to such transaction; or

1.37.3 such Party sells or transfers to any Third Party, in one (1) or more related transactions, properties or assets representing all or substantially all of such Party's assets to which this Agreement relates; or

1.37.4 the holders of capital stock of such Party approve a plan or proposal for the liquidation or dissolution of such Party.

For the purpose of this definition of Change in Control, (a) "person" and "group" have the meanings given such terms under Section 13(d) and 14(d) of the United States Securities Exchange Act of 1934 and the term "group" includes any group acting for the purpose of acquiring, holding or disposing of securities within the meaning of Rule 13d-5(b)(1) under the said Act; (b) a "beneficial owner" shall be determined in accordance with Rule 13d-3 under the aforesaid Act; and (c) the terms "beneficially owned" and "beneficially own" shall have meanings correlative to that of "beneficial owner."

1.38 "**Clinical Data**" means all Information with respect to any Discovery Construct or Licensed Product and made, collected, or otherwise generated under or in connection with Clinical Studies, including any data (including raw data), reports, and results with respect thereto.

1.39 "**Clinical Studies**" means a First-in-Human Clinical Trial, Non-Pivotal Human Clinical Trial, Pivotal Human Clinical Trial, and such other tests and studies in human subjects that are required by Applicable Law, or otherwise recommended by the Regulatory Authorities, to obtain or maintain Regulatory Approvals for a Licensed Product for one (1) or more indications, including tests or studies that are intended to expand the Product Labeling for such Licensed Product with respect to such indication.

1.40 "**Combination Product**" means a Licensed Product that is: (a) sold in the form of a combination product containing both a Discovery Construct and one (1) or more independently therapeutically active pharmaceutical or biologic products; or (b) sold in a form that contains (or is sold bundled with) any (i) diagnostic product, process, service or therapy or (ii) product, process, service or therapy that is administered separately from the Licensed Product, in both cases (clauses (a) and (b)) sold as a unit at a single price and excluding any Delivery System.

1.41 "**Commercialization**" means any and all activities directed to the preparation for sale of, offering for sale of, or sale of a Discovery Construct or Licensed Product, including activities related to marketing, promoting, distributing, importing and exporting such Discovery Construct or Licensed Product, and interacting with Regulatory Authorities regarding any of the foregoing. When used as a verb, "**to Commercialize**" and "**Commercializing**" means to engage in Commercialization, and "**Commercialized**" has a corresponding meaning.

1.42 "**Commercially Reasonable Efforts**" means, with respect to the [***].

1.43 "**Competing Product**" means any pharmaceutical or biologic product, process, service or therapy that Binds to any Accepted Target for any Indication.

1.44 "**Competitor**" means (a) any Person that [***]; and (b) any Person that [***] with respect to any Competing Product.

1.45 "**Confidential Information**" means any Information provided orally, visually, in writing or other form by or on behalf of one (1) Party (or an Affiliate or representative of such Party) to the other Party (or to an Affiliate or representative of such other Party) in connection with this Agreement, whether prior to, on, or after the Effective Date, including Information relating to the terms of this Agreement, the Discovery Construct or any Licensed Product (including the Regulatory Documentation and regulatory data), any Exploitation of any Discovery Construct or

any Licensed Product, any Novel Target, any know-how with respect thereto developed by or on behalf of the disclosing Party or its Affiliates, or the scientific, regulatory or business affairs or other activities of either Party. Notwithstanding the foregoing, (a) Joint Program Know-How shall be deemed to be the Confidential Information of both Parties, and both Parties shall be deemed to be the receiving Party and the disclosing Party with respect thereto, and (b) all Regulatory Documentation owned by AbbVie pursuant to Section 4.7.1 shall be deemed to be the Confidential Information of AbbVie, and AbbVie shall be deemed to be the disclosing Party and Harpoon shall be deemed to be the receiving Party with respect thereto. In addition, all information disclosed by Harpoon to AbbVie under the [***], (the "**Prior NDA**") shall be deemed to be Harpoon's Confidential Information disclosed hereunder, and all information disclosed by AbbVie Inc. to Harpoon under the Prior NDA shall be deemed to be AbbVie's Confidential Information disclosed hereunder.

1.46 "**Control**" means, with respect to any item of Information, Regulatory Documentation, material, Patent, or other property right, the possession of the right, whether directly or indirectly, and whether by ownership, license, covenant not to sue or otherwise (other than by operation of the license and other grants in Sections 6.1 or 6.2), to grant a license, sublicense or other right (including the right to reference Regulatory Documentation) to or under such Information, Regulatory Documentation, material, Patent, or other property right as provided for herein without violating the terms of any agreement or other arrangement with any Third Party.

1.47 "**Default Notice**" has the meaning set forth in Section 13.2.1.

1.48 "**Delivery System**" has the meaning set forth in the definition of "Net Sales."

1.49 "**Development**" means all activities related to research, pre-clinical and other non-clinical testing, test method development and stability testing, toxicology, formulation, process development, manufacturing scale-up, qualification and validation, quality assurance/quality control, Clinical Studies, including Manufacturing in support thereof, statistical analysis and report writing, the preparation and submission of Drug Approval Applications, regulatory affairs with respect to the foregoing and all other activities necessary or reasonably useful or otherwise requested or required by a Regulatory Authority as a condition or in support of obtaining or maintaining a Regulatory Approval. When used as a verb, "**Develop**" means to engage in Development. For purposes of clarity, Development shall include any submissions and activities required in support thereof, required by Applicable Laws or a Regulatory Authority as a condition or in support of obtaining a pricing or reimbursement approval for an approved Licensed Product.

1.50 **"Discovery Antibody**" has the meaning set forth in Section 4.1.

1.51 "**Discovery Antibody Construct**" means an Antibody Construct comprising or incorporating a Discovery Antibody.

1.52 "**Discovery Construct**" means a Discovery T-Cell Receptor Construct or Discovery Antibody Construct, as applicable.

1.53 "**Discovery Construct Delivery Deadline**" means, on an Accepted Target-by-Accepted Target basis, the date that is [***] after the date on which AbbVie delivers to Harpoon the TCR Sequence Information or Antibody Sequence Information, as applicable, pursuant to Section 4.1.

1.54 "**Discovery Construct Failure**" means, with respect to a Licensed Product, that, due to Clinical Study results or actions taken by any Regulatory Authority after the Effective Date, [***] determines[***] that it is unlikely that [***] obtain Regulatory Approval of such Licensed Product [***] or, [***] it is unlikely that [***]in each case without including in the[***].

1.55 "**Discovery Construct Success Criteria**" means the success criteria with respect to a Discovery Construct set forth on Schedule 1.55.

1.56 "**Discovery Research Activities**" means the Development activities set forth in the Discovery Research Plan to be performed by Harpoon (or, by or on behalf of AbbVie pursuant to Section 4.2).

1.57 "**Discovery Research Plan**" means, as applicable:

1.57.1 the research plan setting forth the activities (and estimated timelines) for [***], such plan attached as Schedule 1.57 and identified as "Discovery Research Plan for Discovery TCR Sequences," as the same may be amended from time to time in accordance with the terms hereof (the "**TCR Discovery Research Plan**"); or

1.57.2 the research plan setting forth the activities (and estimated timelines) for [***] such plans attached as Schedule 1.57 and identified as "Discovery Research Plan for Discovery Antibody Sequences," as the same may be amended from time to time in accordance with the terms hereof (the "**Antibody Discovery Research Plan**").

1.58 "**Discovery T-Cell Receptor**" has the meaning set forth in Section 4.1.

1.59 "**Discovery T-Cell Receptor Construct**" means a T-Cell Receptor Construct comprising or incorporating a Discovery T-Cell Receptor.

1.60 "**Dispute**" has the meaning set forth in Section 14.7.

1.61 "**Distributor**" has the meaning set forth in Section 6.4.

1.62 "**Divestiture**" means, with respect to a Party, (a) the divestiture [***] through [***] or [***] with respect to such [***] (for clarity, the [***] in connection with a [***]of such[***] for any such divestiture) or (b) [***]. When used as a verb, "**Divest**" and "**Divested**" means to cause a Divestiture.

1.63 "**Dollars**" or "**$**" means United States Dollars.

1.64 "**Drug Approval Application**" means a Biologics License Application (a "**BLA**") as defined in the FFDCA, or any corresponding foreign application in the Territory, including, with respect to the European Union, a Marketing Authorization Application (a "**MAA**") filed with the EMA or with the applicable Regulatory Authority of a country in Europe with respect to the mutual recognition or any other national approval procedure.

1.65 "**Effective Date**" means the effective date of the Original Agreement as set forth in the recitals hereto.

1.66 "**EMA**" means the European Medicines Agency and any successor agency(ies) or authority having substantially the same function.

1.67 "**European Major Market**" means each of the [***].

1.68 "**Existing Patents**" has the meaning set forth in Section 11.2.1.

1.69 "**Exploit**" or "**Exploitation**" means to make, have made, import, export, use, have used, sell, have sold, or offer for sale, including to Develop, Commercialize, register, modify, enhance, improve, Manufacture, have Manufactured, hold, or keep (whether for disposal or otherwise), or otherwise dispose of.

1.70 "**FDA**" means the United States Food and Drug Administration and any successor agency(ies) or authority having substantially the same function.

1.71 "**FFDCA**" means the United States Federal Food, Drug, and Cosmetic Act, 21 U.S.C. § 301 et seq., as amended from time to time, together with any rules, regulations and requirements promulgated thereunder (including all additions, supplements, extensions, and modifications thereto).

1.72 "**Field**" means all human and non-human diagnostic, prophylactic, and therapeutic uses.

1.73 "**First Commercial Sale**" means, with respect to a Licensed Product and a country, the first sale for monetary value for use or consumption by the end user of such Licensed Product in such country after Regulatory Approval for such Licensed Product has been obtained in such country. [***] shall not be construed as a First Commercial Sale.

1.74 "**First-in-Human Clinical Trial**" means the first-ever human clinical trial in any country conducted in accordance with good clinical practices (as defined under Applicable Law) that is intended to initially evaluate a Licensed Product with respect to safety, tolerability, pharmacological effects and determination of maximum tolerated dose or recommended dose of such Licensed Product for subsequent human clinical trials as the primary endpoint, or that would otherwise satisfy requirements of 21 CFR 312.21(a), or its foreign equivalent. Such trials may include but are not limited to dose range exploration, pharmacokinetics studies, mechanistic and pharmacodynamics studies, drug-drug-interaction and food effect studies, assessment of pharmacokinetics in renal or hepatic impairment patients, and initial evaluation of combinations of a Licensed Product with other drugs or drug candidates.

1.75 [***] has the meaning set forth in [***].

1.76 "**General Harpoon Sequence Information**" means Harpoon Sequence Information that is not Product-Specific Harpoon Sequence Information.

1.77 "**Harpoon**" has the meaning set forth in the preamble hereto.

1.78 "**Harpoon Background Know-How**" means all Information that is (a) not generally known, (b) developed or invented as a result of performing activities outside the scope of this Agreement, and (c) either (i) Controlled by Harpoon or any of its Affiliates on the Effective Date or during the Term and reasonably necessary or useful for [***]For the purposes of clarity, Harpoon Background Know-How shall exclude such Information Controlled by Harpoon that is related to the Discovery T-Cell Receptors and Discovery Antibodies.

1.79 "**Harpoon Background Patents**" means all Patents that (a) (i) are Controlled by Harpoon or any of its Affiliates on the Effective Date or during the Term and (ii) claim or cover [***] or (b) (i) [***]and (ii) [***].

1.80 "**Harpoon In-License Agreement**" has the meaning set forth in Section 11.2.3.

1.81 "**Harpoon Indemnitees**" has the meaning set forth in Section 12.1.

1.82 "**Harpoon Platform**" means Information, Patents and other intellectual property rights that are: (a) Controlled by Harpoon or any of its Affiliates on the Effective Date or during the Term and (b) [***] and (ii) [***].

For the purposes of clarity, Harpoon Platform or any component of the Harpoon Platform does not include Information, Patents and other intellectual property rights that [***].

1.83 "**Harpoon Program Know-How**" means all Program Know-How to the extent (a) specifically related to the Harpoon Platform or any component of the Harpoon Platform, [***], (b) included in General Harpoon Sequence Information, or (c) conceived, discovered, developed or otherwise made solely by or on behalf of Harpoon or its Affiliates, in each case (a), (b), and (c), except to the extent included in Sections 1.6(a) or 1.130.

1.84 "**Harpoon Program Patents**" means all Program Patents that claim or cover Harpoon Program Know-How.

1.85 "**Harpoon Sequence Information**" means Antibody Sequence Information generated by Harpoon as a result of a request from AbbVie under Section 4.1.3.

1.86 "**Immune Effector Target**" means a Target that is [***].

1.87 "**In-Licensed Patents**" has the meaning set forth in Section 11.2.3.

1.88 "**IND**" means an application filed with a Regulatory Authority for authorization to commence Clinical Studies, including (a) an Investigational New Drug Application as defined in the FFDCA or any successor application or procedure filed with the FDA, (b) any equivalent thereof in other countries or regulatory jurisdictions, (e.g., a Clinical Trial Application (CTA) in the European Union) and (c) all supplements, amendments, variations, extensions and renewals thereof that may be filed with respect to the foregoing.

1.89 "**Indemnification Claim Notice**" has the meaning set forth in Section 12.3.

1.90 "**Indemnified Party**" has the meaning set forth in Section 12.3.

1.91 "**Indication**" means each separate and distinct disease, disorder, illness, health condition, or interruption, cessation or disruption of a bodily function, system, tissue type or organ, for which Regulatory Approval is required.

1.92 "**Indirect Taxes**" has the meaning set forth in Section 7.10.

1.93 "**Information**" means all knowledge of a technical, scientific, business and other nature, including know-how, technology, means, methods, processes, practices, formulae, instructions, skills, techniques, procedures, experiences, ideas, technical assistance, designs, drawings, assembly procedures, computer programs, apparatuses, specifications, data, results and other material, regulatory data, and other biological, chemical, pharmacological, toxicological, pharmaceutical, physical and analytical, pre-clinical, clinical, safety, manufacturing and quality control data and information, including study designs and protocols, reagents (e.g., plasmids, proteins, cell lines, assays and compounds) and biological methodology, in each case (whether or not confidential, proprietary, patented or patentable, of commercial advantage or not) in written, electronic or any other form now known or hereafter developed.

1.94 "**Initiation**" or "**Initiate**" means, with respect to a Clinical Study, the first dosing of the first human subject in such Clinical Study.

1.95 "**Intellectual Property**" has the meaning set forth in Section 13.5.1.

1.96 "**Internal Reserved Program**" means [***] internal program of [***] of such program and has [***] of such program [***].

1.97 "**Joint Intellectual Property Rights**" means the Joint Program Know-How and Joint Program Patents.

1.98 "**Joint Program Know-How**" means all Program Know-How that is conceived, discovered, developed, or otherwise made jointly by or on behalf of AbbVie, or its Affiliates or Sublicensees, on the one hand, and Harpoon, or its Affiliates or licensees, on the other hand, but expressly excluding any AbbVie Program Know-How, Harpoon Program Know-How, and Product-Specific Know-How.

1.99 "**Joint Program Patents**" means all Program Patents that claim or cover Joint Program Know-How, but expressly excluding any AbbVie Program Patents, Harpoon Program Patents, and Product-Specific Patents.

1.100 "**Joint Research Committee**" or "**JRC**" has the meaning set forth in Section 3.1.1.

1.101 "**Knowledge**" means [***] of the [***] of a Party, or any personnel holding positions equivalent to such job titles (but only to the extent such positions exist at such Party).

1.102 [***].

1.103 "**Licensed Product**" means any product comprising or containing a Discovery Construct, alone or in combination with one (1) or more other active ingredients, in any and all forms, presentations, delivery systems, dosage forms and strengths, and formulations.

1.104 "**Losses**" has the meaning set forth in Section 12.1.

1.105 "**MAA**" has the meaning set forth in the definition of Drug Approval Application.

1.106 "**Major Market**" means each of the [***].

1.107 "**Major Regulatory Filing**" means major regulatory filings and documents (including INDs, Drug Approval Applications, material labeling supplements, Regulatory Authority meeting requests, and core data sheets).

1.108 "**Manufacture**" and "**Manufacturing**" means all activities related to the synthesis, making, production, processing, purifying, formulating, filling, finishing, packaging, labeling, shipping, and holding of the Discovery Construct, any Licensed Product, or any intermediate thereof, including process development, process qualification and validation, scale-up, pre-clinical, clinical and commercial production and analytic development, product characterization, stability testing, quality assurance, and quality control.

1.109 "**Net Sales**" [***]

1.109.1 [***]

1.109.2 [***]

1.109.3 [***]

1.109.4 [***]

1.109.5 [***]

1.109.6 [***]

1.109.7 [***]of such Licensed Product and to the extent [***], where for purposes of this Net Sales definition,[***] of such Licensed Product;

1.109.8 [***], provided that[***]

1.109.9 [***]

1.109.10 [***] but which [***].

[***]

1.109.11 In the event that a Licensed Product is sold in any country or other jurisdiction [***]:

(a) [***]

(b) [***].

(c) [***]

(d) [***]

1.110 "**Neutral**" has the meaning set forth in Schedule 14.7.3.

1.111 "**New Target**" has the meaning set forth in Section 2.3.

1.112 "**Nominated Target**" has the meaning set forth in Section 2.1.5.

1.113 "**Non-Breaching Party**" has the meaning set forth in Section 13.2.1.

1.114 "**Non-Pivotal Human Clinical Trial**" means an exploratory trial that has clinical efficacy, safety, pharmacodynamics or biological activity as primary endpoint which is
prospectively designed to generate sufficient data that may permit commencement of Pivotal Human Clinical Trials or a similar clinical study or that otherwise satisfies the requirements of 21 CFR 312.21(b) or its foreign equivalent.

1.115 "**Novel Target**" means a Therapeutic Target which, as of the time of the initial nomination by AbbVie of the corresponding TCR Target or TCR/Antibody Target, as applicable, as a potential Accepted Target, [***].

1.116 "**Original Agreement**" has the meaning set forth in the recitals hereto.

1.117 "**Other Product**" means, with respect to a Combination Product, such independently therapeutically active pharmaceutical or biologic products referenced in Section 1.40(a) or such diagnostic or other product, process, service or therapy referenced in Section 1.40(b), in each case other than the Discovery Construct.

1.118 "**Owned Patents**" has the meaning set forth in Section 11.2.3.

1.119 "**Party**" and "**Parties**" has the meaning set forth in the preamble hereto.

1.120 "**Patents**" means (a) all national, regional and international patents and patent applications, including provisional patent applications, (b) all patent applications filed either from such patents, patent applications or provisional applications or from an application claiming priority from either of these, including divisionals, continuations, continuations-in-part, provisionals, converted provisionals and continued prosecution applications, (c) any and all patents that have issued or in the future issue from the foregoing patent applications ((a) and (b)), including utility models, petty patents and design patents and certificates of invention, (d) any and all extensions or restorations by existing or future extension or restoration mechanisms, including revalidations, reissues, re-examinations and extensions (including any pediatric exclusivity and other such exclusivities that are attached to patents, supplementary protection certificates and the like) of the foregoing patents or patent applications ((a), (b), and (c)), and (e) any similar rights, including so-called pipeline protection or any importation, revalidation, confirmation or introduction patent or registration patent or patent of additions to any of such foregoing patent applications and patents.

1.121 "**Person**" means an individual, sole proprietorship, partnership, limited partnership, limited liability partnership, corporation, limited liability company, business trust, joint stock company, trust, unincorporated association, joint venture or other similar entity or organization, including a government or political subdivision, department or agency of a government.

1.122 "**PHSA**" means the United States Public Health Service Act, as amended from time to time.

1.123 "**Pivotal Human Clinical Trial**" means a trial in any country conducted in accordance with GCP that is designed to establish statistically significant evidence of efficacy and
safety of a Licensed Product as a basis for a BLA or that would otherwise satisfy requirements of 21 CFR 312.21(c), or its foreign equivalent.

1.124 "**PMDA**" means Japan's Pharmaceuticals and Medical Devices Agency and any successor agency(ies) or authority having substantially the same function.

1.125 "**Product Information**" has the meaning set forth in Section 10.1.

1.126 "**Product Infringement**" has the meaning set forth in Section 8.3.1.

1.127 "**Product Labeling**" means, with respect to a Licensed Product in a country or other jurisdiction in the Territory, (a) the Regulatory Authority-approved full prescribing information for such Licensed Product for such country or other jurisdiction, including any required patient information, and (b) all labels and other written, printed, or graphic matter upon a container, wrapper, or any package insert utilized with or for such Licensed Product in such country or other jurisdiction.

1.128 "**Product-Specific Harpoon Sequence Information**" means Harpoon Sequence Information that is [***] a Discovery Construct and/or a Licensed Product.

1.129 "**Product-Specific Know-How**" means all Program Know-How to the extent [***], including [***], but excluding, for clarity, (a) [***], provided that such [***] Discovery Construct and/or a Licensed Product.

1.130 "**Product-Specific Patents**" means Program Patents that claim or cover Product-Specific Know-How.

1.131 "**Product Trademarks**" means the Trademark(s) to be used by AbbVie or its Affiliates or its or their respective Sublicensees for the Development or Commercialization of Licensed Products in the Territory and any registrations thereof or any pending applications relating thereto in the Territory (excluding, in any event, any trademarks, service marks, names or logos that include any corporate name or logo of the Parties or their Affiliates or the term "TriTAC").

1.132 "**Program Know-How**" means all Information and inventions that are conceived, discovered, developed, or otherwise made by or on behalf of either Party or its Affiliates or licensees, solely or jointly with the other Party or its Affiliates or licensees, under this Agreement.

1.133 "**Program Patents**" mean all Patents that claim or cover Program Know-How.

1.134 "**Proposed Future In-Licensed Rights**" has the meaning set forth in Section 6.9.

1.135 "**Proposed Target**" has the meaning set forth in Section 2.1.4.

1.136 "**Regulatory Approval**" means, with respect to a country or other jurisdiction in the Territory, all approvals (including Drug Approval Applications), licenses, registrations, or

authorizations of any Regulatory Authority necessary to Commercialize a Discovery Construct or Licensed Product in such country or other jurisdiction, including, where applicable, pricing or reimbursement approval in such country or other jurisdiction.

1.137 "**Regulatory Authority**" means any applicable supra-national, federal, national, regional, state, provincial, or local governmental or regulatory authority, agency, department, bureau, commission, council, or other entities (e.g., the FDA, EMA and PMDA) regulating or otherwise exercising authority with respect to activities contemplated in this Agreement, including the Exploitation of the Discovery Constructs or Licensed Products in the Territory.

1.138 "**Regulatory Documentation**" means all (a) applications (including all INDs and Drug Approval Applications and other Major Regulatory Filings), registrations, licenses, authorizations, and approvals (including Regulatory Approvals), (b) correspondence and reports submitted to or received from Regulatory Authorities (including minutes and official contact reports relating to any communications with any Regulatory Authority) and all supporting documents with respect thereto, including all regulatory drug lists, advertising and promotion documents, adverse event files, and complaint files, and (c) Clinical Data and data contained or relied upon in any of the foregoing, in each case ((a), (b), and (c)) to the extent relating to a Discovery Construct or Licensed Product.

1.139 "**Regulatory Exclusivity**" means, with respect to any country or other jurisdiction in the Territory, an additional market protection, other than Patent protection, granted by a Regulatory Authority in such country or other jurisdiction which confers an exclusive Commercialization period during which AbbVie or its Affiliates or Sublicensees have the exclusive right to market and sell a Discovery Construct or Licensed Product in such country or other jurisdiction through a regulatory exclusivity right (e.g., new chemical entity exclusivity, new use or indication exclusivity, new formulation exclusivity, orphan drug exclusivity, or any applicable data exclusivity).

1.140 "**Royalty Term**" means, with respect to each Licensed Product and each country or other jurisdiction in the Territory, the period beginning on the date of the First Commercial Sale of such Licensed Product in such country or other jurisdiction, and ending on the latest to occur of (a) the expiration, invalidation or abandonment date of the last Valid Claim of any Joint Program Patent, Harpoon Background Patent, Harpoon Program Patent, or Product-Specific Patent that covers [***] in such country or other jurisdiction [***] in such country or other jurisdiction (provided that (A) [***], (b) the expiration of applicable Regulatory Exclusivity in such country or other jurisdiction for such Licensed Product or (c) the [***] of the First Commercial Sale of such Licensed Product in such country or other jurisdiction.

1.141 "**[***]**" means the [***].

1.142 "**Segregate**" means, with respect to a [***] relating to such [***] under this Agreement, including using [***] relating to the [***]or any other [***]; provided, that, in [***] in connection with [***].

1.143 "**Senior Officer**" means, with respect to Harpoon, its [***], and with respect to AbbVie, its [***].

1.144 [***] has the meaning set forth in [***].

1.145 "**Sublicensee**" means a Person, other than an Affiliate or a Distributor, that is granted a sublicense by AbbVie under the grants in Section 6.1 as provided in Section 6.3.

1.146 [***]

1.147 "**T-Cell Receptor**" means (i) a protein naturally expressed by a T-cell on the cell surface of a T-cell that Binds to a particular TCR Target, or any modification or derivative thereof, such as a single chain version of such protein, that Binds to such TCR Target, or (ii) such protein referenced in clause (i) expressed non-naturally by genetically engineered cells.

1.148 "**T-Cell Receptor Construct**" means a TriTAC Construct comprising or incorporating a T-Cell Receptor as the domain that binds to a TCR Target.

1.149 "**Target**" means a protein identified by a unique NCBI Entrez Gene Symbol and NCBI RefSeq accession number or similar information, such as its amino acid or nucleic acid sequence. Such Target shall be deemed to include (a) any mutant or allelic variant of such protein referenced in the first sentence of this definition, including transcriptional and post-transcriptional isoforms (e.g., alternative splice variants), and post-translational modification variants (e.g., protein processing, maturation and glycosylation variants); and (b) truncated forms (including fragments thereof) of such protein or variant, in each case (clauses (a) and (b)) [***].

1.150 "**Target Acceptance Date**" has the meaning set forth in Section 2.1.5.

1.151 "**Target Availability Notice**" has the meaning set forth in Section 2.1.5.

1.152 [***]

1.153 "**Target Nomination Notice**" has the meaning set forth in Section 2.1.5.

1.154 "**TCR/Antibody Target**" means either [***]. For clarity, (i) [***].

1.155 "**TCR Discovery Research Plan**" has the meaning set forth in Section 1.57.1.

1.156 "**TCR Sequence Information**" has the meaning set forth in Section 4.1.

1.157 "**TCR Target**" means [***]. Such [***] shall be referred to in this Agreement as [***]. For the purposes of clarity, a given TCR Target refers to [***]. For illustrative purposes only, in the case of a [***].

1.158 "**Term**" has the meaning set forth in Section 13.1.1.

1.159 "**Terminated Target**" has the meaning set forth in Section 13.8.

1.160 "**Terminated Territory**" means each Major Market with respect to which this Agreement is terminated by Harpoon pursuant to Section 13.2.2, each country with respect to which this Agreement is terminated by AbbVie pursuant to Section 13.3.2, or, if this Agreement is terminated in its entirety, the entire Territory.

1.161 "**Territory**" means the entire world.

1.162 "**Therapeutic Target**" means a Target that is [***].

1.163 "**Third Party**" means any Person other than Harpoon, AbbVie and their respective Affiliates.

1.164 "**Third Party Claims**" has the meaning set forth in Section 12.1.

1.165 "**Third Party Provider**" has the meaning set forth in Section 4.6.

1.166 "**Trademark**" means any word, name, symbol, color, designation or device or any combination thereof that functions as a source identifier, including any trademark, trade dress, brand mark, service mark, trade name, brand name, logo, business symbol or domain name, whether or not registered.

1.167 "**TriTAC Construct**" means a tri-specific antigen-binding molecule that contains (a) one anti-CD3 binding domain, including [***], (b) one domain that binds to a Therapeutic Target, a TCR Target, or a TCR/Antibody Target and [***].

1.168 "**Unavailable Target(s)**" has the meaning set forth in Section 2.1.2.

1.169 "**Unblocking License**" means a [***] license under [***] for the sole purpose of and solely to the extent necessary to [***] as applicable, but expressly excluding (a) any rights to any [***].

1.170 "**United States**" or "**U.S.**" means the United States of America and its territories and possessions (including the District of Columbia and Puerto Rico).

1.171 "**Valid Claim**" means a claim of any [***] whose validity, enforceability, or patentability has not been rendered invalid by any of the following: (a) irretrievable lapse, abandonment, revocation, dedication to the public, or disclaimer; or (b) a holding, finding, or decision of invalidity, unenforceability, or non-patentability by a court, governmental agency, national or regional patent office, or other appropriate body that has competent jurisdiction, such holding, finding, or decision being final and unappealable or unappealed within the time allowed for appeal.

1.172 "**Voting Stock**" has the meaning set forth in the definition of "Change in Control."

1.173 "**Withholding Amount**" has the meaning set forth in Section 7.9.

1.174 "**Withholding Party**" has the meaning set forth in Section 7.9.

1.175 "**Working Group**" has the meaning set forth in Section 3.4.

ARTICLE 2
TARGET NOMINATION [***]

2.1 Target Nomination.

2.1.1 AbbVie has the right to select, in its sole discretion, a total of up to two (2) TCR Targets and six (6) TCR/Antibody Targets as Accepted Targets under this Agreement, in each case, as set forth in the remainder of this Section 2.1.1.

(a) Subject to this ARTICLE 2, [***] AbbVie has the right to select, in its sole discretion, a total of up to [***] TCR Targets as Accepted Targets under this Agreement for purposes of Development and Commercialization of Discovery T-Cell Receptor Constructs and Licensed Products incorporating Discovery T-Cell Receptor Constructs. The first such TCR Target must be initially nominated by AbbVie no later than [***] following the Effective Date and the second such TCR Target must initially be nominated by AbbVie no later than [***] following the Effective Date. [***]

(b) Subject to this ARTICLE 2, [***], AbbVie has the right to select, in its sole discretion, a total of up to [***] TCR/Antibody Targets as Accepted Targets under this Agreement for purposes of Development and Commercialization of Discovery Constructs and Licensed Products. Such TCR/Antibody Targets must each initially be nominated by AbbVie no later than [***] following the Amended Effective Date.

(c) In addition, subject to this ARTICLE 2, in partial consideration for the payments set forth in this Section 2.1.1(c), AbbVie has the right, in its sole discretion, to select a total of up to [***] additional TCR/Antibody Targets as Accepted Targets under this Agreement for purposes of Development and Commercialization of Discovery Constructs and Licensed Products, which TCR/Antibody Targets must each initially be nominated by AbbVie no later than [***] following the Amended Effective Date. Within [***] after each TCR/Antibody Target selected under this Section 2.1.1(c) becomes an Accepted Target pursuant to Section 2.1.5, AbbVie shall pay to Harpoon a one-time amount of Ten Million Dollars ($10,000,000). For clarity, the maximum aggregate amount payable by AbbVie under this Section 2.1.1(c) is Forty Million Dollars ($40,000,000) if AbbVie exercises its right to nominate four (4) additional TCR/Antibody Targets under this Section 2.1.1(c) that become Accepted Targets.

2.1.2 Promptly, but in no case later than [***], after the Effective Date, Harpoon shall [***] set forth in [***] 2.1.4], and 2.1.5, including (a) [***], in accordance with Section 2.1.3, a list of Therapeutic Targets that are not available for nomination by AbbVie under this Agreement ("**Unavailable Targets**") and (b) [***] whether Proposed Targets and Nominated Targets are on the list of

Unavailable Targets. [***]. The identity of the Unavailable Targets is deemed to be the Confidential Information of Harpoon and the identity of the [***] Proposed Targets, and Nominated Targets is deemed to be the Confidential Information of AbbVie.

2.1.3 As of the Amended Effective Date, the Unavailable Targets are the Therapeutic Targets set forth on Schedule 2.1.3. [***] shall maintain an up-to-date list of Unavailable Targets in accordance with the following:

(a) Notwithstanding anything to the contrary herein, the list of Unavailable Targets shall in no event [***] at any time prior to the date that is [***] after the Amended Effective Date

(b) Subject to Section 2.1.3(a), the list of Unavailable Targets shall be limited to (i) Therapeutic Targets [***] with respect to [***], (ii) Therapeutic Targets covered by [***] or (iii) Therapeutic Targets that are the [***] such Therapeutic Target, provided, however, that such Therapeutic Target may [***], not to exceed: (A) [***] and such [***], if Harpoon and such [***], provided, that, such [***] In addition, subject to Section 2.1.3(a), if Harpoon [***], in each such case (clauses (A) through (C)) with respect to a [***], then the Therapeutic Target [***] shall be deemed to be an Unavailable Target.

(c) Harpoon shall [***].

2.1.4 Prior to nomination of a Target (whether pursuant to Section 2.1.5, 2.2 or 2.3), AbbVie may, in its discretion, disclose a Target it is considering for potential nomination (a "**Proposed Target**") [***] and request in writing that [***]

[***] if the Proposed Target is on the list of Unavailable Targets. Within [***] following the [***] of a Proposed Target from AbbVie, [***] whether such Nominated Target is on the list of Unavailable Targets and notify AbbVie in writing whether such Proposed Target is or is not on the list of Unavailable Targets. Notwithstanding anything herein to the contrary (a) AbbVie shall have no obligation to nominate any Proposed Targets and (b) in no way shall a request by AbbVie with respect to a Proposed Target under this Section 2.1.4 be deemed to be a nomination of the Target as an Accepted Target (and such Target shall not be considered nominated unless and until it is formally nominated in accordance with the terms and conditions set forth in Section 2.1.5).

2.1.5 To nominate a TCR Target or TCR/Antibody Target as an Accepted Target, AbbVie shall [***] a confidential written description of the Therapeutic Target] (the "**Nominated Target**") corresponding to such TCR Target or TCR/Antibody Target, as applicable, including, to the extent available, the NCBI Entrez Gene Symbol and NCBI RefSeq accession number and the amino acid sequence for such Therapeutic Target (the "**Target Nomination Notice**"). Within [***] following [***] receipt of the Target Nomination Notice with respect to a Nominated Target, [***] whether such Nominated Target is on the list of Unavailable Targets and notify AbbVie in writing ("**Target Availability Notice**") whether such Nominated Target is or is not on the list of Unavailable Targets. If the Target Availability Notice indicates that the Nominated Target is not on the list of Unavailable Targets, then the TCR Target or TCR/Antibody Target, as applicable, corresponding to such Nominated Target shall automatically be designated as an "**Accepted Target**" on the date of AbbVie's receipt of the Target Availability Notice (the "**Target Acceptance Date**"), and the Parties will have all rights and obligations hereunder in connection with such Accepted Target (including exclusivity in accordance with Section 6.8) as of the Target Acceptance Date. If the Target Availability Notice indicates that the Nominated Target is on the list of Unavailable Targets, then (a) [***] and (b) AbbVie shall have the right to nominate an alternative Nominated Target (or the same Nominated Target, if it becomes available) in accordance with this Section 2.1.5 on or prior to the later of (i) the applicable deadline set forth in Section 2.1.1 or (ii) the date that is [***] after AbbVie's receipt of such Target Availability Notice notwithstanding the deadline set forth in Section 2.1.1. In the event that [***]such Nominated Target [***]. In all cases, Harpoon acknowledges and agrees that if AbbVie is the first Person to submit a Target Nomination Notice for a Nominated Target, then unless such Nominated Target is subject to an Internal Reserved Program, the TCR Target or TCR/Antibody Target, as applicable, corresponding to such Nominated Target will, subject to the terms of this Agreement, be deemed an Accepted Target.

2.2 [***]

2.3 [***].

2.4 **Effect of [***] or [***]**

. In the event of a [***]
[***]

ARTICLE 3

COLLABORATION MANAGEMENT

3.1 Joint Research Committee

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3.1.1 Formation. Within [***] after the Effective Date, the Parties shall establish a joint research committee (the "**Joint Research Committee**" or "**JRC**"). The JRC shall consist of [***] representatives from each of the Parties, each with the requisite experience and seniority to enable such person to make decisions on behalf of the Parties with respect to the issues falling within the jurisdiction of the JRC. From time to time, each Party may substitute [***] or more of its representatives to the JRC on written notice to the other Party. [***] shall select from its representatives the chairperson for the JRC. From time to time, [***]

3.1.2 Specific Responsibilities. The JRC shall develop the strategies for and oversee the research and discovery related activities relating to the conversion of Discovery T-Cell Receptors into Discovery T-Cell Receptor Constructs and Discovery Antibodies into Discovery Antibody Constructs, as applicable, in accordance with the applicable Discovery Research Plan, and shall serve as a forum for the coordination of such activities. In particular, the JRC shall:

(a) periodically (no less often than [***]) review and serve as a forum for discussing the Discovery Research Plan for each Accepted Target, and review and approve amendments thereto;

(b) serve as a forum for discussion of results from the conduct of the Discovery Research Activities;

(c) [***]

(d) establish secure access methods (such as secure databases) for each Party to access research and discovery and other JRC related Information as contemplated under this Agreement; and

(e) perform such other functions as are set forth herein or as the Parties may mutually agree in writing, except where in conflict with any provision of this Agreement.

3.2 General Provisions Applicable to the JRC

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3.2.1 Meetings and Minutes. The JRC shall meet quarterly, or in each case as otherwise agreed to by the Parties, with the location of such meetings alternating between

locations designated by Harpoon and locations designated by AbbVie. The Alliance Manager shall be permitted to attend any such JRC meetings. The chairperson of the JRC shall be responsible for calling meetings on no less than [***] notice. Each Party shall make all proposals for agenda items and shall provide all appropriate information with respect to such proposed items at least [***] in advance of the applicable meeting; provided, that under exigent circumstances requiring input by the JRC, a Party may provide its agenda items to the other Party within a shorter period of time in advance of the meeting, or may propose that there not be a specific agenda for a particular meeting, so long as the other Party consents to such later addition of such agenda items or the absence of a specific agenda for such meeting. The chairperson of the JRC shall prepare and circulate for review and approval of the Parties minutes of each meeting within [***] after the meeting. The Parties shall agree on the minutes of each meeting promptly, but in no event later than the next meeting of the JRC.

3.2.2 Procedural Rules. The JRC shall have the right to adopt such standing rules as shall be necessary for its work, to the extent that such rules are not inconsistent with this Agreement. A quorum of the JRC shall exist whenever there is present at a meeting [***] appointed by each Party. Representatives of the Parties on the JRC may attend a meeting either in person or by telephone, video conference or similar means in which each participant can hear what is said by, and be heard by, the other participants. Representation by proxy shall be allowed. The JRC shall take action by consensus of the representatives present at a meeting at which a quorum exists, with each Party having a single vote irrespective of the number of representatives of such Party in attendance, or by a written resolution signed by [***] appointed by each Party. Employees or consultants of either Party that are not representatives of the Parties on the JRC may attend meetings of the JRC; provided, that such attendees (i) shall not vote or otherwise participate in the decision-making process of the JRC, and (ii) are bound by obligations of confidentiality and non-disclosure equivalent to those set forth in ARTICLE 10.

3.2.3 Dispute Resolution. If the JRC cannot, or does not, reach consensus on an issue, then the dispute shall first be referred to the Senior Officers of the Parties, who shall confer in good faith on the resolution of the issue. Any final decision mutually agreed to by the Senior Officers shall be conclusive and binding on the Parties. If the Senior Officers are not able to agree on the resolution of any such issue within [***] after such issue was first referred to them, then, such dispute shall be finally and definitively resolved by [***]; provided, however, that [***] provided, further, that [***] for the purposes of this Section. Disputes arising between the Parties in connection with or relating to this Agreement or any document or instrument delivered in connection herewith, and that are outside of the jurisdiction of the JRC, shall be resolved pursuant to Section 14.7.

3.2.4 Limitations on Authority. Each Party shall retain the rights, powers, and discretion granted to it under this Agreement and no such rights, powers, or discretion shall be delegated to or vested in the JRC unless such delegation or vesting of rights is expressly

provided for in this Agreement or the Parties expressly so agree in writing. The JRC shall not have the power to amend, modify, or waive compliance with this Agreement, which may only be amended or modified as provided in Section 14.9 or compliance with which may only be waived as provided in Section 14.12.

3.2.5 Alliance Manager. Each Party shall appoint a person(s) who shall oversee contact between the Parties for all matters between meetings of the JRC and shall have such other responsibilities as the Parties may agree in writing after the Effective Date (each, an "**Alliance Manager**"). Each Party may replace its Alliance Manager at any time by notice in writing to the other Party.

3.2.6 Discontinuation of the JRC. Upon completion of the applicable Discovery Research Plan for a given Accepted Target**,** the JRC shall have no further responsibilities or authority under this Agreement with respect to that Accepted Target and the associated Discovery Constructs and Licensed Products. Once the applicable Discovery Research Plan has been completed for [***], the JRC will be considered fully dissolved by the Parties. Additionally, in the event of a Change in Control of Harpoon involving a Competitor, AbbVie shall have the right at any time and for any reason, effective upon written notice, to disband the JRC pursuant to Section 14.2. In the event that the JRC is disbanded pursuant to Section 14.2, (a) any information, documents or reports that a Party is otherwise required to provide to the JRC pursuant to this Agreement shall be provided directly to the other Party and (b) any matters delegated to the JRC shall be made by mutual agreement of the Parties, subject to the dispute resolution provisions of Section 3.2.3.

3.3 Interactions Between a Committee and Internal Teams

. The Parties recognize that each Party possesses an internal structure (including various committees, teams and review boards) that will be involved in administering such Party's activities under this Agreement. Nothing contained in this Article shall prevent a Party from making routine day-to-day decisions relating to the conduct of those activities for which it has a performance or other obligations hereunder, in each case in a manner consistent with the then-current applicable Discovery Research Plan and the terms and conditions of this Agreement.

3.4 Working Groups

. From time to time, the JRC may establish and delegate duties to sub-committees or directed teams (each, a "**Working Group**") on an "as-needed" basis to oversee particular projects or activities (for example, joint project team, joint finance group, and/or joint intellectual property group). Each such Working Group shall be constituted and shall operate as the JRC determines; provided that each Working Group shall have equal representation from each Party, unless otherwise mutually agreed. Working Groups may be established on an ad hoc basis for purposes of a specific project or on such other basis as the JRC may determine. Each Working Group and its activities shall be subject to the oversight, review and approval of, and shall report to, the JRC. In no event shall the authority of the Working Group exceed that specified for the JRC. All decisions of a Working Group shall be by consensus. Any disagreement between the designees of AbbVie and Harpoon on a Working Group shall be referred to the JRC for resolution.

3.5 Expenses

. Each Party shall be responsible for all travel and related costs and expenses for its members and other representatives to attend meetings of, and otherwise participate on, the JRC or any Working Group.

ARTICLE 4
DEVELOPMENT AND REGULATORY

4.1 Sequence Delivery

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4.1.1 For each Accepted Target that was selected by AbbVie pursuant to Section 2.1.1(a), AbbVie will deliver to Harpoon the [***] Controlled by AbbVie that Bind to such Accepted Target (each, a "**Discovery T-Cell Receptor**"), together with related materials and data as set forth in the TCR Discovery Research Plan (collectively, with respect to the applicable Accepted Target, the "**TCR Sequence Information**"), within [***]s following the applicable Target Acceptance Date.

4.1.2 For each Accepted Target that was selected by AbbVie pursuant to Sections 2.1.1(b) or 2.1.1(c), AbbVie, in its sole discretion, will initially deliver to Harpoon either (a) the TCR Sequence Information with respect to such Accepted Target or (b) [***] (each, a "**Discovery Antibody**"), [***] as set forth in the Antibody Discovery Research Plan (collectively, with respect to the applicable Accepted Target, the "**Antibody Sequence Information**"), in each case (a) and (b), within [***] following the applicable Target Acceptance Date.

4.1.3 On an [***], AbbVie may request by written notice to Harpoon [***], that Harpoon [***]. [***] shall be included in the Discovery Research Activities for such Accepted Target.

4.2 Creation of Discovery Constructs

. For each Accepted Target (including any [***] or New Target), Harpoon shall carry out the Discovery Research Activities. Following delivery by AbbVie of the TCR Sequence Information or Antibody Sequence Information, as applicable, with respect to an Accepted Target, Harpoon will create and evaluate against the Discovery Construct Success Criteria [***] Discovery T-Cell Receptor Constructs per Discovery T-Cell Receptor or such number of Discovery Antibody Constructs per Discovery Antibody, as applicable, per Accepted Target that are anticipated to be generated in accordance with the applicable Discovery Research Plan and timeline set forth therein. The applicable Discovery Research Plan shall be conducted over a period of up to [***] from receipt of such TCR Sequence Information or Antibody Sequence Information, as applicable, for each Accepted Target (or from the date of completion by Harpoon of Stage 1 of the Antibody Discovery Research Plan, if applicable). Notwithstanding the foregoing, Harpoon shall not be required to conduct Discovery Research Activities concurrently for more than [***] Accepted Targets. If Harpoon[***]with respect to a

[***](i.e. above such [***] Accepted Targets) based on the foregoing sentence, [***] shall be [***]. Following the completion of such Discovery Research Activities for an Accepted Target, Harpoon shall deliver to AbbVie, by the applicable Discovery Construct Delivery Deadline, [***] (collectively, the "**Accepted Target Deliverables**"). Upon delivery of the Accepted Target Deliverables with respect to an Accepted Target, Harpoon shall have completed all of its obligations under the applicable Discovery Research Plan with respect to such Accepted Target, and thereafter AbbVie shall evaluate whether the Discovery Construct Success Criteria have been met. If Harpoon is in material breach of its obligation to perform any Discovery Research Activities and fails to remedy such breach within [***] after written notice thereof from AbbVie, [***]. In the event of such [***]. Notwithstanding the foregoing, if [***] following the date [***] such [***]. The Parties acknowledge and agree that in the event [***]. If AbbVie so [***], to the extent reasonably requested by AbbVie and permitted under the terms and conditions of [***], [***] to the extent [***]. Following AbbVie's receipt of the Accepted Target Deliverables, AbbVie will evaluate whether the Discovery Construct Success Criteria have been met. If AbbVie determines in good faith that the Discovery Construct Success Criteria have not been met by any of the Discovery Constructs for an Accepted Target, [***]of AbbVie's receipt of the Accepted Target Deliverables for such Accepted Target, provide written notice to Harpoon identifying the deficiencies and Harpoon will[***] to AbbVie in accordance with this Section 4.2.

4.3 Development of Discovery Constructs and Licensed Products

. For each Accepted Target, following the applicable Target Acceptance Date, except for Harpoon's responsibilities in the conduct of the applicable Discovery Research Plan, AbbVie shall have the sole right to Develop and Manufacture (and shall control all aspects of Development and Manufacturing), including seeking Regulatory Approvals for, Discovery Constructs and Licensed

Products in the Field and in the Territory and, for clarity, Harpoon and its Affiliates shall have no right to do so. For each Accepted Target, following the creation of the applicable Discovery Constructs, AbbVie shall use Commercially Reasonable Efforts to Develop and obtain Regulatory Approval for a Licensed Product for at least one Indication for use in [***] Major Market. For the purposes of clarity, AbbVie's obligation to Develop and obtain Regulatory Approval for a Licensed Product as set forth in this Section 4.3 shall be satisfied by AbbVie's Commercially Reasonable Efforts to Develop a Licensed Product directed to [***]. AbbVie shall have the right to satisfy its diligence obligations under this Section 4.3 through its Affiliates or Sublicensees. Except as set forth in this Section 4.3, AbbVie shall have no other diligence obligations, express or implied, with respect to the Development of the Discovery Constructs or Licensed Products with respect to such Accepted Target in the Territory. For each Accepted Target, following the applicable Target Acceptance Date and until submission of a BLA for a Licensed Product directed to such Accepted Target in a Major Market, AbbVie will provide to Harpoon annual reports within [***] after the end of each Calendar Year summarizing the key Development activities undertaken and summarizing the results achieved with respect to the applicable Discovery Constructs and Licensed Products during such Calendar Year, and Harpoon shall provide the JRC with interim updates on such activities and results at its regularly scheduled meetings.

4.4 Supply of Technology for Development Purposes

. On an Accepted Target-by-Accepted Target basis:

(a) Harpoon shall, and shall cause its Affiliates to, [***], disclose and make available to AbbVie (which obligation may be satisfied by granting personnel designated by AbbVie controlled access to an electronic data room), in such form as maintained by Harpoon in the ordinary course of business, [***] for AbbVie's Development of the Discovery Constructs (including sequence information), [***] of the Discovery Constructs pursuant to Section 4.2 and [***] of the development, making, conception, or reduction to practice of such [***]

(b) Harpoon shall provide AbbVie with all reasonable assistance required in order to transfer to AbbVie the [***] required to be produced pursuant to clause (a) above, in each case in a timely manner, and shall assist AbbVie with respect to the [***]. Without prejudice to the generality of the foregoing, if visits of Harpoon's representatives to AbbVie's facilities are reasonably requested by AbbVie for purposes of transferring [***]

[***] to AbbVie or for purposes of providing AbbVie the assistance referenced in the preceding sentence, Harpoon shall send appropriate representatives to AbbVie's facilities. For each Accepted Target, Harpoon shall provide [***]pursuant to this Section 4.4 [***] and AbbVie shall reimburse Harpoon for all out-of-pocket travel and related expenses incurred pursuant to this Section 4.4; any additional consulting time shall be performed and compensated as mutually agreed by the Parties in writing.

(c) The Parties may, each in their sole discretion, elect to collaboratively develop [***], subject to the negotiation of a mutually agreed upon separate agreement.

4.5 Expenses and Invoicing

. Except as expressly set forth in this Agreement, each Party shall bear all costs and expenses associated with the Development activities for which such Party is responsible under this Agreement and the applicable Discovery Research Plan; provided, that [***] pursuant to (including the limitations set forth in) Section 4.2. If AbbVie [***] in accordance with Section 4.2, then [***] associated with [***], and, Harpoon shall [***].

4.6 Subcontracting

. Each Party shall have the right to subcontract any of its Development activities to a Third Party (a "**Third Party Provider**"); provided, that [***] to such Third Party Provider and the activities to be subcontracted [***] sufficient for Harpoon to comply with the applicable terms and conditions of this Agreement, including the confidentiality provisions of ARTICLE 10.

4.7 Regulatory Matters

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4.7.1 Regulatory Activities.

(a) As between the Parties, AbbVie, at its sole expense, shall have the sole right to prepare, obtain, and maintain the Drug Approval Applications (including the setting of the overall regulatory strategy therefor), other Regulatory Approvals and other regulatory submissions, and to conduct communications with the Regulatory Authorities, for Discovery Constructs or Licensed Products in the Territory (which shall include filings of or with respect to INDs and other filings or communications with the Regulatory Authorities). Harpoon

shall support AbbVie, as may be reasonably necessary, in obtaining Regulatory Approvals for the Licensed Products, and in the activities in support thereof, including providing necessary documents or other materials required by Applicable Law to obtain Regulatory Approvals, in each case in accordance with the terms and conditions of this Agreement and the Discovery Research Plans.

(b) All Regulatory Documentation (including all Regulatory Approvals and Product Labeling) specifically relating to the Discovery Constructs or Licensed Products with respect to the Territory shall be owned by, and shall be the sole property and held in the name of, AbbVie or its designated Affiliate, Sublicensee or designee. Harpoon shall duly execute and deliver, or cause to be duly executed and delivered, such instruments and shall do and cause to be done such acts and things, including the filing of such assignments, agreements, documents, and instruments, as may be necessary under, or as AbbVie may reasonably request in connection with, or to carry out more effectively the purpose of, or to better assure and confirm unto AbbVie its rights under, this Section.

4.7.2 Recalls. AbbVie shall make every reasonable effort to notify Harpoon promptly following its determination that any event, incident, or circumstance has occurred that may result in the need for a recall, market suspension, or market withdrawal of a Licensed Product in the Territory, and shall include in such notice the reasoning behind such determination, and any supporting facts. AbbVie (or its Sublicensee) shall have the right to make the final determination whether to voluntarily implement any such recall, market suspension, or market withdrawal in the Territory. If a recall, market suspension, or market withdrawal is mandated by a Regulatory Authority in the Territory, AbbVie (or its Sublicensee) shall initiate such a recall, market suspension, or market withdrawal in compliance with Applicable Law. For all recalls, market suspensions or market withdrawals undertaken pursuant to this Section 4.7.2, AbbVie (or its Sublicensee) shall be solely responsible for the execution thereof, and Harpoon shall reasonably cooperate in all such recall efforts, at AbbVie's expense.

4.7.3 Compliance. Each Party shall perform or cause to be performed, any and all of its Discovery Research Activities in good scientific manner and in compliance with all Applicable Law.

4.7.4 Records.

(a) Each of Harpoon and AbbVie shall, and shall ensure that its Third Party Providers, maintain records in sufficient detail and in good scientific manner appropriate for patent and regulatory purposes, and in compliance with Applicable Law, which shall be complete and accurate and shall properly reflect all work done and results achieved in the performance of its designated Discovery Research Activities which shall record only such activities and shall not include or be commingled with records of activities outside the scope of this Agreement. Such records shall be retained by Harpoon or AbbVie, as the case may be, [***], or for such longer period as may be required by Applicable Law. Upon request, Harpoon shall provide copies of the records it has maintained pursuant to this Section 4.7.4 to AbbVie. AbbVie shall maintain such records and the information disclosed therein in confidence in accordance with ARTICLE 10.

(b) AbbVie shall have the right, [***] to inspect and copy all records of Harpoon maintained pursuant to Section 4.7.4. AbbVie shall maintain such records and the information disclosed therein in confidence in accordance with ARTICLE 10.

ARTICLE 5
COMMERCIALIZATION

5.1 In General

. AbbVie (itself or through its Affiliates or Sublicensees) shall have the sole right to Commercialize Discovery Constructs and Licensed Products in the Territory at its own cost and expense.

5.2 Commercialization Diligence

. For each Accepted Target, AbbVie shall use Commercially Reasonable Efforts to Commercialize one Licensed Product in [***] Major Market following receipt of Regulatory Approval therefor in such Major Market; provided, that (a) such obligation is expressly conditioned upon (i) Harpoon's and its Affiliates' performing their respective obligations hereunder, (ii) [***] and (iii) the [***]. For the purposes of clarity, AbbVie's obligation to Commercialize a Licensed Product as set forth in this Section 5.2 shall be satisfied by AbbVie's Commercially Reasonable Efforts to Commercialize a Licensed Product directed to [***]. Harpoon acknowledges and agrees that, in addition to the foregoing, (A) the Commercialization of Licensed Product may, subject to Section 14.1, be delayed, suspended or otherwise modified by AbbVie in response to circumstances outside the reasonable control of AbbVie, including force majeure events, (B) AbbVie shall have the right to satisfy its diligence obligations under this Section through its Affiliates or Sublicensees, and [***]. With respect to a particular Accepted Target, in the event that AbbVie decides to discontinue the development or commercialization of a Discovery Construct or Licensed Product in favor of another Discovery Construct or Licensed Product, its obligations under this Section shall cease with respect to such initial Discovery Construct or Licensed Product in favor of such other Discovery Construct or Licensed Product. Harpoon further acknowledges that AbbVie is in the business of Exploiting products and nothing in this Agreement shall be construed as restricting such business or imposing on AbbVie the duty to Exploit any Licensed Product for which royalties are payable hereunder to the exclusion of, or in preference to, any other product, or in any way other than in accordance with its normal commercial practices. If at any time Harpoon has a reasonable basis to believe that AbbVie is in material breach of its material obligations under this

Section, then Harpoon may so notify AbbVie, specifying the basis for its belief, and the Parties shall meet within [***] after such notice to discuss in good faith Harpoon's concerns.

5.3 Booking of Sales; Distribution

. AbbVie shall have the sole right to invoice and book sales, establish all terms of sale (including pricing and discounts) and warehousing, and distribute the Licensed Products in the Territory and to perform or cause to be performed all related services. AbbVie shall handle all returns, recalls, or withdrawals, order processing, invoicing, collection, distribution, and inventory management with respect to the Licensed Products in the Territory.

5.4 Product Trademarks

. AbbVie shall have the sole right to determine and own the Product Trademarks to be used with respect to the Exploitation of the Licensed Products on a worldwide basis. Harpoon shall not, and shall not permit its Affiliates to, attack, dispute, or contest the validity of or ownership of such Product Trademark anywhere in the Territory or any registrations issued or issuing with respect thereto or use in their respective businesses, any Trademark that is confusingly similar to, misleading or deceptive with respect to or that dilutes any (or any part) of the Product Trademarks. Notwithstanding the foregoing, to the extent required by Applicable Law in a country or other jurisdiction in the Territory, the promotional materials, packaging, and Product Labeling for the Licensed Products used by AbbVie and its Affiliates in connection with the Licensed Products in such country or other jurisdiction shall contain (a) the corporate name of Harpoon (and to the extent required, Harpoon grants AbbVie a license, with the right to sublicense, to use the same for such purpose), and (b) the logo and corporate name of the manufacturer (if other than AbbVie or an Affiliate).

5.5 Commercial Supply of Discovery Constructs or Licensed Products

. As between the Parties, AbbVie shall have the sole right, at its expense, to Manufacture (or have Manufactured) and supply Discovery Constructs and Licensed Products for commercial sale in the Territory by AbbVie and its Affiliates and Sublicensees.

ARTICLE 6
GRANT OF RIGHTS

6.1 Grants to AbbVie

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6.1.1 Upon the Effective Date, Harpoon (on behalf of itself and its Affiliates) hereby grants to AbbVie, on an Accepted Target-by-Accepted Target basis:

(a) an exclusive (including with regard to Harpoon and its Affiliates, except as provided in Section 6.6) license (or sublicense), with the right to grant sublicenses in accordance with Section 6.3, under the Harpoon Background Patents, the Harpoon Program Patents, the Harpoon Background Know-How, the Harpoon Program Know-How and Harpoon's interests in the Joint Program Patents and the Joint Program Know-How, to Exploit the Discovery T-Cell Receptor Constructs and Licensed Products comprising or containing Discovery T-Cell Receptor Constructs in the Field in the Territory;

(b) an exclusive (including with regard to Harpoon and its Affiliates, except as provided in Section 6.6) license and right of reference, with the right to grant

sublicenses and further rights of reference in accordance with Section 6.3, under the Regulatory Approvals and any other Regulatory Documentation that Harpoon or its Affiliates may Control with respect to the Discovery T-Cell Receptor Constructs or Licensed Products comprising or containing Discovery T-Cell Receptor Constructs as necessary for purposes of Exploiting the Discovery T-Cell Receptor Constructs and Licensed Products comprising or containing Discovery T-Cell Receptor Constructs in the Field in the Territory;

(c) a non-exclusive, royalty-free license, with the right to grant sublicenses in accordance with Section 6.3, under the Harpoon Background Patents, the Harpoon Program Patents, the Harpoon Background Know-How, the Harpoon Program Know-How and Harpoon's interests in the Joint Program Patents and the Joint Program Know-How, to conduct Discovery Research Activities assumed by AbbVie in accordance with Sections 4.2 (if any); and

6.1.2 Upon the Amended Effective Date, Harpoon (on behalf of itself and its Affiliates) hereby grants to AbbVie, on an Accepted Target-by-Accepted Target basis:

(a) an exclusive (including with regard to Harpoon and its Affiliates, except as provided in Section 6.6) license (or sublicense), with the right to grant sublicenses in accordance with Section 6.3, under the Harpoon Background Patents, the Harpoon Program Patents, the Harpoon Background Know-How, the Harpoon Program Know-How and Harpoon's interests in the Joint Program Patents and the Joint Program Know-How, to Exploit the Discovery Antibody Constructs and Licensed Products comprising or containing Discovery Antibody Constructs in the Field in the Territory; and

(b) an exclusive (including with regard to Harpoon and its Affiliates, except as provided in Section 6.6) license and right of reference, with the right to grant sublicenses and further rights of reference in accordance with Section 6.3, under the Regulatory Approvals and any other Regulatory Documentation that Harpoon or its Affiliates may Control with respect to the Discovery Antibody Constructs or Licensed Products comprising or containing Discovery Antibody Constructs as necessary for purposes of Exploiting the Discovery Antibody Receptor Constructs and Licensed Products comprising or containing Discovery Antibody Constructs in the Field in the Territory.

6.1.3 The grants set forth in Section 6.1.1 and Section 6.1.2 will automatically come into full force and effect on the Target Acceptance Date for such Accepted Target without any further action required by either Party under this Agreement.

6.2 Grants to Harpoon

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6.2.1 Upon the Effective Date, AbbVie hereby grants to Harpoon, on an Accepted Target-by-Accepted Target basis, a non-exclusive, royalty-free license, without the right to grant sublicenses (other than to permitted subcontractors of Harpoon in accordance with Section 4.6), under the AbbVie Background Patents, AbbVie Background Know-How, AbbVie Program Patents, AbbVie Program Know-How, and AbbVie's interests in the Joint Program Patents and the Joint Program Know-How to Develop and Manufacture the Discovery T-Cell Receptor Constructs in the Territory solely for purposes of performing its obligations as set forth in, and subject to, the Discovery Research Plans.

6.2.2 Upon the Amended Effective Date, AbbVie hereby grants to Harpoon, on an Accepted Target-by-Accepted Target basis, a non-exclusive, royalty-free license, without the right to grant sublicenses (other than to permitted subcontractors of Harpoon in accordance with Section 4.6), under the AbbVie Background Patents, AbbVie Background Know-How, AbbVie Program Patents, AbbVie Program Know-How, and AbbVie's interests in the Joint Program Patents and the Joint Program Know-How to Develop and Manufacture the Discovery Antibody Constructs in the Territory solely for purposes of performing its obligations as set forth in, and subject to, the Discovery Research Plans.

6.2.3 The grant set forth in Section 6.2.1 and Section 6.2.2 will automatically come into full force and effect on the Target Acceptance Date for such Accepted Target without any further action required by either Party under this Agreement.

6.3 Sublicenses

. AbbVie shall have the right to grant sublicenses (or further rights of reference), through multiple tiers of sublicensees, under the licenses and rights of reference granted in Section 6.1, to its Affiliates and other Persons; provided that any such sublicenses shall be consistent with the terms and conditions of this Agreement and AbbVie shall remain liable for its obligations under this Agreement and for the performance of all sublicensees. AbbVie shall provide Harpoon with a copy of any such sublicense agreement within [***] after the execution thereof, which copy may be redacted with respect to information not pertinent to compliance with this Agreement.

6.4 Distributorships

. . AbbVie shall have the right, in its sole discretion, to appoint its Affiliates, and AbbVie and its Affiliates shall have the right, in their sole discretion, to appoint any other Persons, in the Territory or in any country or other jurisdiction of the Territory, to distribute, market, and sell the Licensed Products. Where AbbVie or its Affiliates appoints such a Person and such Person is not an Affiliate of AbbVie and does not have rights to, and does not, Manufacture any Licensed Product (except solely to package or label such Licensed Product purchased in bulk form from AbbVie or its Affiliates), that Person shall be a "**Distributor**" for purposes of this Agreement.

6.5 Co-Promotion Rights

. . For purposes of clarity, AbbVie and its Affiliates shall have the right, in their sole discretion, to co-promote the Licensed Products with any other Person(s), or to appoint one (1) or more Third Parties to promote the Licensed Products without AbbVie in all or any part of the Territory.

6.6 Retention of Rights

.

6.6.1 Notwithstanding the exclusive licenses granted to AbbVie pursuant to Section 6.1, Harpoon retains the right to practice under the Harpoon Background Patents, the Harpoon Program Patents, the Harpoon Background Know-How, the Harpoons Program Know-How, Harpoon's interests in the Joint Program Patents and the Joint Program Know-How, Regulatory Approvals and any other Regulatory Documentation (a) to perform (and to sublicense Third Parties to perform as permitted hereunder) its obligations under this Agreement and (b) for any purpose outside the scope of the licenses and rights granted pursuant to Section 6.1, including to Exploit any products or services other than Discovery Constructs and Licensed Products subject to Section 6.8.1. Except as expressly provided herein, Harpoon grants no other right or license,

including any rights or licenses to the Harpoon Background Patents, the Harpoon Program Patents, the Harpoon Background Know-How, the Harpoon Program Know-How, Harpoon's interests in the Joint Program Patents and the Joint Program Know-How, the Regulatory Documentation or any other Patent or intellectual property rights not otherwise expressly granted herein.

6.6.2 Except as expressly provided herein, AbbVie grants no other right or license, including any rights or licenses to the AbbVie Background Patents, the AbbVie Program Patents, the AbbVie Background Know-How, the AbbVie Program Know-How, the Regulatory Documentation, or any other Patent or intellectual property rights not otherwise expressly granted herein.

6.7 Confirmatory Patent License

. Harpoon shall if requested to do so by AbbVie immediately enter into confirmatory license agreements consistent with this Agreement in the form or substantially the form reasonably requested by AbbVie for purposes of recording the licenses granted under this Agreement with such patent offices in the Territory as AbbVie considers appropriate. Until the execution of any such confirmatory licenses, so far as may be legally possible, Harpoon and AbbVie shall have the same rights in respect of the Harpoon Background Patents, Harpoon Program Patents and Joint Program Patents and be under the same obligations to each other in all respects as if the said confirmatory licenses had been executed.

6.8 Exclusivity with Respect to the Territory

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6.8.1 Harpoon shall not, and shall cause its Affiliates not to, on an Accepted Target-by-Accepted Target basis, beginning on the applicable Target Acceptance Date until the termination or expiration of this Agreement with respect to the applicable Accepted Target (including by [***] or [***]), (a) directly or indirectly, whether alone or together with a Third Party, [***] for any purpose except [***], (b) directly or indirectly, develop, commercialize or manufacture any Competing Product in any country or other jurisdiction in the Territory, or (c) license, authorize, appoint, or otherwise enable any Third Party to directly or indirectly, develop, commercialize or manufacture any Competing Product in any country or other jurisdiction in the Territory.

6.8.2 Notwithstanding the provisions of Section 6.8.1, if, during the Term, [***].

6.8.3 From the Amended Effective Date until [***] after the Amended Effective Date, Harpoon shall not, and shall cause its Affiliates not to [***], or is intended for use against, [***]or otherwise [***] any other action that would preclude a [***].

6.9 In-License Agreements

. Neither Harpoon nor any of its Affiliates shall, [***] enter into any agreement with a Third Party (a) during the Term, related to Information, Regulatory Documentation, materials, Patents, or other intellectual other property rights [***], provided that, for clarity, the foregoing shall not restrict Harpoon or its Affiliates from entering into any agreement with a Third Party related to Information, Regulatory Documentation, materials, Patents, or other intellectual other property rights directed [***]. Subject to Section 8.6, if Harpoon or any of its Affiliates, after the Effective Date (or after the Amended Effective Date with respect to Discovery Antibody Constructs), become a party to a license, sublicense or other agreement for additional intellectual property rights, with the right to sublicense, that are [***] pursuant to the preceding sentence, then Harpoon shall inform AbbVie and shall [***]t ("**Proposed Future In-Licensed Rights**"). If AbbVie notifies Harpoon in writing within [***] after receipt of such copy that AbbVie wishes to receive a license or sublicense (as applicable) under, and be subject to the rights and obligations of, the Proposed Future In-Licensed Rights as they apply to AbbVie and this Agreement, then the Proposed Future In-Licensed Rights shall automatically be included in the Harpoon Background Patents and/or Harpoon Background Know-How (as applicable) hereunder and AbbVie agrees to abide by all applicable terms and conditions of such license, sublicense or other agreement, as it relates to AbbVie and this Agreement, including payment of any financial obligations based upon AbbVie's practice of such intellectual property rights. Except as provided in the preceding sentence, Harpoon shall be solely responsible for and shall bear any and all payments under any Harpoon In-License Agreements.

ARTICLE 7
PAYMENTS AND RECORDS

7.1 Upfront Payment

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7.1.1 [***] following the Effective Date, AbbVie shall pay Harpoon an upfront, non-refundable, non-creditable amount equal to Seventeen Million Dollars ($17,000,000).

7.1.2 [***] after the Amended Effective Date, AbbVie shall pay Harpoon a one-time, non-refundable, non-creditable upfront payment equal to Twenty Million Dollars ($20,000,000).

7.2 Development Milestones

. In partial consideration of the rights granted by Harpoon to AbbVie hereunder and subject to the terms and conditions set forth in this Agreement, AbbVie shall pay to Harpoon a non-refundable milestone payment within [***] after the achievement of each of the following milestones for the first Licensed Product for each Accepted Target (irrespective of whether such Accepted Target is an initially nominated Accepted Target, [***] or New Target), calculated as follows:

7.2.1 upon [***] for the first Licensed Product for an Accepted Target, [***]; and

7.2.2 upon [***] for the first Licensed Product that [***] for an Accepted Target [***], [***]; provided, however, that if [***] for such Licensed Product, [***]:

(a) in the amount of [***] upon the first achievement of such [***], if such [***]; or

(b) in the amount of (i) [***] upon the first achievement of [***] upon the subsequent achievement of [***].

On an Accepted Target-by-Accepted Target basis, if a development milestone payment set forth in this Section 7.2 for a Licensed Product becomes due before an earlier listed development milestone payment for such Licensed Product, then the earlier listed development milestone payment shall become payable upon the achievement of the later listed development milestone.

Each milestone payment in this Section 7.2 shall be payable only upon the first achievement of such milestone for an Accepted Target and no amounts shall be due for subsequent or repeated achievements of such milestone, whether for the same or a different Licensed Product targeting such Accepted Target. The maximum aggregate amount payable by AbbVie pursuant to this

Section 7.2 for each Accepted Target is [***] and for all Accepted Targets is [***].

7.3 Regulatory Milestones

. In partial consideration of the rights granted by Harpoon to AbbVie hereunder and subject to the terms and conditions set forth in this Agreement, AbbVie shall pay to Harpoon a non-refundable milestone payment within [***] after the achievement of each of the following milestones for each Accepted Target (irrespective of whether such Accepted Target is an initially nominated Accepted Target, [***] or New Target), calculated as follows:

7.3.1 upon the [***] for a Licensed Product for an Accepted Target, [***];

7.3.2 upon the [***] for a Licensed Product for an Accepted Target, [***];

7.3.3 upon the [***] for a Licensed Product for an Accepted Target, [***]; and

7.3.4 upon the [***] for a Licensed Product for an Accepted Target, [***].

Each milestone payment in this Section 7.3 shall be payable only upon the first achievement of such milestone for an Accepted Target and no amounts shall be due for subsequent or repeated achievements of such milestone, whether for the same or a different Licensed Product targeting such Accepted Target. The maximum aggregate amount payable by AbbVie pursuant to this Section 7.3 for each Accepted Target is [***] and for all Accepted Targets is [***].

7.4 Commercialization Milestones

. In partial consideration of the rights granted by Harpoon to AbbVie hereunder and subject to the terms and conditions set forth in this Agreement, AbbVie shall pay to Harpoon the following non-refundable milestone payments due within [***] after the achievement of each of the following milestones for each Accepted Target (irrespective of whether such Accepted Target is an initially nominated Accepted Target, [***] or New Target), calculated as follows:

7.4.1 upon the First Commercial Sale in [***] for an Accepted Target, [***];

7.4.2 upon the First Commercial Sale in [***] for an Accepted Target, [***];

7.4.3 upon the First Commercial Sale in [***] for an Accepted Target, [***]; and

7.4.4 upon the First Commercial Sale in [***] for an Accepted Target, [***].

Each milestone payment in this Section 7.4 shall be payable only upon the first achievement of such milestone for each Accepted Target and no amounts shall be due for subsequent or repeated achievements of such milestone, whether for the same or a different Licensed Product targeting such Accepted Target. The maximum aggregate amount payable by AbbVie pursuant to this Section 7.4 for each Accepted Target is [***] and for all Accepted Targets is [***].

7.5 Sales-Based Milestones

. In partial consideration of the rights granted by Harpoon to AbbVie hereunder and subject to the terms and conditions set forth in this Agreement, AbbVie shall pay to Harpoon the following non-refundable milestone payments due within [***] in which such milestone was achieved for the first Licensed Product for each Accepted Target (irrespective of whether such Accepted Target is an initially nominated Accepted Target, [***] or New Target), calculated as follows:

7.5.1 upon the Net Sales in the Territory of a particular Licensed Product made by AbbVie or any of its Affiliates or Sublicensees [***] equaling or exceeding [***];

7.5.2 upon the Net Sales in the Territory of a particular Licensed Product made by AbbVie or any of its Affiliates or Sublicensees [***] equaling or exceeding [***];

7.5.3 upon the Net Sales in the Territory of a particular Licensed Product made by AbbVie or any of its Affiliates or Sublicensees [***] equaling or exceeding [***]; and

7.5.4 upon the Net Sales in the Territory of a particular Licensed Product made by AbbVie or any of its Affiliates or Sublicensees [***] equaling or exceeding [***].

Each milestone payment in this Section 7.5 shall be payable only upon the first achievement of such milestone for each Accepted Target and no amounts shall be due for subsequent or repeated achievements of such milestone, whether for the same or a different Licensed Product targeting such Accepted Target. The maximum aggregate amount payable by AbbVie pursuant to this Section 7.5 for each Accepted Target is [***] and for all Accepted Targets is [***]. As used herein a particular Licensed Product includes any Licensed Product that contains the same Discovery Construct.

7.6 Royalties

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7.6.1 Royalty Rates. As further consideration for the rights granted to AbbVie hereunder, subject to Section 7.6.3, commencing upon the First Commercial Sale of a Licensed Product in the Territory, on a Licensed Product-by-Licensed Product basis, AbbVie shall pay to Harpoon a non-refundable royalty on Net Sales of each Licensed Product in the Territory (excluding Net Sales of each Licensed Product in any country or other jurisdiction in the Territory for which the Royalty Term for such Licensed Product in such country or other jurisdiction has expired) during [***] at the following rates:

Net Sales in the Territory of each Licensed Product [***] in [***]	**Royalty Rate**
For that portion of aggregate Net Sales of each Licensed Product [***] in the Territory during [***]	[***]
For that portion of aggregate Net Sales of each Licensed Product [***] in the Territory during [***] but [***]	[***]
For that portion of aggregate Net Sales of each Licensed Product [***] in the Territory during [***]	[***]

For the purposes of clarity, (a) all Licensed Products [***] shall be deemed to be the same Licensed Product for purposes of the royalty tiers set forth in the table above, and (b) the royalty tiers set forth in the table above shall apply separately to Licensed Products that [***]. For example, if Net Sales for a particular Licensed Product [***] during [***], and Net Sales for a Licensed [***], then the Net Sales for such respective Licensed Products during [***] for purposes of the royalty tiers set forth in the table above.

With respect to each Licensed Product in each country or other jurisdiction in the Territory, from and after the expiration of the Royalty Term for such Licensed Product in such country or other jurisdiction, Net Sales of such Licensed Product in such country or other jurisdiction shall be excluded for purposes of calculating the aggregate Net Sales amounts and applicable royalty rates set forth in this Section 7.6.1.

7.6.2 Royalty Term. AbbVie shall have no obligation to pay any royalty with respect to Net Sales of any Licensed Product in any country or other jurisdiction after the Royalty Term for such Licensed Product in such country or other jurisdiction has expired.

7.6.3 Reductions. Notwithstanding the foregoing:

(a) in the event that in any country or other jurisdiction in the Territory during the Royalty Term for a Licensed Product there is Biosimilar Competition in such country or other jurisdiction, then for each such country or other jurisdiction, the royalties payable to Harpoon for the Net Sales of such Licensed Product in such country or other jurisdiction shall be reduced by [***] of the applicable royalty rate(s) set forth in Section 7.6.1. For purposes herein, "**Biosimilar Competition**" means, on a country or other jurisdiction and Licensed Product basis, [***] of such Licensed Product sold in that country or other jurisdiction by AbbVie, its Affiliates and Sublicensees. Unless otherwise agreed by the Parties, the [***] shall be as [***] or any other [***] by the Parties;

(b) AbbVie shall be entitled to deduct from [***] payable hereunder with respect to a Licensed Product for a particular country or other jurisdiction [***] of all [***] paid under AbbVie In-License Agreements with respect to such Licensed Product for such country or other jurisdiction; provided that in no case shall such deduction reduce such [***] set forth in Section [7.2, 7.3, 7.4, 7.5 or 7.6.1], as applicable, [***];

(c) [***] in a country or other jurisdiction in the Territory, then, for the purposes of calculating the royalties payable with respect to such Licensed Product under Section 7.6.1, [***]; and

(d) in the event that, and in such case from and after the date on which, a Licensed Product is Exploited in a country or other jurisdiction and is not covered by a Valid Claim of a [***] Patent that covers (i) [***] in such country or other jurisdiction or (ii) [***] such Licensed Product [***] in such country or other jurisdiction (provided that (A) [***], or (B) [***], when [***]), the royalty rate set forth in Section 7.6.1 with

respect to such country or other jurisdiction (for purposes of calculations under Section 7.6.1), shall be reduced [***].

7.7 Royalty Payments and Reports

. AbbVie shall calculate all amounts payable to Harpoon pursuant to Section 7.6 at the end of each Calendar Quarter, which amounts shall be converted to Dollars, in accordance with Section 7.8. AbbVie shall pay to Harpoon the royalty amounts due with respect to a given Calendar Quarter within [***] after the end of such Calendar Quarter. Each payment of royalties due to Harpoon shall be accompanied by a statement of the amount of Net Sales of each Licensed Product in each country or other jurisdiction the Territory during the applicable Calendar Quarter (including such amounts expressed in local currency and as converted to Dollars) and a calculation of the amount of royalty payment due on such Net Sales for such Calendar Quarter.

7.8 Mode of Payment; Offsets

. All payments to either Party under this Agreement shall be made by deposit of Dollars in the requisite amount to such bank account as the receiving Party may from time to time designate by notice to the paying Party. For the purpose of calculating any sums due under, or otherwise reimbursable pursuant to, this Agreement (including the calculation of Net Sales expressed in currencies other than Dollars), a Party shall convert any amount expressed in a foreign currency into Dollar equivalents using its, its Affiliate's or Sublicensee's standard conversion methodology consistent with Accounting Standards. [***]

7.9 Withholding Taxes

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7.9.1 Withholding Amounts. Where any sum due to be paid to either Party hereunder is subject to any withholding or similar tax, the Parties shall use their commercially reasonable efforts to do all such acts and things and to sign all such documents as will enable them to take advantage of any applicable double taxation agreement or treaty. In the event there is no applicable double taxation agreement or treaty, or if an applicable double taxation agreement or treaty reduces but does not eliminate such withholding or similar tax, the payor shall remit such withholding or similar tax to the appropriate government authority, deduct the amount paid from the amount due to payee and secure and send to payee the best available evidence of the payment of such withholding or similar tax. Any such amounts deducted by the payor in respect of such withholding or similar tax shall be treated as having been paid by the payor for purposes of this Agreement. If withholding or similar taxes are paid to a government authority, each Party will provide the other such assistance as is reasonably required to obtain a refund of the withheld or similar taxes, or to obtain a credit with respect to such taxes paid. In the event that a government authority retroactively determines that a payment made by the paying Party to the receiving Party pursuant to this Agreement should have been subject to withholding or similar (or to additional withholding or similar) taxes, and such paying Party (the "**Withholding Party**") remits such withholding or similar taxes to the government authority, including any interest and penalties that may be imposed thereon (together with the tax paid, the "**Withholding Amount**"), the Withholding Party will have the right (a) to offset the Withholding Amount against future payment obligations of the Withholding Party under this Agreement or (b) to invoice the receiving Party for the Withholding Amount (which shall be payable by the receiving Party within [***]

of its receipt of such invoice), or to pursue reimbursement of the Withholding Amount by any other available remedy.

7.9.2 Withholding Actions. Notwithstanding the foregoing, the Parties acknowledge and agree that if AbbVie (or its assignee pursuant to Section 14.4) is required by Applicable Law to withhold taxes in respect of any amount payable under this Agreement, and if such withholding obligation arises as a result of any action taken by AbbVie or its Affiliate or successor or assignee, including without limitation an assignment of this Agreement as permitted under Section 14.4 of this Agreement, a change in tax residency of AbbVie, or payments arise or are deemed to arise through a branch of AbbVie and such withholding taxes exceed the amount of withholding taxes that would have been applicable if such action had not occurred (each an "**AbbVie Withholding Tax Action**"), then, any such amount payable shall be increased to take into account such increased withholding taxes as may be necessary so that, after making all required withholdings Harpoon (or its assignee pursuant to Section 14.4) receives an amount equal to the sum it would have received had no such AbbVie Withholding Tax Action occurred. [***].

7.10 Indirect Taxes

. Except as otherwise provided in this Agreement, all payments due under this Agreement are exclusive of value added taxes, sales taxes, consumption taxes and other similar taxes (the "**Indirect Taxes**"). Notwithstanding anything to the contrary in this Agreement, AbbVie shall be responsible for any Indirect Taxes as well as any transfer, documentary, sales use, stamp, registration, value added or other similar tax that is imposed with respect to the payments or the related transfer of rights or other property pursuant to the terms of this Agreement. If the Indirect Taxes originally paid or otherwise borne by the paying Party are in whole or in part subsequently determined not to have been chargeable, all reasonably necessary steps will be taken by the receiving Party to receive a refund of these undue Indirect Taxes from the applicable governmental authority or other fiscal authority and any amount of undue Indirect Taxes repaid by such authority to the receiving Party will be transferred to the paying Party within [***] of receipt.

7.11 Interest on Late Payments

. If any payment due to either Party under this Agreement is not paid when due, then such paying Party shall pay interest thereon (before and after any judgment) at [***], such interest to run from the date on which payment of such sum became due until payment thereof in full together with such interest.

7.12 Audit

. AbbVie shall, shall cause its Affiliates to, and shall use commercially reasonable efforts to cause its Sublicensees to keep complete and accurate books and records pertaining to Net Sales of Licensed Products in sufficient detail to calculate all amounts payable hereunder. At the request of Harpoon, AbbVie shall permit an independent public accounting firm of nationally recognized standing designated by Harpoon and reasonably acceptable to AbbVie, at reasonable times during normal business hours and upon reasonable notice, to audit the books and records maintained pursuant to this Section 7.12 to ensure the accuracy of all reports and payments made hereunder. Such examinations may not (a) be conducted for any Calendar Quarter [***], (b) be conducted more than once in any [***]

[***] period or (c) be [***]. The accounting firm shall disclose to Harpoon only whether the reports are correct or not, and the specific details concerning any discrepancies. No other information shall be shared. Except as provided below, the cost of this audit shall be borne by Harpoon, unless the audit reveals a variance [***] from the reported amounts or [***], in which case AbbVie shall bear the cost of the audit.

7.13 Audit Dispute

. In the event of a dispute with respect to any audit under Section 7.12, Harpoon and AbbVie shall work in good faith to resolve the disagreement. If the Parties are unable to reach a mutually acceptable resolution of any such dispute within [***], the dispute shall be submitted for resolution to a certified public accounting firm jointly selected by each Party's certified public accountants or to such other Person as the Parties shall mutually agree (the "**Audit Expert**"). The decision of the Audit Expert shall be final and the costs of such arbitration as well as the initial audit shall be borne between the Parties in such manner as the Audit Expert shall determine. Not later than [***] after such decision and in accordance with such decision, AbbVie shall pay the additional amounts or Harpoon shall reimburse the excess payments, as applicable.

7.14 Confidentiality

. The receiving Party shall treat all information subject to review under this ARTICLE 7 in accordance with the confidentiality provisions of ARTICLE 10 and the Parties shall cause the Audit Expert to enter into a reasonably acceptable confidentiality agreement with AbbVie obligating such firm to retain all such financial information in confidence pursuant to such confidentiality agreement.

7.15 [***]

. The development milestone payments, regulatory milestone payments, commercialization milestone payments, sales-based milestone payments and royalties in Sections 7.2, 7.3, 7.4, 7.5 and 7.6 shall not apply to Development and Commercialization of Discovery Constructs or Licensed Products [***] a Discovery Construct or Licensed Product or [***] Discovery Construct or Licensed Product. In the event that a Discovery Construct or Licensed Product is Developed for any such purposes, [***] for the sale of such Licensed Product that [***] such Licensed Product and [***], as applicable, provided that, for clarity, any such [***] under this Agreement with respect to Discovery Constructs or Licensed Products that are [***].

7.16 No Other Compensation

. Each Party hereby agrees that the terms of this Agreement fully define all consideration, compensation and benefits, monetary or otherwise, to be paid, granted or delivered by one (1) Party to the other Party in connection with the transactions contemplated herein. Neither Party previously has paid or entered into any other commitment to pay, whether orally or in writing, any of the other Party's employees, directly or indirectly, any

consideration, compensation or benefits, monetary or otherwise, in connection with the transaction contemplated herein.

ARTICLE 8
INTELLECTUAL PROPERTY

8.1 Ownership of Intellectual Property

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8.1.1 Harpoon Ownership. As between the Parties, Harpoon shall own all right, title and interest in and to any and all Harpoon Background Patents, Harpoon Background Know-How, Harpoon Program Patents and Harpoon Program Know-How.

8.1.2 AbbVie Ownership. As between the Parties, AbbVie or an Affiliate designated by AbbVie shall own and retain all right, title, and interest in and to any and all AbbVie Background Patents, AbbVie Background Know-How, AbbVie Program Patents, AbbVie Program Know-How, Product-Specific Know-How and Product-Specific Patents.

8.1.3 Ownership of Joint Program Patents and Joint Program Know-How. Subject to Section 4.7.1(b), as between the Parties, each Party shall own an equal, undivided interest in any and all Joint Program Patents and Joint Program Know-How. Subject to the licenses and rights of reference granted under Sections 6.1 and 6.2 and Harpoon's exclusivity obligations hereunder, each Party shall have the right to Exploit the Joint Intellectual Property Rights without a duty of seeking consent from or accounting to the other Party.

8.1.4 United States Law. The determination of whether Information and inventions are conceived, discovered, developed, or otherwise made by a Party for the purpose of allocating proprietary rights (including Patent, copyright or other intellectual property rights) therein, shall, for purposes of this Agreement, be made in accordance with Applicable Law in the United States.

8.1.5 Assignment Obligation.

(a) Each Party shall cause all Persons who perform activities for such Party under this Agreement to be under an obligation to assign (or, if such Party is unable to cause such Person to agree to such assignment obligation despite such Party's using commercially reasonable efforts to negotiate such assignment obligation, provide a license under) their rights in any Information and inventions resulting therefrom to such Party, except where Applicable Law requires otherwise and except in the case of governmental, not-for-profit and public institutions which have standard policies against such an assignment (in which case a suitable license, or right to obtain such a license, shall be obtained).

(b) AbbVie will promptly disclose to Harpoon in writing, the conception, discovery, development or making of any Harpoon Program Know-How, Harpoon Program Patents, Product-Specific Know-How and Product-Specific Patents by Persons who perform activities for AbbVie under this Agreement. AbbVie, for itself and on behalf of its Affiliates, hereby assigns (and to the extent such assignment can only be made in the future hereby agrees to assign), to Harpoon all its right, title and interest in and to any Harpoon Program Know-

How and Harpoon Program Patents. AbbVie will execute and record assignments and other necessary documents consistent with such ownership promptly upon request.

(c) Harpoon will promptly disclose to AbbVie in writing, the conception, discovery, development or making of any AbbVie Program Know-How, AbbVie Program Patents, Product-Specific Know-How and Product-Specific Patents by Persons who perform activities for Harpoon under this Agreement. Harpoon, for itself and on behalf of its Affiliates, hereby assigns (and to the extent such assignment can only be made in the future hereby agrees to assign), to AbbVie all its right, title and interest in and to any AbbVie Program Know-How, AbbVie Program Patents, Product-Specific Know-How and Product-Specific Patents. Harpoon will execute and record assignments and other necessary documents consistent with such ownership promptly upon request.

(d) Each Party will promptly disclose to the other Party in writing, the conception, discovery, development or making of any Joint Program Know-How or Joint Program Patents by Persons who perform activities for it under this Agreement. Each Party will execute and record assignments and other necessary documents consistent with such ownership promptly upon request.

8.2 Maintenance and Prosecution of Patents

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8.2.1 Patent Prosecution and Maintenance of Harpoon Background Patents. Harpoon shall have the sole right, but not the obligation, through the use of internal or outside counsel, to prepare, file, prosecute, and maintain the Harpoon Background Patents worldwide, at Harpoon's sole cost and expense. Harpoon shall keep AbbVie informed regarding each Harpoon Background Patent relating to use of the Harpoon Platform incorporating a T-Cell Receptor or Antibody that Harpoon is prosecuting, and shall provide copies to AbbVie of all material communications sent to such patent offices by or on behalf of Harpoon.

8.2.2 Patent Prosecution and Maintenance of Harpoon Program Patents. In consultation with AbbVie, Harpoon shall have the right, but not the obligation, through the use of internal or outside counsel reasonably acceptable to AbbVie, to prepare, file, prosecute, and maintain the Harpoon Program Patents worldwide, at Harpoon's sole cost and expense. Harpoon shall [***] with regard to the preparation, filing, prosecution, and maintenance of Harpoon Program Patents, including by providing AbbVie with a copy of material communications to and from any patent authority in the Territory regarding such Harpoon Program Patents, and by providing AbbVie drafts of any material filings or responses to be made to such patent authorities in the Territory sufficiently in advance of submitting such filings or responses so as to allow for a reasonable opportunity for AbbVie to review and comment thereon. Harpoon shall consider in good faith the requests and suggestions of AbbVie with respect to such Harpoon drafts and with respect to strategies for filing and prosecuting the Harpoon Program Patents in the Territory. Notwithstanding the foregoing, Harpoon shall promptly inform AbbVie of any adversarial patent office proceeding or *sua sponte* filing, including a request for, or filing of or declaration of, any interference, opposition, Third Party observation, derivation proceeding, post grant review, supplementary examination, reissue or inter parte or ex parte reexamination relating to a Harpoon Program Patent in the Territory. The Parties shall thereafter consult and cooperate to determine a course of action with respect to any

such proceeding in the Territory and Harpoon shall consider in good faith all comments, requests and suggestions provided by AbbVie. [***]

8.2.3 Patent Prosecution and Maintenance of AbbVie Background Patents, AbbVie Program Patents and Joint Program Patents. AbbVie shall have the right, but not the obligation, to prepare, file, prosecute, and maintain the AbbVie Background Patents and AbbVie Program Patents worldwide, at AbbVie's sole cost and expense. AbbVie shall have the first right, but not the obligation, to prepare, file, prosecute, and maintain the Joint Program Patents worldwide, at AbbVie's sole cost and expense. AbbVie shall keep Harpoon fully informed of all material steps with regard to the preparation, filing, prosecution, and maintenance of AbbVie Program Patents and Joint Program Patents, including by providing Harpoon with a copy of material communications to and from any patent authority in the Territory regarding such AbbVie Program Patents and Joint Program Patents, and by providing Harpoon drafts of any material filings or responses to be made to such patent authorities in the Territory sufficiently in advance of submitting such filings or responses so as to allow for a reasonable opportunity for Harpoon to review and comment thereon. AbbVie shall consider in good faith the requests and suggestions of Harpoon with respect to such AbbVie drafts and with respect to strategies for filing and prosecuting the AbbVie Program Patents and Joint Program Patents in the Territory. In the event that AbbVie decides not to prepare, file, prosecute, or maintain a Joint Program Patent in a country or other jurisdiction in the Territory, AbbVie shall provide reasonable prior written notice to Harpoon of such intention (which notice shall, in any event, be given no later than [***] prior to the next deadline for any action that may be taken with respect to such Joint Program Patent in such country or other jurisdiction), and Harpoon shall thereupon have the option, in its sole discretion, to assume the control and direction of the preparation, filing, prosecution, and maintenance of such Joint Program Patent at its sole cost and expense in such country or other jurisdiction. Upon Harpoon's written acceptance of such option, Harpoon shall assume the responsibility and control for the preparation, filing, prosecution, and maintenance of such specific Joint Program Patent. In such event, AbbVie shall reasonably cooperate with Harpoon in such country or other jurisdiction as provided under Section 8.2.5.

8.2.4 Patent Prosecution and Maintenance of Product-Specific Patents. AbbVie shall have the first right, but not the obligation, to prepare, file, prosecute, and maintain the Product-Specific Patents worldwide, at AbbVie's sole cost and expense. AbbVie shall keep Harpoon fully informed of all material steps with regard to the preparation, filing, prosecution, and maintenance of Product-Specific Patents, including by providing Harpoon with a copy of material communications to and from any patent authority in the Territory regarding such Product-Specific Patents, and by providing Harpoon drafts of any material filings or responses to be made to such patent authorities in the Territory sufficiently in advance of submitting such filings or responses so as to allow for a reasonable opportunity for Harpoon to review and comment thereon, which in any event shall be at least [***] prior to any such submission. AbbVie shall consider in good faith the requests and suggestions of Harpoon with respect to such AbbVie drafts and with respect to strategies for filing and prosecuting the Product-Specific Patents in the Territory. In the event that AbbVie decides not to prepare, file, prosecute, or maintain a Product-Specific Patent in a country or other jurisdiction in the Territory, AbbVie shall provide reasonable prior written notice to Harpoon of such intention (which notice shall, in any event, be given no later than [***]

[***] prior to the next deadline for any action that may be taken with respect to such Product-Specific Patent in such country or other jurisdiction), and Harpoon shall thereupon have the option, in its sole discretion, to assume the control and direction of the preparation, filing, prosecution, and maintenance of such Product-Specific Patent at its sole cost and expense in such country or other jurisdiction. Upon Harpoon's written acceptance of such option, Harpoon shall assume the responsibility and control for the preparation, filing, prosecution, and maintenance of such specific Product-Specific Patent. In such event, AbbVie shall reasonably cooperate with Harpoon in such country or other jurisdiction as provided under Section 8.2.5. Notwithstanding anything to the contrary in this Agreement, each Party agrees that [***]. Subject to Section 13.6.2, if this Agreement is terminated (in its entirety or otherwise), with respect to an Accepted Target, the applicable Product-Specific Patents claiming Discovery Constructs or Licensed Products directed to such Accepted Target shall be [***].

8.2.5 Cooperation. The Parties agree to cooperate fully in the preparation, filing, prosecution, and maintenance of the Harpoon Program Patents, AbbVie Program Patents, Product-Specific Patents and Joint Program Patents in the Territory under this Agreement. Cooperation shall include:

(a) without limiting any other rights and obligations of the Parties under this Agreement, cooperating with respect to the timing, scope and filing of such Patents to preserve and enhance the patent protection for Discovery Constructs and Licensed Products, including the manufacture and use thereof.

(b) executing all papers and instruments, or requiring its employees or contractors to execute such papers and instruments, so as to (i) effectuate the ownership of intellectual property set forth in Section 8.1.1, 8.1.2 and 8.1.3; (ii) enable the other Party to apply for and to prosecute Patent applications in the Territory; and (iii) obtain and maintain any Patent extensions, supplementary protection certificates, and the like with respect to the Harpoon Program Patents, AbbVie Program Patents, Product-Specific Patents and Joint Program Patents in the Territory, in each case ((i), (ii), and (iii)) to the extent provided for in this Agreement;

(c) consistent with this Agreement, assisting in any license registration processes with applicable governmental authorities that may be available in the Territory for the protection of a Party's interests in this Agreement; and

(d) promptly informing the other Party of any matters coming to such Party's attention that may materially affect the preparation, filing, prosecution, or maintenance of any such Patents in the Territory.

8.2.6 Patent Term Extension and Supplementary Protection Certificate. AbbVie shall be responsible for making decisions regarding patent term extensions, including supplementary protection certificates and any other extensions that are now or become available in the future, wherever applicable, for AbbVie Background Patents, AbbVie Program Patents, Product-Specific Patents and Joint Program Patents in any country or other jurisdiction and for applying for any extension or supplementary protection certificate with respect to such Patents in the Territory. Harpoon shall provide prompt and reasonable assistance, as requested by AbbVie, including by taking such action as patent holder as is required under any Applicable Law to obtain such patent extension or supplementary protection certificate. AbbVie shall pay all expenses in regard to obtaining the extension or supplementary protection certificate in the Territory. In case that AbbVie determines that patent term extension should be applied for a Harpoon Program Patent or a Harpoon Background Patent, Harpoon and AbbVie should discuss in good faith with respect to such patent term extension.

8.2.7 European Patents. AbbVie shall have the sole right to decide whether a European Patent within Joint Program Patents should be validated or maintained as a Unitary Patent, whether and when such European Patent should be opted out of or opted in to the jurisdiction of the Unified Patent Court (UPC) (including withdrawal of an opt-out), as well as any other issues concerning the jurisdiction of the UPC in connection with Joint Program Patents. Harpoon shall, at AbbVie's cost and expense, cooperate with AbbVie and provide to AbbVie and submit to authorities all necessary documents to effect such decision.

8.2.8 Patent Listings. AbbVie will have the sole right to make all filings with Regulatory Authorities in the Territory with respect to AbbVie Background Patents, AbbVie Program Patents, Product-Specific Patents and Joint Program Patents, including as required or allowed under Applicable Law, provided that with respect to Joint Program Patents, such right shall be solely with respect to Licensed Products. AbbVie shall notify Harpoon in writing of any Harpoon Background Patents or Harpoon Program Patents that it intends to list with Regulatory Authorities related to the Licensed Products and, prior to filing any such listing, consult with and consider in good faith the requests and suggestions of Harpoon regarding the same.

8.3 Enforcement of Patents

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8.3.1 Enforcement of Harpoon Background Patents and Harpoon Program Patents.

(a) Each Party shall promptly notify the other Party in writing of any alleged or threatened infringement of the Harpoon Background Patents or Harpoon Program Patents by a Third Party in the Territory of which such Party becomes aware based on the development, commercialization, or an application to market a product containing a Discovery Construct or any Licensed Product in the Territory (the "**Product Infringement**").

(b) Harpoon shall have the sole right, but not the obligation, to prosecute any Product Infringement involving any claims of Harpoon Background Patents and Harpoon Program Patents at its sole expense and Harpoon shall retain control of the prosecution of such claim, suit or proceeding.

8.3.2 Enforcement of AbbVie Background Patents, AbbVie Program Patents, Product-Specific Patents and Joint Program Patents.

(a) Each Party shall promptly notify the other Party in writing of any alleged or threatened infringement of the AbbVie Background Patents, AbbVie Program Patents, Product-Specific Patents or Joint Program Patents by a Third Party in the Territory of which such Party becomes aware (including alleged or threatened infringement based on the development, commercialization, or an application to market a product containing a Discovery Construct or any Licensed Product in the Territory).

(b) AbbVie shall have the sole right, but not the obligation, to prosecute any such infringement of AbbVie Background Patents, AbbVie Program Patents and Product-Specific Patents in the Territory at its sole expense and AbbVie shall retain control of the prosecution of such claim, suit or proceeding.

(c) AbbVie shall have the first right, but not the obligation, to prosecute any such infringement of Joint Program Patents in the Territory at its sole expense and AbbVie shall retain control of the prosecution of such claim, suit or proceeding. In the event AbbVie prosecutes any such infringement, Harpoon shall have the right to join as a party to such claim, suit or proceeding in the Territory and participate with its own counsel at its own expense; provided that AbbVie shall retain control of the prosecution of such claim, suit or proceeding. If AbbVie does not take commercially reasonable steps to prosecute the alleged or threatened infringement in the Territory with respect to such Joint Program Patents (i) within [***] following the first notice provided above with respect to such alleged infringement, or (ii) provided such date occurs after the first such notice of infringement is provided, [***] before the time limit, if any, set forth in appropriate laws and regulations for filing of such actions, whichever comes first, then Harpoon may prosecute the alleged or threatened infringement in the Territory at its own expense.

8.3.3 Patent Exclusivity Listings. If either Party receives a copy of an application submitted to the FDA under subsection (k) of Section 351 of the PHSA (a "**Biosimilar Application**") naming a Licensed Product as a reference product or otherwise becomes aware that such a Biosimilar Application has been filed (such as in an instance described in Section 351(l)(9)(C) of the PHSA), such Party shall, within [***], notify the other Party so that the other Party may seek permission to view the application and related confidential information from the filer of the Biosimilar Application under Section 351(l)(1)(B)(iii) of the PHSA. If either Party receives any equivalent or similar certification or notice in any other jurisdiction in the Territory, either Party shall, within [***], notify and provide the other Party with copies of such communication. Regardless of the Party that is the "reference product sponsor" for purposes of such Biosimilar Application, (a) [***]; (b) AbbVie shall have the right to list any AbbVie Background Patents, AbbVie Program Patents, Product-Specific Patents, Joint Program Patents, and, upon the written consent of Harpoon, such consent not to be unreasonably withheld, conditioned or delayed (taking into account, without limitation, the potential impact of such consent on other products undergoing development or commercialization by Harpoon or its Third Party licensees and covered by such Harpoon Program Patents), Harpoon

Program Patents, and upon the written consent of Harpoon, Harpoon Background Patents, insofar as they cover the applicable Licensed Product as required pursuant to Section 351(l)(3)(A), Section 351(l)(5)(b)(i)(II), or Section 351(l)(7) of the PHSA, to respond to any communications with respect to such lists from the filer of the Biosimilar Application, and to negotiate with the filer of the Biosimilar Application as to whether to utilize a different mechanism for information exchange than that specified in Section 351(l) of the PHSA; and (c) [***] shall have the sole right to identify such Patents or respond to communications under any equivalent or similar listing in any other jurisdiction in the Territory. If required pursuant to Applicable Law, [***] shall prepare such lists and make such responses [***]. If Harpoon has provided written consent as contemplated by this Section 8.3.3, Harpoon shall cooperate with AbbVie's reasonable requests in connection therewith, including meeting any submission deadlines, in each case, to the extent required or permitted by Applicable Law. AbbVie shall (A) reasonably consult with Harpoon prior to [***] to a Third Party as contemplated by this Section 8.3.3 and shall consider in good faith Harpoon's advice, requests and suggestions with respect thereto, and (B) notify Harpoon of any such lists or communications promptly after they are made.

8.3.4 Conduct of Patent Litigation Under the Biologics Price Competition and Innovation Act. Notwithstanding anything to the contrary in this Section 8.3, AbbVie shall have the first right to bring an action for infringement of the AbbVie Background Patents, AbbVie Program Patents, Product-Specific Patents, Joint Program Patents and, upon the written consent of Harpoon, such consent not to be unreasonably withheld, conditioned or delayed (taking into account, without limitation, the potential impact of such consent on other products undergoing development or commercialization by Harpoon or its Third Party licensees and covered by such Harpoon Program Patents), Harpoon Program Patents, and upon the written consent of Harpoon, Harpoon Background Patents, as required under Section 351(l)(6) of the PHSA following the agreement on a list of patents for litigation under Section 351(l)(4) or exchange of Patent lists pursuant to Section 351(l)(5)(B) of such act, or as required following any equivalent or similar certification or notice in any other jurisdiction. The Parties' rights and obligations with respect to the foregoing legal actions shall be as set forth in Sections 8.3.1 through 8.3.5; provided, that within [***] of reaching agreement on a list of Patents for litigation under Section 351(l)(4) or exchange of Patent lists pursuant to Section 351(l)(5)(B), AbbVie shall notify Harpoon as to whether or not it elects to prosecute such infringement. Either Party shall, within [***], notify and provide the other Party with copies of any notice of commercial marketing provided by the filer of a Biosimilar Application pursuant to Section 351(l)(8)(A) of the PHSA, or any equivalent or similar certification or notice in any other jurisdiction. Thereafter, the Party controlling any Patent infringement litigation pursuant to this Section 8.3.4 shall have the first right to seek an injunction against such commercial marketing as permitted pursuant to Section 351(l)(8)(B) of the PHSA. If no such litigation is ongoing at the time of such notice, then [***] shall have the first right to seek such an injunction.

8.3.5 Cooperation. The Parties agree to cooperate fully in any infringement action pursuant to this Section 8.3. Where a Party brings such an action, the other Party shall, where necessary, furnish a power of attorney solely for such purpose or shall join in, or be named as a necessary party to, such action. Unless otherwise set forth herein, the Party entitled to bring any patent infringement litigation in accordance with this Section 8.3 shall have the right to settle

such claim; provided that neither Party shall have the right to settle any patent infringement litigation under this Section 8.3 in a manner that materially diminishes or has a material adverse effect on the rights or interest of the other Party, or in a manner that imposes any costs or liability on, or involves any admission by, the other Party, without the express written consent of such other Party. The Party commencing the litigation shall provide the other Party with copies of all pleadings and other documents filed with the court and shall consider reasonable input from the other Party during the course of the proceedings.

8.3.6 Recovery. Any recovery realized as a result of such litigation described in Sections 8.3.1, 8.3.2, or 8.3.4 (whether by way of settlement or otherwise) shall be first allocated to reimburse the Parties for their costs and expenses in making such recovery (which amounts shall be allocated pro rata if insufficient to cover the totality of such expenses). [***].

8.4 Infringement Claims by Third Parties

. If the manufacture, sale, or use of a Discovery Construct or Licensed Product in the Territory pursuant to this Agreement results in, or may result in, any claim, suit, or proceeding by a Third Party alleging patent infringement by AbbVie (or its Affiliates or Sublicensees), AbbVie shall promptly notify Harpoon thereof in writing. AbbVie shall have the first right, but not the obligation, to defend and control the defense of any such claim, suit, or proceeding at its own expense, using counsel of its own choice. Harpoon may participate in any such claim, suit, or proceeding with counsel of its choice at its own expense. Without limitation of the foregoing, if AbbVie finds it necessary or desirable to join Harpoon as a party to any such action, Harpoon shall, at AbbVie's expense, execute all papers and perform such acts as shall be reasonably required. If AbbVie elects (in a written communication submitted to Harpoon within a reasonable amount of time after notice of the alleged patent infringement) not to defend or control the defense of, or otherwise fails to initiate and maintain the defense of, any such claim, suit, or proceeding, within such time periods so that Harpoon is not prejudiced by any delays, Harpoon may conduct and control the defense of any such claim, suit, or proceeding at its own expense. Each Party shall keep the other Party reasonably informed of all material developments in connection with any such claim, suit, or proceeding. [***] under this Section 8.4 shall be [***]

8.5 Invalidity or Unenforceability Defenses or Actions

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8.5.1 Notice. Each Party shall promptly notify the other Party in writing of any alleged or threatened assertion of invalidity or unenforceability of any of the Harpoon Background Patents, Harpoon Program Patents, AbbVie Background Patents, AbbVie Program

Patents, Product-Specific Patents or Joint Program Patents by a Third Party, in each case in the Territory and of which such Party becomes aware.

8.5.2 Harpoon Background Patents. Harpoon shall have the sole right, but not the obligation, to defend and control the defense of the validity and enforceability of the Harpoon Background Patents at its own expense in the Territory.

8.5.3 Harpoon Program Patents. Harpoon shall have the first right, but not the obligation, to defend and control the defense of the validity and enforceability of the Harpoon Program Patents at its own expense in the Territory. AbbVie may participate in any such claim, suit, or proceeding in the Territory with counsel of its choice at its own expense; provided that Harpoon shall retain control of the defense in such claim, suit, or proceeding. If Harpoon elects not to defend or control the defense of such Harpoon Program Patents in a suit brought in the Territory, or otherwise fails to initiate and maintain the defense of any such claim, suit, or proceeding, then AbbVie may conduct and control the defense of any such claim, suit, or proceeding at its own expense; provided, that AbbVie shall obtain the written consent of Harpoon prior to settling or compromising such defense.

8.5.4 AbbVie Background Patents, AbbVie Program Patents, Product-Specific Patents and Joint Program Patents.

(a) AbbVie shall have the sole right, but not the obligation, to defend and control the defense of the validity and enforceability of the AbbVie Background Patents, AbbVie Program Patents and Product-Specific Patents at its own expense in the Territory.

(b) AbbVie shall have the first right, but not the obligation, to defend and control the defense of the validity and enforceability of the Joint Program Patents at its own expense in the Territory. Harpoon may participate in any such claim, suit, or proceeding in the Territory related to the Joint Program Patents with counsel of its choice at its own expense; provided that AbbVie shall retain control of the defense in such claim, suit, or proceeding. If AbbVie elects not to defend or control the defense of the Joint Program Patents in a suit brought in the Territory, or otherwise fails to initiate and maintain the defense of any such claim, suit, or proceeding, then Harpoon may conduct and control the defense of any such claim, suit, or proceeding, at its own expense; provided, that Harpoon shall obtain the written consent of AbbVie prior to settling or compromising such defense.

8.5.5 Cooperation. Each Party shall assist and cooperate with the other Party as such other Party may reasonably request from time to time in connection with its activities set forth in this Section 8.5, including by being joined as a party plaintiff in such action or proceeding, providing access to relevant documents and other evidence, and making its employees available at reasonable business hours. In connection with any such defense or claim or counterclaim, the controlling Party shall consider in good faith any comments from the other Party and shall keep the other Party reasonably informed of any steps taken, and shall provide copies of all documents filed, in connection with such defense, claim, or counterclaim. In connection with the activities set forth in this Section 8.5, each Party shall consult with the other as to the strategy for the defense of the Harpoon Program Patents, AbbVie Program Patents, Product-Specific Patents and Joint Program Patents.

8.6 Third Party Licenses

. If [***], the Development, Manufacture, or Commercialization of any Discovery Construct or Licensed Product by AbbVie, any of its Affiliates, or any of its or their Sublicensees infringes or misappropriates any [***] of a Third Party in any country or other jurisdiction in the Territory, such that AbbVie, any of its Affiliates or any of its or their Sublicensees cannot Develop, Manufacture, or Commercialize such Discovery Construct or Licensed Product in such country or other jurisdiction without infringing such [***] of such Third Party, then [***], and [***] shall promptly provide [***] with written notice of any such license, including the identity of the counter-party and a description of the [***].

8.7 Product Trademarks

. As between the Parties, AbbVie shall own all right, title, and interest to the Product Trademarks in the Territory, and shall be responsible for the registration, prosecution, maintenance and enforcement thereof. All costs and expenses of registering, prosecuting, maintaining and enforcing the Product Trademarks shall be borne solely by AbbVie. Harpoon shall provide all assistance and documents reasonably requested by AbbVie in support of its prosecution, registration, maintenance and enforcement of the Product Trademarks.

8.8 Inventor’s Remuneration

. Each Party shall be solely responsible for any remuneration that may be due such Party's inventors under any applicable inventor remuneration laws.

8.9 Common Interest

. All information exchanged between the Parties regarding the prosecution, maintenance, enforcement and defense of Patents under this ARTICLE 8 will be deemed to be Confidential Information of the disclosing Party. In addition, the Parties acknowledge and agree that, with regard to such prosecution, maintenance, enforcement and defense, the interests of the Parties as collaborators and Harpoon and licensee are to, for their mutual benefit, obtain patent protection and plan patent defense against potential infringement activities by Third Parties, and as such, are aligned and are legal in nature. The Parties agree and acknowledge that they have not waived, and nothing in this Agreement constitutes a waiver of, any legal privilege concerning Patents under this ARTICLE 8, including privilege under the common interest doctrine and similar or related doctrines. Notwithstanding anything to the contrary in this Agreement, to the extent a Party has a good faith belief that any information required to be disclosed by such Party to the other Party under this ARTICLE 8 is protected by attorney-client privilege or any other applicable legal privilege or immunity, such Party shall not be required to disclose such information and the Parties shall in good faith cooperate to agree upon a procedure (which may include entering into a specific common interest agreement, disclosing such information on a “for counsel eyes only” basis or similar procedure) under which such information may be disclosed without waiving or breaching such privilege or immunity.

ARTICLE 9
PHARMACOVIGILANCE AND SAFETY

9.1 Pharmacovigilance

. On an Accepted Target-by-Accepted Target basis, no later than [***] for a Discovery Construct or Licensed Product, the Parties shall enter into an agreement to initiate a process for the exchange of safety data (including post-marketing spontaneous reports received by each Party and its Affiliates) in a mutually agreed format in order to monitor the safety of the Discovery Constructs or Licensed Products and to meet reporting requirements with any applicable Regulatory Authority.

9.2 Global Safety Database

. On an Accepted Target-by-Accepted Target basis, no later than [***] for a Discovery Construct or Licensed Product, AbbVie shall set up, hold, and maintain (at AbbVie's sole cost and expense) the global safety database for Discovery Constructs or Licensed Products. Harpoon shall provide AbbVie with all information necessary or desirable for AbbVie to comply with its pharmacovigilance responsibilities in the Territory, including, as applicable, any adverse drug experiences, from pre-clinical or clinical laboratory, animal toxicology and pharmacology studies, Clinical Studies, and commercial experiences with a Discovery Construct or Licensed Product, in each case in any form agreed upon between AbbVie and Harpoon at the time of the request.

ARTICLE 10
CONFIDENTIALITY AND NON-DISCLOSURE

10.1 Product Information

. Harpoon recognizes that by reason of AbbVie's status as an exclusive licensee pursuant to the grants under Section 6.1, AbbVie has an interest in Harpoon maintaining the confidentiality of certain information of Harpoon. Accordingly, on an Accepted Target-by-Accepted Target basis, from the applicable Target Acceptance Date and for the remainder of the Term, Harpoon shall, and shall cause its Affiliates and its and their respective officers, directors, employees, and agents to, keep confidential, and not publish or otherwise disclose, and not use directly or indirectly for any purpose other than to fulfill Harpoon's obligations hereunder any Information owned or otherwise Controlled by Harpoon or any of its Affiliates specifically relating to any Discovery Construct or Licensed Product, or the Exploitation of any of the foregoing (the "**Product Information**"); except to the extent (a) the Product Information is in the public domain through no fault of Harpoon, its Affiliates or any of its or their respective officers, directors, employees, or agents; (b) such disclosure or use is expressly permitted under Section 10.3, or (c) such disclosure or use is otherwise expressly permitted by the terms of this Agreement. For purposes of Section 10.3, AbbVie shall be deemed to be the disclosing Party with respect to Product Information under Section 10.3 and Harpoon shall be deemed to be the receiving Party with respect thereto. For further clarification, (i) without limiting this Section 10.1, to the extent Product Information is disclosed by Harpoon to AbbVie pursuant to this Agreement, such information shall, subject to the other terms and conditions of this ARTICLE 10, also constitute Confidential Information of Harpoon with respect to the use and disclosure of such Information by AbbVie, but (ii) the disclosure by Harpoon to AbbVie of Product Information shall not cause such information to cease to be subject to the provisions of this Section 10.1 with respect to the use and disclosure of such Confidential Information by Harpoon. In the event this Agreement is terminated in its entirety or with respect to the Terminated Territory or Terminated Target, this Section 10.1 shall have no continuing force or effect with respect to the use or disclosure of such information solely in connection with the Exploitation of the Discovery Construct or Licensed Product for the benefit of the Terminated Territory or Terminated Target,

as applicable, but the Product Information, to the extent disclosed by AbbVie to Harpoon hereunder, shall continue to be Confidential Information of AbbVie, subject to the terms of Sections 10.2, 10.3, and 10.6 for purposes of the surviving provisions of this Agreement.

10.2 Confidentiality Obligations

. At all times during the Term and for a period [***] following termination or expiration hereof in its entirety, each Party shall, and shall cause its officers, directors, employees and agents to, keep confidential and not publish or otherwise disclose to a Third Party and not use, directly or indirectly, for any purpose, any Confidential Information furnished or otherwise made known to it, directly or indirectly, by the other Party, except to the extent such disclosure or use is expressly permitted by the terms of this Agreement or is reasonably necessary or useful for the performance of, or the exercise of such Party's rights under, this Agreement. Notwithstanding the foregoing, to the extent the receiving Party can demonstrate by documentation or other competent proof, the confidentiality and non-use obligations under this Section 10.2 with respect to any Confidential Information shall not include any information that:

10.2.1 has been published by a Third Party or otherwise is or hereafter becomes part of the public domain by public use, publication, general knowledge or the like through no wrongful act, fault or negligence on the part of the receiving Party;

10.2.2 has been in the receiving Party's possession prior to disclosure by the disclosing Party without any obligation of confidentiality with respect to such information; provided that the foregoing exception shall not apply with respect to Regulatory Documentation (excluding clinical protocols) or Joint Program Know-How;

10.2.3 is subsequently received by the receiving Party from a Third Party without restriction and without breach of any agreement between such Third Party and the disclosing Party;

10.2.4 is generally made available to Third Parties by the disclosing Party without restriction on disclosure;

10.2.5 has been independently developed by or for the receiving Party without reference to, or use or disclosure of, the disclosing Party's Confidential Information; provided that the foregoing exception shall not apply with respect to Regulatory Documentation (excluding clinical protocols) or Joint Program Know-How; or

10.2.6 in the case of [***], has been [***] concerning such [***].

Specific aspects or details of Confidential Information shall not be deemed to be within the public domain or in the possession of the receiving Party merely because the Confidential Information is embraced by more general information in the public domain or in the possession of the receiving

Party. Further, any combination of Confidential Information shall not be considered in the public domain or in the possession of the receiving Party merely because individual elements of such Confidential Information are in the public domain or in the possession of the receiving Party unless the combination and its principles are in the public domain or in the possession of the receiving Party.

10.3 Permitted Disclosures

. Each Party may disclose Confidential Information to the extent that such disclosure is:

10.3.1 in the reasonable opinion of the receiving Party's legal counsel, required to be disclosed pursuant to law, regulation or a valid order of a court of competent jurisdiction or other supra-national, federal, national, regional, state, provincial or local governmental body of competent jurisdiction (including by reason of filing with securities regulators, but subject to Section 10.5); provided, that the receiving Party shall first have given prompt written notice (and to the extent possible, at least [***] notice) to the disclosing Party and given the disclosing Party a reasonable opportunity to take whatever action it deems necessary to protect its Confidential Information. In the event that no protective order or other remedy is obtained, or the disclosing Party waives compliance with the terms of this Agreement, the receiving Party shall furnish only that portion of Confidential Information which the receiving Party is advised by counsel is legally required to be disclosed;

10.3.2 made by or on behalf of the receiving Party to the Regulatory Authorities as required in connection with any filing, application or request for Regulatory Approval of a Licensed Product in accordance with the terms of this Agreement; provided, that reasonable measures shall be taken to assure confidential treatment of such Confidential Information to the extent practicable and consistent with Applicable Law;

10.3.3 made by or on behalf of the receiving Party to a patent authority as may be reasonably necessary or useful for purposes of obtaining, defending or enforcing a Patent in accordance with the terms of this Agreement; provided, that reasonable measures shall be taken to assure confidential treatment of such Confidential Information, to the extent such protection is available;

10.3.4 made to its or its Affiliates' financial and legal advisors who have a need to know such disclosing Party's Confidential Information and are either under professional codes of conduct giving rise to expectations of confidentiality and non-use or under written agreements of confidentiality and non-use, in each case, at least as restrictive as those set forth in this Agreement; provided that the receiving Party shall remain responsible for any failure by such financial and legal advisors, to treat such Confidential Information as required under this Article;

10.3.5 made by the receiving Party or its Affiliates to potential or actual investors or acquirers as may be necessary in connection with their evaluation of such potential or actual investment or acquisition; provided, that such Persons shall be subject to obligations of confidentiality and non-use with respect to such Confidential Information substantially similar to the obligations of confidentiality and non-use of the receiving Party pursuant to this ARTICLE 10;

10.3.6 made by AbbVie or its Affiliates or Sublicensees to its or their advisors, consultants, clinicians, vendors, service providers, contractors, existing or prospective collaboration partners, licensees, sublicensees, or other Third Parties as may be necessary or useful in connection with the Exploitation of the Discovery Construct, the Licensed Products, or otherwise in connection with the performance of its obligations or exercise of its rights as contemplated by this Agreement; provided, that such Persons shall be subject to obligations of confidentiality and non-use with respect to such Confidential Information substantially similar to the obligations of confidentiality and non-use of AbbVie pursuant to this ARTICLE 10; or

10.3.7 made by Harpoon or its Affiliates after receiving advanced approval from AbbVie, to its or their advisors, consultants, clinicians, vendors, service providers, contractors, or other Third Parties as may be necessary or useful in connection with the performance of their obligations or exercise of their rights as contemplated by this Agreement; provided, that such Persons shall be subject to obligations of confidentiality and non-use with respect to such Confidential Information of AbbVie substantially similar to the obligations of confidentiality and non-use of Harpoon pursuant to this ARTICLE 10; provided, further, that the advanced approval requirement set forth in this Section 10.3.7 shall not apply to Third Party Providers approved by AbbVie pursuant to Section 4.6.

10.4 Use of Name

. Except as expressly provided herein, neither Party shall mention or otherwise use the name, logo, or Trademark of the other Party or any of its Affiliates (or any abbreviation or adaptation thereof) in any publication, press release, marketing and promotional material, or other form of publicity without the prior written approval of such other Party in each instance. The restrictions imposed by this Section 10.4 shall not prohibit either Party from making any disclosure identifying the other Party that, in the opinion of the disclosing Party's counsel, is required by Applicable Law; provided, that such Party shall submit the proposed disclosure identifying the other Party in writing to the other Party as far in advance as reasonably practicable (and in no event less than [***] prior to the anticipated date of disclosure) so as to provide a reasonable opportunity to comment thereon.

10.5 Public Announcements

. Neither Party shall issue any public announcement, press release, or other public disclosure regarding this Agreement or its subject matter without the other Party's prior written consent, except (i) for a mutually agreed press release to be issued promptly following the Effective Date, or (ii) for any such disclosure that is, in the opinion of the disclosing Party's counsel, required by Applicable Law or the rules of a stock exchange on which the securities of the disclosing Party are listed (or to which an application for listing has been submitted). In the event a Party is, in the opinion of its counsel, required by Applicable Law or the rules of a stock exchange on which its securities are listed (or to which an application for listing has been submitted) to make such a public disclosure, such Party shall submit the proposed disclosure in writing to the other Party as far in advance as reasonably practicable (and in no event less than [***] prior to the anticipated date of disclosure) so as to provide a reasonable opportunity to comment thereon. Notwithstanding the foregoing, AbbVie, its Sublicensees and its and their respective Affiliates shall have the right to publicly disclose research, development and commercial information (including with respect to regulatory matters) regarding the Discovery Construct and Licensed Products, provided that any such disclosure does not contain any Confidential Information of Harpoon.

10.6 Publications

. The Parties acknowledge that scientific publications must be strictly monitored to prevent any adverse effect from premature publication of results of the activities contemplated hereunder. Accordingly, [***], except as required by Applicable Law.

10.7 Return of Confidential Information

. Upon the effective date of the termination of this Agreement for any reason, either Party may request in writing, and the other Party shall either, with respect to Confidential Information (in the event of termination of this Agreement with respect to one (1) or more Terminated Territories or Terminated Targets but not in its entirety, solely to the extent relating specifically and exclusively to such Terminated Territories or Terminated Targets, as applicable) to which such other Party does not retain rights under the surviving provisions of this Agreement: (a) as soon as reasonably practicable, destroy all copies of such Confidential Information in the possession of the other Party and confirm such destruction in writing to the requesting Party; or (b) as soon as reasonably practicable, deliver to the requesting Party, at such other Party's expense, all copies of such Confidential Information in the possession of such other Party; provided, that such other Party shall be permitted to retain one (1) copy of such Confidential Information for the sole purpose of performing any continuing obligations hereunder, as required by Applicable Law, or for archival purposes. Notwithstanding the foregoing, such other Party also shall be permitted to retain such additional copies of or any computer records or files containing such Confidential Information that have been created solely by such Party's automatic archiving and back-up procedures, to the extent created and retained in a manner consistent with such other Party's standard archiving and back-up procedures, but not for any other use or purpose.

10.8 Survival

. All Confidential Information shall continue to be subject to the terms of this Agreement for the period set forth in Section 10.2.

ARTICLE 11
REPRESENTATIONS AND WARRANTIES

11.1 Mutual Representations and Warranties

. Harpoon and AbbVie each represents and warrants to the other, as of the Amended Effective Date, as follows:

11.1.1 Organization. It is a corporation duly incorporated, validly existing, and in good standing under the laws of the jurisdiction of its incorporation, and has all requisite corporate power and authority, to execute, deliver, and perform this Agreement.

11.1.2 Authorization. The execution and delivery of this Agreement and the performance by it of the transactions contemplated hereby have been duly authorized by all necessary corporate action, and do not violate (a) such Party's charter documents, bylaws, or other organizational documents, (b) in any material respect, any agreement, instrument, or contractual obligation to which such Party is bound, (c) any requirement of any Applicable Law, or (d) any order, writ, judgment, injunction, decree, determination, or award of any court or governmental agency presently in effect applicable to such Party.

11.1.3 Binding Agreement. This Agreement is a legal, valid, and binding obligation of such Party enforceable against it in accordance with its terms and conditions, subject to the effects of bankruptcy, insolvency, or other laws of general application affecting the enforcement of creditor rights, judicial principles affecting the availability of specific performance, and general principles of equity (whether enforceability is considered a proceeding at law or equity).

11.1.4 No Inconsistent Obligation. It is not under any obligation, contractual or otherwise, to any Person that conflicts with or is inconsistent in any material respect with the terms of this Agreement, or that would impede the diligent and complete fulfillment of its obligations hereunder.

11.1.5 No Misstatements or Omissions. The representations and warranties of such Party in this Agreement, and the Information, documents and materials furnished to the other Party in response to such Party's written requests for due diligence information prior to the Amended Effective Date, as applicable, do not, taken as a whole, (a) contain any untrue statement of a material fact, or (b) omit to state any material fact necessary to make the statements or facts contained therein, in light of the circumstances under which they were made, not misleading.

11.2 Additional Representations and Warranties of Harpoon

. Harpoon further represents and warrants to AbbVie, as of the Amended Effective Date, as follows:

11.2.1 All Harpoon Background Patents existing as of the Amended Effective Date are listed on Schedule 11.2.1 (the "**Existing Patents**"). To Harpoon's Knowledge, all Existing Patents existing as of the Amended Effective Date are subsisting and, to Harpoon's Knowledge, are not invalid or unenforceable, in whole or in part, are being diligently prosecuted in the applicable patent offices in the Territory in accordance with Applicable Law, and have been filed and maintained properly and correctly and all applicable fees have been paid on or before the due date for payment.

11.2.2 There are no judgments, or settlements against, or amounts with respect thereto, owed by Harpoon or any of its Affiliates relating to the Existing Patents, or the Harpoon Background Know-How. No claim or litigation has been brought or threatened in writing or any other form by any Person alleging, and Harpoon has no Knowledge of any claim, whether or not asserted, that (a) the Existing Patents are invalid or unenforceable, or (b) the Development or Commercialization of the Discovery Constructs or Licensed Products as contemplated herein [***], does or will violate, infringe, misappropriate or otherwise conflict or interfere with, any Patent or other intellectual property or proprietary right of any Third Party. To Harpoon's Knowledge, no Person is infringing or threatening to infringe or misappropriating or threatening to misappropriate the Existing Patents or the Harpoon Background Know-How.

11.2.3 Harpoon is (a) the sole and exclusive owner of the entire right, title and interest in the Existing Patents listed on Schedule 11.2.1, Part A (the "**Owned Patents**") and the

Harpoon Background Know-How and (b) the sole and exclusive licensee of the Existing Patents listed on Schedule 11.2.1, Part B (the "**In-Licensed Patents**") subject to valid and enforceable in-license agreements (each, a "**Harpoon In-License Agreement**"), in each case ((a) and (b)) free of any encumbrance, lien, or claim of ownership by any Third Party. Harpoon is entitled to grant the licenses specified herein. The Owned Patents and In-Licensed Patents represent all of the Existing Patents. The Existing Patents represent all Patents within Harpoon's or its Affiliates' ownership or Control relating to the Harpoon Platform, or the Exploitation thereof, as of the Amended Effective Date. To Harpoon's Knowledge, there is no Information owned or Controlled by Harpoon or any of its Affiliates as of the Amended Effective Date that relates to the Harpoon Platform that is not within the Harpoon Background Know-How.

11.2.4 To Harpoon's Knowledge, Harpoon has the right to use all Information and Patents necessary to Develop, Manufacture and Commercialize the Discovery Constructs and the Licensed Products as contemplated herein [***] and such are not subject to any license or agreement to which Harpoon or any of its Affiliates is a party other than a Harpoon In-License Agreement.

11.2.5 As of the Amended Effective Date, none of Harpoon or its Affiliates and, to Harpoon's Knowledge, any Third Party is in breach of any Harpoon In-License Agreement.

11.2.6 True, complete, and correct copies of: (a) the file wrapper and other documents and materials relating to the prosecution, defense, maintenance, validity, and enforceability of the Existing Patents; (b) all existing Harpoon In-License Agreements; and (c) all material adverse information with respect to the safety and efficacy of the Discovery Constructs known to Harpoon, in each case ((a) through (c)) have been provided or made available to AbbVie prior to the Amended Effective Date, as applicable.

11.2.7 Harpoon and its Affiliates have generated, prepared, maintained, and retained all Regulatory Documentation that is required to be maintained or retained pursuant to and in accordance with Applicable Law, and all such information is true, complete and correct and what it purports to be.

11.2.8 Each Person who has or has had any rights in or to any Owned Patents or any Harpoon Background Know-How, has assigned and has executed an agreement assigning its entire right, title, and interest in and to such Owned Patents and Harpoon Background Know-How to Harpoon. To Harpoon's Knowledge, no current officer, employee, agent, or consultant of Harpoon or any of its Affiliates is in violation of any term of any assignment or other agreement regarding the protection of Patents or other intellectual property or proprietary information of Harpoon related to the Harpoon Background Patents.

11.2.9 All rights in all inventions and discoveries, made, developed, or conceived by any employee or independent contractor of Harpoon or any of its Affiliates during the course of their employment (or other retention) by Harpoon or such Affiliate, and included in

Harpoon Background Know-How or that are the subject of one (1) or more Existing Patents have been or will be assigned in writing to Harpoon or such Affiliate.

11.2.10 Harpoon has obtained the right (including under any Patents and other intellectual property rights) to use all Information and all other materials (including any formulations and manufacturing processes and procedures) developed or delivered by any Third Party under any agreements between Harpoon and any such Third Party that is reasonably necessary or useful for the Development or Commercialization of Discovery Constructs, and Harpoon has the rights under each such agreement to transfer such Information or other materials to AbbVie and its designees and to grant AbbVie the right to use such Information or other materials in the Development or Commercialization of the Discovery Constructs or the Licensed Products as set forth in this Agreement.

11.2.11 Harpoon has made (and will make) available to AbbVie, as set forth in Section 4.4(a), all Regulatory Documentation and Harpoon Background Know-How and all such Regulatory Documentation and Harpoon Background Know-How are (and, if made available after the Amended Effective Date, will be), to Harpoon's Knowledge, true, complete, and correct. Neither Harpoon nor any of its Affiliates has any Knowledge of [***] that has not been disclosed to AbbVie as of the Amended Effective Date. [***] of a Licensed Product.

11.2.12 Neither Harpoon nor any of its Affiliates, nor any of its or their respective officers, employees, or agents has made an untrue statement of material fact or fraudulent statement to the FDA or any other Regulatory Authority with respect to the Development of the Discovery Constructs or the Licensed Products, failed to disclose a material fact required to be disclosed to the FDA or any other Regulatory Authority with respect to the Development of the Discovery Constructs or the Licensed Products, or committed an act, made a statement, or failed to make a statement with respect to the Development of the Discovery Constructs or the Licensed Products that could reasonably be expected to provide a basis for the FDA to invoke its policy respecting "Fraud, Untrue Statements of Material Facts, Bribery, and Illegal Gratuities", set forth in 56 Fed. Reg. 46191 (September 10, 1991) and any amendments thereto or any analogous laws or policies in the Territory.

11.2.13 There are no amounts that will be required to be paid to a Third Party as a result of the Development or Commercialization of Discovery Construct or the Licensed Products that arise out of any agreement to which Harpoon or any of its Affiliates is a party, [***].

11.2.14 Neither Harpoon nor any of its employees nor, to Harpoon's Knowledge, agents performing hereunder, have ever been, are currently, or are the subject of a

proceeding that could lead to it or such employees or agents becoming, as applicable, a Debarred Entity or Debarred Individual, an Excluded Entity or Excluded Individual or a Convicted Entity or Convicted Individual or added to the FDA's Disqualified/Restricted List. If, during the Term, Harpoon, or any of its employees or agents performing hereunder, become or are the subject of a proceeding that could lead to a Person becoming, as applicable, a Debarred Entity or Debarred Individual, an Excluded Entity or Excluded Individual or a Convicted Entity or Convicted Individual or added to the FDA's Disqualified/Restricted List, Harpoon shall immediately notify AbbVie, and AbbVie shall have the right, exercisable upon written notice given by AbbVie to terminate this Agreement. This provision shall survive termination or expiration of this Agreement. For purposes of this Agreement, the following definitions shall apply:

(a) A "**Debarred Individual**" is an individual who has been debarred by the FDA pursuant to 21 U.S.C. §335a (a) or (b) from providing services in any capacity to a person that has an approved or pending drug or biological product application.

(b) A "**Debarred Entity**" is a corporation, partnership or association that has been debarred by the FDA pursuant to 21 U.S.C. §335a (a) or (b) from submitting or assisting in the submission of any Drug Approval Application, or a subsidiary or affiliate of a Debarred Entity.

(c) An "**Excluded Individual**" or "**Excluded Entity**" is (i) an individual or entity, as applicable, who has been excluded, debarred, suspended or is otherwise ineligible to participate in federal health care programs such as Medicare or Medicaid by the Office of the Inspector General (OIG/HHS) of the U.S. Department of Health and Human Services, or (ii) is an individual or entity, as applicable, who has been excluded, debarred, suspended or is otherwise ineligible to participate in federal procurement and non-procurement programs, including those produced by the U.S. General Services Administration (GSA).

(d) A "**Convicted Individual**" or "**Convicted Entity**" is an individual or entity, as applicable, who has been convicted of a criminal offense that falls within the ambit of 21 U.S.C. §335a (a) or 42 U.S.C. §1320a - 7(a), but has not yet been excluded, debarred, suspended or otherwise declared ineligible.

(e) "**FDA's Disqualified/Restricted List**" is the list of clinical investigators restricted from receiving investigational drugs, biologics, or devices if the FDA has determined that the investigators have repeatedly or deliberately failed to comply with regulatory requirements for studies or have submitted false Information to the study sponsor or the FDA.

11.2.15 The inventions claimed or covered by the Existing Patents (a) were not conceived, discovered, developed, or otherwise made in connection with any research activities funded, in whole or in part, by the federal government of the United States or any agency thereof, and (b) are not a "subject invention" as that term is described in 35 U.S.C. Section 201(f).

11.3 Additional Representations and Warranties of AbbVie

. AbbVie further represents and warrants to Harpoon, as of the Target Acceptance Date with respect to an Accepted Target, as follows:

11.3.1 To AbbVie's Knowledge, AbbVie has the right to use all Information and Patents necessary to Develop, Manufacture and Commercialize the Discovery T-Cell Receptors or Discovery Antibodies, as applicable, that Bind to such Accepted Target and AbbVie is entitled to grant Harpoon the licenses specified in Section 6.2.

11.3.2 All rights in all inventions and discoveries, made, developed, or conceived by any employee or independent contractor of AbbVie or any of its Affiliates during the course of their employment (or other retention) by AbbVie or such Affiliate, and included in AbbVie Background Know-How or that are the subject of [***] or more AbbVie Background Patents existing as of (a) the Effective Date that claim or cover Discovery T-Cell Receptors that Bind to such Accepted Target or (b) the Amended Effective Date that claim or cover Discovery Antibodies that Bind to such Accepted Target, in each case (a) and (b) have been or will be assigned in writing to AbbVie or such Affiliate.

11.3.3 AbbVie has obtained the right (including under any Patents and other intellectual property rights) to use all Information and all other materials developed or delivered by any Third Party under any agreements between AbbVie and any such Third Party that is necessary for the Development or Commercialization of Discovery T-Cell Receptors or Discovery Antibodies, as applicable, that Bind to such Accepted Target, and AbbVie has the rights under each such agreement to transfer such Information or other materials to Harpoon and its designees and to grant Harpoon the right to use such Information or other materials in the Development of the Discovery Constructs or the Licensed Products as set forth in this Agreement.

11.3.4 Neither AbbVie nor any of its employees nor, to AbbVie's Knowledge, agents performing hereunder, have ever been, are currently, or are the subject of a proceeding that could lead to it or such employees or agents becoming, as applicable, a Debarred Entity or Debarred Individual, an Excluded Entity or Excluded Individual or a Convicted Entity or Convicted Individual or added to the FDA's Disqualified/Restricted List. If, during the Term, AbbVie, or any of its employees or agents performing hereunder, become or are the subject of a proceeding that could lead to a Person becoming, as applicable, a Debarred Entity or Debarred Individual, an Excluded Entity or Excluded Individual or a Convicted Entity or Convicted Individual or added to the FDA's Disqualified/Restricted List, AbbVie shall immediately notify Harpoon. This provision shall survive termination or expiration of this Agreement.

11.4 Covenants of Harpoon

. Harpoon covenants to AbbVie as follows:

11.4.1 During the Term, neither Harpoon nor any of its Affiliates shall encumber or diminish the rights granted to AbbVie hereunder with respect to the Harpoon Background Patents or Harpoon Program Patents, including by not (a) committing any acts or permitting the occurrence of any omissions that would cause the breach or termination of any Harpoon In-License Agreement, or (b) amending or otherwise modifying or permitting to be amended or modified, any Harpoon In-License Agreement, where such amendment or modification would adversely affect the rights granted to AbbVie hereunder. Harpoon shall promptly provide AbbVie with notice of any alleged, threatened, or actual breach of any Harpoon In-License Agreement.

11.4.2 Harpoon and its Affiliates will employ Persons with appropriate education, knowledge and experience to conduct and to oversee the Discovery Research Activities.

11.4.3 Harpoon shall have obtained from each of its Affiliates, sublicensees, employees and agents who are participating in the Exploitation of the Discovery Constructs or Licensed Products or who otherwise have access to any AbbVie Information or other Confidential Information of AbbVie, rights to any and all Information that is reasonably necessary or useful for the Development or Commercialization of Discovery Constructs or Licensed Products, in each case prior to the performance of or participation in such activities, such that AbbVie shall, by virtue of this Agreement, receive from Harpoon, without payments beyond those required by ARTICLE 7, the licenses and other rights granted to AbbVie hereunder.

11.5 Covenants of AbbVie

. AbbVie covenants to Harpoon as follows:

11.5.1 AbbVie shall have obtained from each of its Affiliates, Sublicensees, employees and agents who are participating in the Exploitation of the Discovery Constructs or Licensed Products or who otherwise have access to any Harpoon Information or other Confidential Information of Harpoon, rights to any and all Information that is reasonably necessary or useful for the Development or Commercialization of Discovery Constructs or Licensed Products, in each case prior to the performance of or participation in such activities, such that Harpoon shall, by virtue of this Agreement, receive from AbbVie, without additional consideration, the licenses specified in Section 6.2.

11.6 DISCLAIMER OF WARRANTIES

. EXCEPT FOR THE EXPRESS WARRANTIES SET FORTH HEREIN, NEITHER PARTY MAKES ANY REPRESENTATIONS OR GRANTS ANY WARRANTIES, EXPRESS OR IMPLIED, EITHER IN FACT OR BY OPERATION OF LAW, BY STATUTE OR OTHERWISE, AND EACH PARTY SPECIFICALLY DISCLAIMS ANY OTHER WARRANTIES, WHETHER WRITTEN OR ORAL, OR EXPRESS OR IMPLIED, INCLUDING ANY WARRANTY OF QUALITY, MERCHANTABILITY, OR FITNESS FOR A PARTICULAR USE OR PURPOSE OR ANY WARRANTY AS TO THE VALIDITY OF ANY PATENTS OR THE NON-INFRINGEMENT OF ANY INTELLECTUAL PROPERTY RIGHTS OF THIRD PARTIES.

ARTICLE 12
INDEMNITY

12.1 Indemnification of Harpoon

. AbbVie shall indemnify Harpoon, its Affiliates and its and their respective directors, officers, employees, and agents (the "**Harpoon Indemnitees**") and defend and save each of them harmless, from and against any and all losses, damages, liabilities, penalties, costs, and expenses (including reasonable attorneys' fees and expenses) (collectively, "**Losses**") in connection with any and all suits, investigations, claims, or demands of Third Parties (collectively, "**Third Party Claims**") incurred by or rendered against the Harpoon Indemnitees arising from or occurring as a result of: [***].

12.2 Indemnification of AbbVie

. Harpoon shall indemnify AbbVie, its Affiliates and their respective directors, officers, employees, and agents (the "**AbbVie Indemnitees**"), and defend and save each of them harmless, from and against any and all Losses in connection with any and all Third Party Claims incurred by or rendered against the AbbVie Indemnitees arising from or occurring as a result of: [***].

12.3 Notice of Claim

. All indemnification claims in respect of a Party, its Affiliates, or their respective directors, officers, employees and agents shall be made solely by such Party to this Agreement (the "**Indemnified Party**"). The Indemnified Party shall give the indemnifying Party prompt written notice (an "**Indemnification Claim Notice**") of any Losses or discovery of fact upon which such Indemnified Party intends to base a request for indemnification under this ARTICLE 12, but in no event shall the indemnifying Party be liable for any Losses that result from any delay in providing such notice. Each Indemnification Claim Notice must contain a description of the claim and the nature and amount of such Loss (to the extent that the nature and amount of such Loss is known at such time). The Indemnified Party shall furnish promptly to the indemnifying Party copies of all papers and official documents received in respect of any Losses and Third Party Claims.

12.4 Control of Defense.

12.4.1 In General. Subject to the provisions of Sections 8.4, 8.5 and 8.7, at its option, the indemnifying Party may assume the defense of any Third Party Claim by giving written notice to the Indemnified Party within [***] after the indemnifying Party's receipt of an Indemnification Claim Notice. The assumption of the defense of a Third Party Claim by the indemnifying Party shall not be construed as an acknowledgment that the indemnifying Party is liable to indemnify the Indemnified Party in respect of the Third Party Claim, nor shall it constitute a waiver by the indemnifying Party of any defenses it may assert against the Indemnified Party's claim for indemnification. Upon assuming the defense of a Third Party Claim, the indemnifying Party may appoint as lead counsel in the defense of the Third Party Claim any legal counsel selected by the indemnifying Party which shall be reasonably acceptable to the Indemnified Party. In the event the indemnifying Party assumes the defense of a Third Party Claim, the Indemnified Party shall promptly deliver to the indemnifying Party all original notices and documents (including court papers) received by the Indemnified Party in connection with the Third Party Claim. Should the indemnifying Party assume the defense of a Third Party Claim, except as provided in Section 12.4.2, the indemnifying Party shall not be liable to the Indemnified Party for any legal expenses subsequently incurred by such Indemnified Party in connection with the analysis, defense or settlement of the Third Party Claim unless specifically requested in writing by the indemnifying Party. In the event that it is ultimately determined that the indemnifying Party

is not obligated to indemnify, defend or hold harmless the Indemnified Party from and against the Third Party Claim, the Indemnified Party shall reimburse the indemnifying Party for any Losses incurred by the indemnifying Party in its defense of the Third Party Claim.

12.4.2 Right to Participate in Defense. Without limiting Section 12.4.1, any Indemnified Party shall be entitled to participate in, but not control, the defense of such Third Party Claim and to employ counsel of its choice for such purpose; provided, that such employment shall be at the Indemnified Party's own expense unless (a) the employment thereof, and the assumption by the indemnifying Party of such expense, has been specifically authorized by the indemnifying Party in writing, (b) the indemnifying Party has failed to assume the defense and employ counsel in accordance with Section 12.4.1 (in which case the Indemnified Party shall control the defense), or (c) the interests of the Indemnified Party and the indemnifying Party with respect to such Third Party Claim are sufficiently adverse to prohibit the representation by the same counsel of both Parties under Applicable Law, ethical rules or equitable principles.

12.4.3 Settlement. With respect to any Losses relating solely to the payment of money damages in connection with a Third Party Claim and that shall not result in the Indemnified Party's becoming subject to injunctive or other relief, and as to which the indemnifying Party shall have acknowledged in writing the obligation to indemnify the Indemnified Party hereunder, the indemnifying Party shall have the sole right to consent to the entry of any judgment, enter into any settlement or otherwise dispose of such Loss, on such terms as the indemnifying Party, in its sole discretion, shall deem appropriate. With respect to all other Losses in connection with Third Party Claims, where the indemnifying Party has assumed the defense of the Third Party Claim in accordance with Section 12.4.1, the indemnifying Party shall have authority to consent to the entry of any judgment, enter into any settlement or otherwise dispose of such Loss; provided, that it obtains the prior written consent of the Indemnified Party (which consent shall not be unreasonably withheld, conditioned or delayed). If the indemnifying Party does not assume and conduct the defense of a Third Party Claim as provided above, the Indemnified Party may defend against such Third Party Claim. Regardless of whether the indemnifying Party chooses to defend or prosecute any Third Party Claim, no Indemnified Party shall admit any liability with respect to, or settle, compromise or dispose of, any Third Party Claim without the prior written consent of the indemnifying Party. The indemnifying Party shall not be liable for any settlement, compromise or other disposition of a Loss by an Indemnified Party that is reached without the written consent of the indemnifying Party.

12.4.4 Cooperation. Regardless of whether the indemnifying Party chooses to defend or prosecute any Third Party Claim, the Indemnified Party shall, and shall cause each indemnitee to, cooperate in the defense or prosecution thereof and shall furnish such records, information and testimony, provide such witnesses and attend such conferences, discovery proceedings, hearings, trials and appeals as may be reasonably requested in connection therewith. Such cooperation shall include access during normal business hours afforded to the indemnifying Party to, and reasonable retention by the Indemnified Party of, records and information that are reasonably relevant to such Third Party Claim, and making Indemnified Parties and other employees and agents available on a mutually convenient basis to provide additional information and explanation of any material provided hereunder, and the indemnifying Party shall reimburse the Indemnified Party for all its reasonable out-of-pocket expenses in connection therewith.

12.4.5 Expenses. Except as provided above, the reasonable and verifiable costs and expenses, including fees and disbursements of counsel, incurred by the Indemnified Party in connection with any Third Party Claim shall be reimbursed on a Calendar Quarter basis in arrears by the indemnifying Party, without prejudice to the indemnifying Party's right to contest the Indemnified Party's right to indemnification and subject to refund in the event the indemnifying Party is ultimately held not to be obligated to indemnify the Indemnified Party.

12.5 Special, Indirect, and Other Losses

. EXCEPT (A) FOR WILLFUL MISCONDUCT OR GROSS NEGLIGENCE, (B) FOR A PARTY'S BREACH OF ITS OBLIGATIONS UNDER [***], (C) AS PROVIDED UNDER [***], AND (D) TO THE EXTENT ANY SUCH DAMAGES ARE REQUIRED TO BE PAID TO A THIRD PARTY AS PART OF A CLAIM FOR WHICH A PARTY PROVIDES INDEMNIFICATION UNDER THIS ARTICLE 12, NEITHER PARTY NOR ANY OF ITS AFFILIATES SHALL BE LIABLE FOR INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, PUNITIVE OR CONSEQUENTIAL DAMAGES, INCLUDING LOSS OF PROFITS OR BUSINESS INTERRUPTION, HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, TORT, NEGLIGENCE, BREACH OF STATUTORY DUTY OR OTHERWISE IN CONNECTION WITH OR ARISING IN ANY WAY OUT OF THE TERMS OF THIS AGREEMENT OR THE TRANSACTIONS CONTEMPLATED HEREBY OR THE USE OF THE DISCOVERY CONSTRUCTS OR LICENSED PRODUCTS, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

12.6 Insurance

. Each Party shall obtain and carry in full force and effect the minimum insurance requirements set forth herein. Such insurance (a) shall be primary insurance with respect to each Party's own participation under this Agreement, (b) shall be issued by a recognized insurer rated by [***] (or its equivalent) or better, or an insurer pre-approved in writing by the other Party, (c) shall list the other Party as an additional named insured thereunder, and (d) shall require [***]' written notice to be given to the other Party prior to any cancellation, non-renewal or material change thereof.

12.6.1 Types and Minimum Limits. The types of insurance, and minimum limits shall be:

(a) Worker's Compensation with statutory limits in compliance with the Worker's Compensation laws of the state or states in which the Party has employees in the United States (excluding Puerto Rico).

(b) Employer's Liability coverage with a minimum limit of [***]; provided, that a Party has employees in the United States (excluding Puerto Rico).

(c) General Liability Insurance with a minimum limit of [***] and [***]. General Liability Insurance, which, in the case of AbbVie only, shall include, at a minimum, Professional Liability, Clinical Trial Insurance and, beginning at least [***] prior to First Commercial Sale of a Licensed Product, product liability insurance.

12.6.2 Certificates of Insurance. Upon request by a Party, the other Party shall provide Certificates of Insurance evidencing compliance with this Section (including evidence of permitted self-insurance, as applicable). The insurance policies shall be under an occurrence form, but if only a claims-made form is available to a Party, then such Party shall continue to maintain such insurance after the expiration or termination of this Agreement for the longer of (a) a period of [***] following termination or expiration of this Agreement in its entirety, or (b) with respect to a particular Party, [***] by a Party.

12.6.3 Self-Insurance. Notwithstanding the foregoing, a Party may self-insure, in whole or in part, the insurance requirements described above, provided that such Party (on a consolidated basis with its Affiliates) has [***], and, if such Party is not publicly traded on a recognized securities exchange, upon request of the other Party, provides reasonable evidence thereof to such other Party.

ARTICLE 13
TERM AND TERMINATION

13.1 Term

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13.1.1 Term. This Agreement shall commence on the Effective Date and, unless earlier terminated in accordance herewith, shall continue in force and effect until the date of expiration of the last Royalty Term for the last Licensed Product (such period, the "**Term**").

13.1.2 Effect of Expiration of the Term. Following the expiration of the Term, the grants in Section 6.1 shall become non-exclusive, fully-paid, royalty-free and irrevocable.

13.2 Termination for Material Breach

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13.2.1 Material Breach. If either Party (the "**Non-Breaching Party**") believes that the other Party (the "**Breaching Party**") has materially breached one (1) or more of its material obligations under this Agreement, then the Non-Breaching Party may deliver notice of such material breach to the Breaching Party (a "**Default Notice**"). If the Breaching Party does not dispute that it has committed a material breach of one (1) or more of its material obligations under this Agreement, then if the Breaching Party fails to cure such breach within ninety (90) days after receipt of the Default Notice, or if such compliance cannot be fully achieved within such ninety (90) day period and the Breaching Party has failed to commence compliance or has failed to use diligent efforts to achieve full compliance as soon thereafter as is reasonably possible, the Non-Breaching Party may terminate this Agreement upon written notice to the Breaching Party. If the Breaching Party disputes that it has materially breached one (1) of its material obligations under this Agreement, the dispute shall be resolved pursuant to Section 14.7. If, as a result of the application of such dispute resolution procedures, the Breaching Party is determined to be in material breach of one (1) or more of its material obligations under this Agreement (an "**Adverse**

Ruling"), then if the Breaching Party fails to complete the actions specified by the Adverse Ruling to cure such material breach within [***] after such ruling, or if such compliance cannot be fully achieved within such [***] period and the Breaching Party has failed to commence diligent efforts to achieve full compliance as soon thereafter as is reasonably possible, then the Non-Breaching Party may terminate this Agreement upon written notice to the Breaching Party.

13.2.2 Material Breach Related to Diligence in a Major Market. Notwithstanding Section 13.2.1, if the material breach and failure to cure contemplated by Section 13.2.1 is with respect to AbbVie's Commercialization diligence obligations under Section 5.2 with respect to any Major Market, Harpoon shall not have the right to terminate this Agreement in its entirety, but shall have the right to terminate this Agreement solely with respect to such Major Market.

13.2.3 Material Breach Related to an Accepted Target. Notwithstanding Section 13.2.1, if the material breach and failure to cure contemplated by Section 13.2.1 is with respect to AbbVie's obligations under this Agreement with respect to any particular Accepted Target, Harpoon shall not have the right to terminate this Agreement in its entirety, but shall have the right to terminate this Agreement solely with respect to such Accepted Target.

13.2.4 Invocation of Material Breach. Notwithstanding the foregoing, the Parties agree that termination pursuant to this Section 13.2 is a remedy to be invoked only if the breach is not (a) cured in accordance with Section 13.2.1 (including the timeframes set forth therein), (b) remedied through the payment of money damages determined in accordance with Section 14.7 or (c) adequately remedied through a combination of (a) and (b).

13.3 Additional Termination Rights by AbbVie

.

13.3.1 For Cause. AbbVie may terminate this Agreement in its entirety or on an Accepted Target-by-Accepted Target basis effective immediately upon written notice to Harpoon in the event that (a) a Discovery Construct Failure occurs, or (b) AbbVie in good faith believes that it is not advisable for AbbVie to continue to Develop or Commercialize the Discovery Constructs or Licensed Products as a result of a serious safety issue regarding the use of any Licensed Product.

13.3.2 Termination For Convenience by AbbVie. AbbVie may terminate this Agreement in its entirety, or on a country-by-country or other jurisdiction basis, or on an Accepted Target-by-Accepted Target basis, for any or no reason, upon thirty (30) days' prior written notice to Harpoon.

13.4 Termination for Insolvency

. In the event that either Party (a) files for protection under bankruptcy or insolvency laws, (b) makes an assignment for the benefit of creditors, (c) appoints or suffers appointment of a receiver or trustee over substantially all of its property that is not discharged within [***] after such filing, (d) is a party to any dissolution or liquidation, (e) files a petition under any bankruptcy or insolvency act or has any such petition filed against it that is not discharged within [***] of the filing thereof, or (f) admits in writing its inability generally to meet its obligations as they fall due in the general course, then the

other Party may terminate this Agreement in its entirety effective immediately upon written notice to such Party.

13.5 Rights in Bankruptcy

.

13.5.1 Applicability of 11 U.S.C. § 365(n). All rights and licenses (collectively, the "**Intellectual Property**") granted under or pursuant to this Agreement, including all rights and licenses to use improvements or enhancements developed during the Term, are intended to be, and shall otherwise be deemed to be, for purposes of Section 365(n) of the United States Bankruptcy Code (the "**Bankruptcy Code**") or any analogous provisions in any other country or jurisdiction, licenses of rights to "intellectual property" as defined under Section 101(35A) of the Bankruptcy Code. The Parties agree that the licensee of such Intellectual Property under this Agreement shall retain and may fully exercise all of its rights and elections under the Bankruptcy Code, including Section 365(n) of the Bankruptcy Code, or any analogous provisions in any other country or jurisdiction. All of the rights granted to either Party under this Agreement shall be deemed to exist immediately before the occurrence of any bankruptcy case in which the other Party is the debtor.

13.5.2 Rights of non-Debtor Party in Bankruptcy. If a bankruptcy proceeding is commenced by or against either Party under the Bankruptcy Code or any analogous provisions in any other country or jurisdiction, the non-debtor Party shall be entitled to a complete duplicate of (or complete access to, as appropriate) any Intellectual Property and all embodiments of such Intellectual Property, which, if not already in the non-debtor Party's possession, shall be delivered to the non-debtor Party within [***] of such request; provided, that the debtor Party is excused from its obligation to deliver the Intellectual Property to the extent the debtor Party continues to perform all of its obligations under this Agreement and the Agreement has not been rejected pursuant to the Bankruptcy Code or any analogous provision in any other country or jurisdiction.

13.6 Termination in Entirety

.

13.6.1 In the event of a termination of this Agreement in its entirety by AbbVie pursuant to Section 13.3.2 or by Harpoon pursuant to Section 13.2.1 or 13.4:

(a) all rights and licenses granted by Harpoon hereunder shall immediately terminate;

(b) all rights and licenses granted by AbbVie hereunder shall immediately terminate, other than any Unblocking License granted pursuant to Section 2.4;

(c) AbbVie shall grant Harpoon an Unblocking License for each Accepted Target, subject to the good faith negotiation of mutually agreeable terms and conditions for such Unblocking License; and

(d) solely in the case of termination pursuant to Section 13.3.2, upon the effective date of AbbVie's notice of termination (i) AbbVie will have no further diligence obligations under this Agreement and (ii) AbbVie will not be required to make any milestone

payments to Harpoon under this Agreement for milestones achieved during the period between the notice of termination by AbbVie under Section 13.3.2 and the effective date of termination or thereafter.

13.6.2 In the event of a termination of this Agreement in its entirety by AbbVie pursuant to Sections 13.2.1 or 13.4:

(a) all rights and licenses granted by AbbVie hereunder shall immediately terminate;

(b) Harpoon will have no further obligations under this Agreement with respect to the Development of Discovery Constructs and Licensed Products, including any obligations under ARTICLE 4; and

(c) all rights and licenses granted to AbbVie hereunder shall become [***], irrevocable, unrestricted, and perpetual rights and licenses and the Parties shall [***], taking into consideration: (i) [***] or Licensed Product due to termination; (ii) [***] Licensed Product; and (iii) [***]. If, despite good faith discussions, the Parties are unable to agree on the consideration, then the dispute shall be resolved pursuant to Section 14.7.

13.7 Termination of Terminated Territory

. In the event of a termination of this Agreement with respect to a country or other jurisdiction by AbbVie pursuant to Section 13.3.2 or with respect to a Terminated Territory by Harpoon pursuant to Section 13.2.2 (but not in the case of any termination of this Agreement in its entirety), the term "Territory" shall be automatically amended to exclude the Terminated Territory and all rights and licenses granted by Harpoon hereunder (a) shall automatically be deemed to be amended to exclude, if applicable, the right to market, promote, detail, distribute, import, sell, offer for sale, file any Drug Approval Application for, or seek any Regulatory Approval for Discovery Construct or Licensed Products in such Terminated Territory, and (b) shall otherwise survive and continue in effect in such Terminated Territory solely for the purpose of furthering any Commercialization of the Discovery Constructs or Licensed Products in the Territory other than the Terminated Territory or any Development or Manufacturing in support thereof.

13.8 Termination of Accepted Target

. In the event of a termination of this Agreement with respect to one Accepted Target (the "**Terminated Target**") pursuant to Sections 13.2.3 or 13.3.2 (but not in the case of any termination of this Agreement in its entirety) then:

13.8.1 the Terminated Target shall cease to be an Accepted Target;

13.8.2 all rights and licenses granted by Harpoon hereunder shall automatically be deemed to be amended to exclude the Terminated Target but shall otherwise survive and continue in effect for the remaining Accepted Target(s);

13.8.3 all rights and licenses granted by AbbVie hereunder shall automatically be deemed to be amended to exclude the Terminated Target but shall otherwise survive and continue in effect for the remaining Accepted Target(s);

13.8.4 AbbVie shall grant Harpoon an Unblocking License for the Terminated Target, subject to the good faith negotiation of mutually agreeable terms and conditions for such Unblocking License;

13.8.5 Harpoon will have no further obligations under this Agreement with respect to the Development of Discovery Constructs and Licensed Products that are directed to the Terminated Target, including any obligation under ARTICLE 4 with respect to the Terminated Target; and

13.8.6 solely in the case of termination pursuant to Section 13.3.2, upon the effective date of AbbVie's notice of termination (i) AbbVie will have no further diligence obligations under this Agreement with respect to the Terminated Target and (ii) AbbVie will not be required to make any milestone payments to Harpoon under this Agreement for milestones achieved with respect to the Terminated Target during the period between the notice of termination by AbbVie under Section 13.3.2 and the effective date of termination or thereafter.

13.9 Remedies

. Except as otherwise expressly provided herein, termination of this Agreement (either in its entirety or with respect to one (1) or more country(ies) or other jurisdiction(s) or with respect to a Terminated Target) in accordance with the provisions hereof shall not limit remedies that may otherwise be available in law or equity.

13.10 Accrued Rights; Surviving Obligations

.

13.10.1 Termination or expiration of this Agreement (either in its entirety or with respect to one (1) or more country(ies) or other jurisdiction(s) or with respect to a Terminated Target) for any reason shall be without prejudice to any rights that shall have accrued to the benefit of a Party prior to such termination or expiration. Such termination or expiration shall not relieve a Party from obligations that are expressly indicated to survive the termination or expiration of this Agreement. Without limiting the foregoing, ARTICLE 1 (Definitions), ARTICLE 12 (Indemnification), Sections 4.7.1(b) (Regulatory Activities), 4.7.4 (Records), 5.4 (Product Trademarks), 7.11 (Interest on Late Payments), 7.12 (Audit), 7.13 (Audit Dispute), 7.14 (Confidentiality), 7.16 (No Other Compensation), 8.1.1 (Harpoon Ownership), 8.1.2 (AbbVie Ownership), 8.2.4 (Patent Prosecution and Maintenance of Product-Specific Patents), 10.2 (Confidentiality Obligations), 10.3 (Permitted Disclosures), 10.4 (Use of Name), 10.5 (Public Announcements), 10.7 (Return of Confidential Information), 10.8 (Survival), 13.6 (Termination in Entirety), 13.9 (Remedies), 13.10 (Accrued Rights; Surviving Obligations), 14.4 (Assignment), 14.5 (Severability), 14.6 (Governing Law, Jurisdiction and Service), 14.7 (Dispute Resolution), 14.8 (Notices), 14.9 (Entire Agreement; Amendments), 14.10 (English Language), 14.11 (Equitable Relief), 14.12 (Waiver and Non-Exclusion of Remedies), 14.13 (No Benefit to Third Parties), 14.14 (Further Assurance), 14.15 (Relationship of the Parties), 14.16 (Performance by Affiliates), 14.17 (Counterparts; Facsimile Execution), 14.18 (References), 14.19 (Schedules), 14.20 (Construction) and, solely with respect to Joint Program Patents, Sections 8.1.3 (Ownership of Joint Program Patents and Joint Program Know-How), 8.2.3 (Patent Prosecution and

Maintenance of AbbVie Background Patents, AbbVie Program Patents and Joint Program Patents), 8.2.5 (Cooperation), 8.3.2 (Enforcement of AbbVie Background Patents, AbbVie Program Patents, Product-Specific Patents and Joint Program Patents), 8.3.5 (Cooperation), 8.3.6 (Recovery), 8.5.4 (AbbVie Background Patents, AbbVie Program Patents, Product-Specific Patents and Joint Program Patents) and 8.5.5 (Cooperation) of this Agreement shall survive the termination or expiration of this Agreement for any reason. If this Agreement is terminated with respect to a Terminated Territory or a Terminated Target but not in its entirety, then following such termination the foregoing provisions of this Agreement shall remain in effect with respect to the Terminated Territory or Terminated Target, as applicable (to the extent they would survive and apply in the event the Agreement expires or is terminated in its entirety), and all provisions not surviving in accordance with the foregoing shall terminate upon termination of this Agreement with respect to the Terminated Territory or Terminated Target, as applicable and be of no further force and effect (and, for purposes of clarity, all provisions of this Agreement shall remain in effect with respect to all countries in the Territory other than the Terminated Territory or with respect to the Accepted Target other than the Terminated Target).

13.10.2 Notwithstanding the termination of AbbVie's licenses and other rights under this Agreement or with respect to a particular Major Market or country or other jurisdiction or with respect to a Terminated Target, as the case may be, AbbVie shall have the right for [***] after the effective date of such termination with respect to each Major Market or country or other jurisdiction or Terminated Target with respect to which such termination applies to sell or otherwise dispose of all Discovery Construct or Licensed Product then in its inventory and any in-progress inventory, in each case that is intended for sale or disposition in such Major Market or country or other jurisdiction or, in the case of a Terminated Target, in the Territory, as though this Agreement had not terminated with respect to such Major Market or country or other jurisdiction or Terminated Target, as applicable, and such sale or disposition shall not constitute infringement of Harpoon's or its Affiliates' Patent or other intellectual property or other proprietary rights. For purposes of clarity, AbbVie shall continue to make payments thereon as provided in ARTICLE 7 (as if this Agreement had not terminated with respect to such Major Market or country or other jurisdiction or Terminated Target, as applicable).

ARTICLE 14
MISCELLANEOUS

14.1 Force Majeure

. Neither Party shall be held liable or responsible to the other Party or be deemed to have defaulted under or breached this Agreement for failure or delay in fulfilling or performing any term of this Agreement when such failure or delay is caused by or results from events beyond the reasonable control of the non-performing Party, including fires, floods, earthquakes, hurricanes, embargoes, shortages, epidemics, quarantines, war, acts of war (whether war be declared or not), terrorist acts, insurrections, riots, civil commotion, strikes, lockouts, or other labor disturbances (whether involving the workforce of the non-performing Party or of any other Person), acts of God or acts, omissions or delays in acting by any governmental authority (except to the extent such delay results from the breach by the non-performing Party or any of its Affiliates of any term or condition of this Agreement). The non-performing Party shall notify the other Party of such force majeure within [***] after such occurrence by giving written notice to the other Party stating the nature of the event, its anticipated duration, and any action

being taken to avoid or minimize its effect. The suspension of performance shall be of no greater scope and no longer duration than is necessary and the non-performing Party shall use commercially reasonable efforts to remedy its inability to perform.

14.2 Change in Control of Harpoon

.

14.2.1 Harpoon (or its successor) shall provide AbbVie with written notice of any Change in Control of Harpoon or Acquisition by Harpoon within [***]

14.2.2 In the event [***]

14.3 Export Control

. This Agreement is made subject to any restrictions concerning the export of products or technical information from the United States or other countries that may be imposed on the Parties from time to time. Each Party agrees that it will not export, directly or indirectly, any technical information acquired from the other Party under this Agreement or any products using such technical information to a location or in a manner that at the time of export requires an export license or other governmental approval, without first obtaining the written consent to do so from the appropriate agency or other governmental entity in accordance with Applicable Law.

14.4 Assignment

.

14.4.1 Without the prior written consent of the other Party, such consent not to be unreasonably withheld, conditioned or delayed, neither Party shall sell, transfer, assign, delegate, pledge, or otherwise dispose of, whether voluntarily, involuntarily, by operation of law or otherwise, this Agreement or any of its rights or duties hereunder; provided, that either Party

may make such an assignment without the other Party's consent to its Affiliate or to a successor, whether in a merger, sale of stock, sale of assets or any other transaction, of the business to which this Agreement relates. With respect to an assignment to an Affiliate, the assigning Party shall remain responsible for the performance by such Affiliate of the rights and obligations hereunder. Any attempted assignment or delegation in violation of this Section 14.4 shall be void and of no effect. All validly assigned and delegated rights and obligations of the Parties hereunder shall be binding upon and inure to the benefit of and be enforceable by and against the successors and permitted assigns of Harpoon or AbbVie, as the case may be. The permitted assignee or transferee shall assume all obligations of its assignor or transferor under this Agreement. Without limiting the foregoing, the grant of rights set forth in this Agreement shall be binding upon any successor or permitted assignee of Harpoon, and the obligations of AbbVie, including the payment obligations, shall run in favor of any such successor or permitted assignee of Harpoon's benefits under this Agreement.

14.4.2 [***].

14.5 Severability

. If any provision of this Agreement is held to be illegal, invalid, or unenforceable under any present or future law, and if the rights or obligations of either Party under this Agreement will not be materially and adversely affected thereby, (a) such provision shall be fully severable, (b) this Agreement shall be construed and enforced as if such illegal, invalid, or unenforceable provision had never comprised a part hereof, (c) the remaining provisions of this Agreement shall remain in full force and effect and shall not be affected by the illegal, invalid, or unenforceable provision or by its severance herefrom, and (d) in lieu of such illegal, invalid, or unenforceable provision, there shall be added automatically as a part of this Agreement a legal, valid, and enforceable provision as similar in terms to such illegal, invalid, or unenforceable provision as may be possible and reasonably acceptable to the Parties. To the fullest extent permitted by Applicable Law, each Party hereby waives any provision of law that would render any provision hereof illegal, invalid, or unenforceable in any respect.

14.6 Governing Law, Jurisdiction and Service

.

14.6.1 Governing Law. This Agreement or the performance, enforcement, breach or termination hereof shall be interpreted, governed by and construed in accordance with the laws of the [***], excluding any conflicts or choice of law rule or principle that might otherwise refer construction or interpretation of this Agreement to the substantive law of another jurisdiction; provided, that all questions concerning (a) inventorship of Patents under this Agreement shall be determined in accordance with Section 8.1.4 and (b) the construction or effect of Patents shall be determined in accordance with the laws of the country or other jurisdiction in which the particular Patent has been filed or granted, as the case may be. The

Parties agree to exclude the application to this Agreement of the United Nations Convention on Contracts for the International Sale of Goods.

14.6.2 Service. Each Party further agrees that service of any process, summons, notice or document by registered mail to its address set forth in Section 14.8.2 shall be effective service of process for any action, suit, or proceeding brought against it under this Agreement in any such court.

14.7 Dispute Resolution

. Except for disputes resolved by the procedures set forth in Section 3.2.3 or 7.13, if a dispute arises between the Parties in connection with or relating to this Agreement, including the determination of the scope or applicability of this Section 14.7 and the agreement to arbitrate, or any document or instrument delivered in connection herewith (a "**Dispute**"), it shall be resolved pursuant to this Section 14.7.

14.7.1 General. Any Dispute shall first be referred to the Senior Officers of the Parties, who shall confer in good faith on the resolution of the issue. Any final decision mutually agreed to by the Senior Officers shall be conclusive and binding on the Parties. If the Senior Officers are not able to agree on the resolution of any such issue within [***] (or such other period of time as mutually agreed by the Senior Officers) after such issue was first referred to them, then, except as otherwise set forth in Section 14.7.2, either Party may, by written notice to the other Party, elect to initiate an arbitration proceeding pursuant to the procedures set forth in Section 14.7.3, which shall fully and finally settle the Dispute .

14.7.2 Intellectual Property Disputes. In the event that a Dispute arises with respect to the validity, scope, enforceability, inventorship or ownership of any Patent, Trademark or other intellectual property rights, and such Dispute cannot be resolved in accordance with Section 14.7.1, unless otherwise agreed by the Parties in writing, such Dispute shall not be submitted to an arbitration proceeding in accordance with Section 14.7.3 and instead, either Party may initiate litigation in a court of competent jurisdiction, notwithstanding Section 14.6, in any country or other jurisdiction in which such rights apply. In case of a Dispute between the Parties with respect to inventorship, the Parties shall jointly select a patent attorney registered before the United States Patent and Trademark Office and submit such Dispute to the mutually-selected patent attorney for resolution under the United States patent law. The decision of such patent attorney with respect to inventorship shall be final, and the Parties agree to be bound by the decision and share equally the expenses of such patent attorney.

14.7.3 Arbitration. Any arbitration proceeding under this Agreement shall take place pursuant to the procedures set forth in Schedule 14.7.3.

14.7.4 Adverse Ruling. Any determination pursuant to this Section 14.7 that a Party is in material breach of its material obligations hereunder shall specify a (nonexclusive) set of actions to be taken to cure such material breach, if feasible.

14.7.5 Interim Relief. Notwithstanding anything herein to the contrary, nothing in this Section 14.7 shall preclude either Party from seeking interim or provisional relief, including a temporary restraining order, preliminary injunction or other interim equitable relief

concerning a Dispute, if necessary to protect the interests of such Party. This Section shall be specifically enforceable.

14.8 Notices

.

14.8.1 Notice Requirements. Any notice, request, demand, waiver, consent, approval, or other communication permitted or required under this Agreement shall be in writing, shall refer specifically to this Agreement and shall be deemed given only if (a) delivered by hand, (b) sent by facsimile transmission (with transmission confirmed), or (c) by internationally recognized overnight delivery service that maintains records of delivery, addressed to the Parties at their respective addresses specified in Section 14.8.2 or to such other address as the Party to whom notice is to be given may have provided to the other Party in accordance with this Section 14.8.1. Such notice shall be deemed to have been given as of the date delivered by hand or transmitted by facsimile (with transmission confirmed) or on the second Business Day (at the place of delivery) after deposit with an internationally recognized overnight delivery service. Any notice delivered by facsimile shall be confirmed by a hard copy delivered as soon as practicable thereafter. This Section 14.8.1 is not intended to govern the day-to-day business communications necessary between the Parties in performing their obligations under the terms of this Agreement.

14.8.2 Address for Notice.

If to AbbVie, to:

AbbVie Biotechnology LTD
c/o Conyers, Dill & Pearman,
Clarendon House,
2 Church Street,
Hamilton HM 11 Bermuda

with a copy (which shall not constitute notice) to:

AbbVie Inc.
1 N. Waukegan Road
North Chicago, IL 60064-6011 USA
Attention: [***]
Facsimile: [***]

If to Harpoon, to:

Harpoon Therapeutics, Inc.
131 Oyster Point Boulevard, Suite 300
South San Francisco, CA 94080
Attention: [***]

with a copy (which shall not constitute notice) to:

Cooley LLP
3175 Hanover Street
Palo Alto, CA 94304
Attention: [***]
Facsimile: [***]

14.9 Entire Agreement; Amendments

. This Agreement, together with the Schedules attached hereto, sets forth and constitutes the entire agreement and understanding between the Parties with respect to the subject matter hereof and all prior agreements, understandings, promises, and representations, whether written or oral, with respect thereto are superseded hereby (including the Prior NDA and the Original Agreement, as previously amended). The foregoing shall not be interpreted as a waiver of any remedies available to either Party as a result of any breach, (a) prior to the Effective Date, by the other Party (or its Affiliates) of its obligations under the Prior NDA or (b) prior to the Amended Effective Date, by the other Party (or its Affiliates) of its obligations under the Original Agreement, as amended. Each Party confirms that it is not relying on any representations or warranties of the other Party except as specifically set forth in this Agreement. No amendment, modification, release, or discharge with respect to this Agreement shall be binding upon the Parties unless in writing and duly executed by authorized representatives of both Parties.

14.10 English Language

. This Agreement shall be written and executed in, and all other communications under or in connection with this Agreement shall be in, the English language. Any translation into any other language shall not be an official version thereof, and in the event of any conflict in interpretation between the English version and such translation, the English version shall control.

14.11 Equitable Relief

. Each Party acknowledges and agrees that the restrictions set forth in Section 6.8 and ARTICLE 8 and ARTICLE 10 are reasonable and necessary to protect the legitimate interests of the other Party and that such other Party would not have entered into this Agreement in the absence of such restrictions, and that any breach or threatened breach of any provision of such Section or Articles may result in irreparable injury to such other Party for which there will be no adequate remedy at law. In the event of a breach or threatened breach of any provision of such Section or Articles, the non-breaching Party shall be authorized and entitled to seek from any court of competent jurisdiction injunctive relief, whether preliminary or permanent, specific performance, and an equitable accounting of all earnings, profits, and other benefits arising from such breach, which rights shall be cumulative and in addition to any other rights or remedies to which such non-breaching Party may be entitled in law or equity. Both Parties agree to waive any requirement that the other (a) post a bond or other security as a condition for obtaining any such relief, and (b) show irreparable harm, balancing of harms, consideration of the public interest, or inadequacy of monetary damages as a remedy. Nothing in this Section 14.11 is intended, or should be construed, to limit either Party's right to equitable relief or any other remedy for a breach of any other provision of this Agreement.

14.12 Waiver and Non-Exclusion of Remedies

. Any term or condition of this Agreement may be waived at any time by the Party that is entitled to the benefit thereof, but no

such waiver shall be effective unless set forth in a written instrument duly executed by or on behalf of the Party waiving such term or condition. The waiver by either Party hereto of any right hereunder or of the failure to perform or of a breach by the other Party shall not be deemed a waiver of any other right hereunder or of any other breach or failure by such other Party whether of a similar nature or otherwise. The rights and remedies provided herein are cumulative and do not exclude any other right or remedy provided by Applicable Law or otherwise available except as expressly set forth herein.

14.13 No Benefit to Third Parties

. Except as provided in ARTICLE 11, covenants and agreements set forth in this Agreement are for the sole benefit of the Parties hereto and their successors and permitted assigns, and they shall not be construed as conferring any rights on any other Persons.

14.14 Further Assurance

. Each Party shall duly execute and deliver, or cause to be duly executed and delivered, such further instruments and do and cause to be done such further acts and things, including the filing of such assignments, agreements, documents, and instruments, as may be necessary or as the other Party may reasonably request in connection with this Agreement or to carry out more effectively the provisions and purposes hereof, or to better assure and confirm unto such other Party its rights and remedies under this Agreement.

14.15 Relationship of the Parties

. It is expressly agreed that Harpoon, on the one hand, and AbbVie, on the other hand, shall be independent contractors and that the relationship between the Parties shall not constitute a partnership, joint venture, or agency including for all tax purposes. Neither Harpoon, on the one hand, nor AbbVie, on the other hand, shall have the authority to make any statements, representations, or commitments of any kind, or to take any action, which shall be binding on the other, without the prior written consent of the other Party to do so. All persons employed by a Party shall be employees of such Party and not of the other Party and all costs and obligations incurred by reason of any such employment shall be for the account and expense of such Party.

14.16 Performance by Affiliates

. AbbVie may use one (1) or more of its Affiliates to perform its obligations and duties hereunder and such AbbVie Affiliates are expressly granted certain rights herein; provided that each such Affiliate shall be bound by the corresponding obligations of AbbVie and, subject to an assignment to such Affiliate pursuant to Section 14.4, AbbVie shall remain liable hereunder for the prompt payment and performance of all their respective obligations hereunder.

14.17 Counterparts; Facsimile Execution

. This Agreement may be executed in two (2) counterparts, each of which shall be deemed an original, but all of which together shall constitute one (1) and the same instrument. This Agreement may be executed by facsimile or electronically transmitted signatures and such signatures shall be deemed to bind each Party hereto as if they were original signatures.

14.18 References

. Unless otherwise specified, (a) references in this Agreement to any Article, Section or Schedule shall mean references to such Article, Section or Schedule of this Agreement, (b) references in any Section to any clause are references to such clause of such Section, and (c) references to any agreement, instrument, or other document in this Agreement

refer to such agreement, instrument, or other document as originally executed or, if subsequently amended, replaced, or supplemented from time to time, as so amended, replaced, or supplemented and in effect at the relevant time of reference thereto.

14.19 Schedules

. In the event of any inconsistencies between this Agreement and any schedules or other attachments hereto, the terms of this Agreement shall control.

14.20 Construction

. Except where the context otherwise requires, wherever used, the singular shall include the plural, the plural the singular, the use of any gender shall be applicable to all genders and the word "or" is used in the inclusive sense (and/or). Whenever this Agreement refers to a number of days, unless otherwise specified, such number refers to calendar days. The captions of this Agreement are for convenience of reference only and in no way define, describe, extend, or limit the scope or intent of this Agreement or the intent of any provision contained in this Agreement. The term "including," "include," or "includes" as used herein shall mean "including, but not limited to," and shall not limit the generality of any description preceding such term. The language of this Agreement shall be deemed to be the language mutually chosen by the Parties and no rule of strict construction shall be applied against either Party hereto. Each Party represents that it has been represented by legal counsel in connection with this Agreement and acknowledges that it has participated in the drafting hereof. In interpreting and applying the terms and provisions of this Agreement, the Parties agree that no presumption will apply against the Party which drafted such terms and provisions.

[SIGNATURE PAGE FOLLOWS**]**

THIS AMENDED AND RESTATED DISCOVERY COLLABORATION AND LICENSE AGREEMENT is executed by the authorized representatives of the Parties as of the Amended Effective Date.

HARPOON THERAPEUTICS, INC.	**ABBVIE BIOTECHNOLOGY LTD.**
By: /s/ Gerald McMahon	By: /s/ Robert Michael
Name: Gerald McMahon	Name: Robert Michael
Title: President and CEO	Title: Director

Schedule 1.8

[***]

Schedule 1.55

Discovery Construct Success Criteria

[***]

Schedule 1.57

Discovery Research Plan

TCR Discovery Research Plan

[***]

Antibody Discovery Research Plan
[***]

Schedule 2.1.3

Unavailable Targets as of the Amended Effective Date

[***]

Schedule 4.6

Pre-Approved Third Party Providers

[***]

Schedule 11.2.1

Existing Patents

[***]

Schedule 14.7.3

[***]

Confidential

EXECUTION COPY

CERTAIN CONFIDENTIAL INFORMATION CONTAINED IN THIS DOCUMENT, MARKED BY [***], HAS BEEN OMITTED BECAUSE IT IS BOTH NOT MATERIAL AND WOULD BE COMPETITIVELY HARMFUL IF PUBLICLY DISCLOSED.

DEVELOPMENT AND OPTION AGREEMENT

between

HARPOON THERAPEUTICS, INC.

and

ABBVIE BIOTECHNOLOGY LTD

Dated as of November 20, 2019

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DEVELOPMENT AND OPTION AGREEMENT

This Development and Option Agreement (the "**Agreement**") is made and entered into effective as of November 20, 2019 (the "**Effective Date**") by and between Harpoon Therapeutics, Inc., a Delaware corporation ("**Harpoon**"), and AbbVie Biotechnology Ltd, a Bermuda corporation ("**AbbVie**"). Harpoon and AbbVie are sometimes referred to herein individually as a "**Party**" and collectively as the "**Parties**."

RECITALS

WHEREAS, Harpoon Controls (as defined herein) certain intellectual property rights with respect to the Licensed Compound (as defined herein) and Licensed Products (as defined herein) in the Territory (as defined herein); and

WHEREAS, Harpoon wishes to grant an option to a license to AbbVie, and AbbVie wishes to take, such option to a license under such intellectual property rights to develop and commercialize Licensed Products in the Territory, in each case in accordance with the terms and conditions set forth below.

NOW, THEREFORE, in consideration of the premises and the mutual promises and conditions hereinafter set forth, and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Parties, intending to be legally bound, do hereby agree as follows:

ARTICLE 1
DEFINITIONS

Unless otherwise specifically provided herein, the following terms shall have the following meanings:

1.1 "**AbbVie**" has the meaning set forth in the preamble hereto.

1.2 [***] has the meaning set forth in [***]

1.3 [***] has the meaning set forth in [***].

1.4 [***] has the meaning set forth in [***]

1.5 [***] has the meaning set forth in [***].

1.6 "**AbbVie [***] Rights**" has the meaning set forth in Section 5.9.2.

1.7 "**AbbVie Indemnitees**" has the meaning set forth in Section 11.2.

1.8 "**AbbVie Know-How**" means all Information that is (a) Controlled by AbbVie or any of its Affiliates during the Term, (b) developed or acquired by AbbVie or any of its Affiliates during the Term as a result of performance under this Agreement, (c) not generally known and (d) necessary or reasonably useful for the Exploitation of the Licensed Compound or a Licensed Product, but excluding any Joint Know-How or Information published in any AbbVie Patents or Joint Patents.

1.9 "**AbbVie Patents**" means all of the Patents that (a) are Controlled by AbbVie or any of its Affiliates during the Term, (b) claim inventions made or conceived by or on behalf of AbbVie or any of its Affiliates during the Term as a result of performance under this Agreement, and (c) are necessary or reasonably useful (or, with respect to patent applications, would be necessary or reasonably useful if such

patent applications were to issue as patents) for the Exploitation of the Licensed Compound or a Licensed Product, but excluding any Joint Patents.

1.10 "**AbbVie Reversion IP**" has the meaning set forth in Section 12.7.1.

1.11 "**AbbVie Withholding Tax Action**" has the meaning set forth in Section 6.8.2.

1.12 "**Acceptance**" means, with respect to a Drug Approval Application, receipt of written notice from the applicable Regulatory Authority indicating that such Drug Approval Application has been accepted for filing and further review.

1.13 "**Accounting Standards**" means, with respect to a Party, that such Party shall maintain records and books of accounts in accordance with United States Generally Accepted Accounting Principles.

1.14 "**Acquisition**" means, with respect to a Party, a merger, acquisition (whether of all of the stock or all or substantially all of the assets of a Person or any operating or business division of a Person) or similar transaction by or with the Party, other than a Change in Control of the Party.

1.15 "**Adverse Ruling**" has the meaning set forth in Section 12.2.1.

1.16 "**Affiliate**" means, with respect to a Party, any Person that, directly or indirectly, through one (1) or more intermediaries, controls, is controlled by or is under common control with such Party. For purposes of this definition, "control" and, with correlative meanings, the terms "controlled by" and "under common control with" means (a) the possession, directly or indirectly, of the power to direct the management or policies of a Person, whether through the ownership of voting securities, by contract relating to voting rights or corporate governance, or otherwise; or (b) the ownership, directly or indirectly, of more than fifty percent (50%) of the voting securities or other ownership interest of a Person (or, with respect to a limited partnership or other similar entity, its general partner or controlling entity). The Parties acknowledge that in the case of certain entities organized under the laws of certain countries outside of the United States, the maximum percentage ownership permitted by law for a foreign investor may be less than fifty percent (50%), and that in such case such lower percentage shall be substituted in the preceding sentence, *provided* that such foreign investor has the power to direct the management or policies of such entity.

1.17 "**Agreement**" has the meaning set forth in the preamble hereto.

1.18 "**Alliance Manager**" has the meaning set forth in Section 2.2.5.

1.19 "**Applicable Law**" means federal, state, local, national and supra-national laws, statutes, rules, and regulations, including any rules, regulations, regulatory guidelines, or other requirements of the Regulatory Authorities, major national securities exchanges or major securities listing organizations, that may be in effect from time to time during the Term and applicable to a particular activity or country or other jurisdiction hereunder.

1.20 "**Audit Expert**" has the meaning set forth in Section 6.12.

1.21 "**Bankruptcy Code**" has the meaning set forth in Section 12.5.1.

1.22 "**BCMA**" means that specific protein known as B-cell maturation antigen or tumor necrosis factor receptor superfamily member 17 (TNFRSF17) or CD269 in addition to any other known aliases [***].

1.23 "**Biosimilar Application**" has the meaning set forth in Section 7.3.3.

1.24 "**Biosimilar Product**" means, with respect to a particular Licensed Product in a particular country, a biologic product that is (a) substantially similar to or interchangeable with such Licensed Product, such that the application for a BLA for such biologic product submitted to the applicable Regulatory Authority relies in whole or in part on a prior BLA granted to such Licensed Product (including any application for such biological product submitted under Section 351(k) of the PHSA or successor law, or other analogous Applicable Law, citing the Licensed Product as the reference product), or (b) determined by the applicable Regulatory Authority to be interchangeable with such Licensed Product, as set forth at 42 U.S.C. § 262(k)(4) or successor law, or other analogous Applicable Law outside of the United States. A biological product licensed under the same BLA as the Licensed Product will not constitute a Biosimilar Product.

1.25 "**BLA**" has the meaning set forth in the definition of "Drug Approval Application."

1.26 "**Board of Directors**" has the meaning set forth in the definition of "Change in Control."

1.27 "**Breaching Party**" has the meaning set forth in Section 12.2.1.

1.28 "**Business Day**" means a day other than a Saturday or Sunday on which banking institutions in New York, New York are open for business.

1.29 "**Calendar Quarter**" means each successive period of three (3) calendar months commencing on January 1, April 1, July 1 and October 1, except that the first Calendar Quarter of the Term shall commence on the Effective Date and end on the day immediately prior to the first to occur of January 1, April 1, July 1 or October 1 after the Effective Date, and the last Calendar Quarter shall end on the last day of the Term.

1.30 "**Calendar Year**" means each successive period of twelve (12) calendar months commencing on January 1 and ending on December 31, except that the first Calendar Year of the Term shall commence on the Effective Date and end on December 31 of the year in which the Effective Date occurs and the last Calendar Year of the Term shall commence on January 1 of the year in which the Term ends and end on the last day of the Term.

1.31 "**Change in Control**," with respect to a Party, shall be deemed to have occurred if any of the following occurs after the Effective Date:

1.31.1 any "person" or "group" (as such terms are defined below) (a) is or becomes the "beneficial owner" (as defined below), directly or indirectly, of shares of capital stock or other interests (including partnership interests) of such Party then outstanding and normally entitled (without regard to the occurrence of any contingency) to vote in the election of the directors, managers or similar supervisory positions ("**Voting Stock**") of such Party representing fifty percent (50%) or more of the total voting power of all outstanding classes of Voting Stock of such Party or (b) has the power, directly or indirectly, to elect a majority of the members of the Party's board of directors, or similar governing body ("**Board of Directors**"); excluding in each case (subclauses (a) and (b)) [***]; or

1.31.2 such Party enters into a merger, consolidation or similar transaction with another Person (whether or not such Party is the surviving entity) and as a result of such merger, consolidation or similar transaction (a) the members of the Board of Directors of such Party immediately prior to such transaction constitute less than a majority of the members of the Board of Directors of such Party or such surviving Person immediately following such transaction or (b) the Persons that beneficially owned, directly

or indirectly, the shares of Voting Stock of such Party immediately prior to such transaction cease to beneficially own, directly or indirectly, shares of Voting Stock of such Party representing at least a majority of the total voting power of all outstanding classes of Voting Stock of the surviving Person in substantially the same proportions as their ownership of Voting Stock of such Party immediately prior to such transaction; or

1.31.3 such Party sells or transfers to any Third Party, in one (1) or more related transactions, properties or assets representing all or substantially all of such Party's assets to which this Agreement relates; or

1.31.4 the holders of capital stock of such Party approve a plan or proposal for the liquidation or dissolution of such Party.

For the purpose of this definition of Change in Control, (a) "person" and "group" have the meanings given such terms under Section 13(d) and 14(d) of the United States Securities Exchange Act of 1934 and the term "group" includes any group acting for the purpose of acquiring, holding or disposing of securities within the meaning of Rule 13d-5(b)(1) under the said Act; (b) a "beneficial owner" shall be determined in accordance with Rule 13d-3 under the aforesaid Act; and (c) the terms "beneficially owned" and "beneficially own" shall have meanings correlative to that of "beneficial owner."

1.32 [***]

1.33 "**Clinical Data**" means [***] Information with respect to any Licensed Compound or Licensed Product and made, collected, or otherwise generated under or in connection with Clinical Studies, including any data (including raw data), reports, and results with respect thereto.

1.34 "**Clinical Studies**" means Phase 0, Phase I, Phase II, Phase III, and such other tests and studies in human subjects that are required by Applicable Law, or otherwise recommended by the Regulatory Authorities, to obtain or maintain Regulatory Approvals for a Licensed Product for one (1) or more indications, including tests or studies that are intended to expand the Product Labeling for such Licensed Product with respect to such indication.

1.35 "**CMC**" has the meaning set forth in the definition of "Initial Development Plan."

1.36 "**CMC Working Group**" has the meaning set forth in Section 2.5.

1.37 "**Combination Product**" means a Licensed Product that is: (a) sold in the form of a combination product containing both a Licensed Compound and one (1) or more other therapeutically active pharmaceutical or biologic products; or (b) sold in a form that contains (or is sold bundled with) any (i) diagnostic product or (ii) other product that is administered separately from the Licensed Product, in both cases (subclauses (a) and (b)) sold as a unit at a single price and excluding any Delivery System.

1.38 "**Commercialization**" means any and all activities directed to the preparation for sale of, offering for sale of, or sale of a Licensed Compound or Licensed Product, including activities related to marketing, promoting, distributing, importing and exporting such Licensed Compound or Licensed Product, and interacting with Regulatory Authorities regarding any of the foregoing. When used as a verb, "**to Commercialize**" and "**Commercializing**" means to engage in Commercialization, and "**Commercialized**" has a corresponding meaning.

1.39 "**Commercially Reasonable Efforts**" means with respect to [***].

1.40 [***]

1.41 "**Competitor**" means any Person that [***], or (b) that [***].

1.42 "**Confidential Information**" means any Information provided orally, visually, in writing or other form by or on behalf of one (1) Party (or an Affiliate or representative of such Party) to the other Party (or to an Affiliate or representative of such other Party) in connection with this Agreement, whether prior to, on, or after the Effective Date, including Information relating to the terms of this Agreement, the Licensed Compound or any Licensed Product (including the Regulatory Documentation and regulatory data), any Exploitation of the Licensed Compound or any Licensed Product, any know-how with respect thereto developed by or on behalf of the disclosing Party or its Affiliates, or the scientific, regulatory or business affairs or other activities of either Party. Notwithstanding the foregoing, (a) Joint Know-How shall be deemed to be the Confidential Information of both Parties, and both Parties shall be deemed to be the receiving Party and the disclosing Party with respect thereto, and (b) following the License Option Exercise Closing Date, all Regulatory Documentation owned by AbbVie pursuant to Section 3.8.2 shall be deemed to be the Confidential Information of AbbVie, and AbbVie shall be deemed to be the disclosing Party and Harpoon shall be deemed to be the receiving Party with respect thereto. In addition, all information disclosed by Harpoon to AbbVie under the Prior NDA shall be deemed to be Harpoon's Confidential Information disclosed hereunder, and all information disclosed by AbbVie Inc. to Harpoon under the Prior NDA shall be deemed to be AbbVie's Confidential Information disclosed hereunder.

1.43 "**Control**" means, with respect to any item of Information, Regulatory Documentation, material, Patent, or other property right, the possession of the right, whether directly or indirectly, and whether by ownership, license or otherwise (other than by operation of the license and other grants in Sections 5.1 or 5.2), to grant a license, sublicense or other right (including the right to reference Regulatory Documentation) to or under such Information, Regulatory Documentation, material, Patent, or other property right as provided for herein without violating the terms of any agreement or other arrangement with any Third Party. "**Controlled**" has a corresponding meaning.

1.44 "**CSR Notification Date**" has the meaning set forth in Section 12.6.3(e).

1.45 "**Default Notice**" has the meaning set forth in Section 12.2.1.

1.46 "**Delivery System**" has the meaning set forth in the definition of "Net Sales."

1.47 "**Development**" means all activities related to pre-clinical and other non-clinical testing, test method development and stability testing, toxicology, formulation, process development, manufacturing scale-up, qualification and validation, quality assurance/quality control, Clinical Studies, including Manufacturing in support thereof, statistical analysis and report writing, the preparation and submission of Drug Approval Applications, regulatory affairs with respect to the foregoing and all other activities necessary or reasonably useful or otherwise requested or required by a Regulatory Authority as a condition or in support of obtaining or maintaining a Regulatory Approval. When used as a verb, "**Develop**" means to engage in Development. For purposes of clarity, Development shall include any submissions and activities required in support thereof, required by Applicable Laws or a Regulatory Authority as a condition or in support of obtaining a pricing or reimbursement approval for an approved Licensed Product.

1.48 "**Development Report Review Deadline**" means [***] following the initial delivery of any [***], as applicable.

1.49 "**Dispute**" has the meaning set forth in Section 13.7.

1.50 "**Distributor**" has the meaning set forth in Section 5.4.

1.51 "**Divestiture**" means, with respect to a Party, (a) the divestiture [***] through [***] or [***] with respect to [***] (for clarity, the [***] for any such divestiture), or (b) [***]. When used as a verb, "**Divest**" and "**Divested**" means to cause a Divestiture.

1.52 "**Dollars**" or "**$**" means United States Dollars.

1.53 "**Drug Approval Application**" means a Biologics License Application (a "**BLA**") as defined in the PHSA, or any corresponding foreign application in the Territory, including, with respect to the European Union, a Marketing Authorization Application (a "**MAA**") filed with the EMA or with the applicable Regulatory Authority of a country in Europe with respect to the mutual recognition or any other national approval procedure.

1.54 "[***]" means the [***] by Harpoon to AbbVie within [***] following Harpoon's receipt of written notice from AbbVie pursuant to [***] prior to the date of AbbVie's receipt of the [***].

1.55 "**Effective Date**" means the effective date of this Agreement as set forth in the preamble hereto.

1.56 "**EMA**" means the European Medicines Agency and any successor agency(ies) or authority having substantially the same function.

1.57 "**European Major Market**" means each of [***].

1.58 "**European Union**" or "**E.U.**" means the economic, scientific, and political organization of member states known as the European Union, as its membership may be altered from time to time, and any successor thereto.

1.59 "**Existing Patents**" has the meaning set forth in Section 10.2.1.

1.60 "**Exploit**," "**Exploited**" or "**Exploitation**" means to make, have made, import, export, use, sell, or offer for sale, including to Develop, Commercialize, register, modify, enhance, improve, Manufacture, have Manufactured, hold, or keep (whether for disposal or otherwise), formulate, optimize, have used, export, transport, distribute, promote, market, have sold or otherwise dispose of.

1.61 "**FDA**" means the United States Food and Drug Administration and any successor agency(ies) or authority having substantially the same function.

1.62 "**FFDCA**" means the United States Federal Food, Drug, and Cosmetic Act, 21 U.S.C. § 301 *et seq.*, as amended from time to time, together with any rules, regulations and requirements promulgated thereunder (including all additions, supplements, extensions, and modifications thereto).

1.63 "**Field**" means all human and non-human diagnostic, prophylactic, and therapeutic uses.

1.64 "**Final Development Report**" means the final written data package delivered by Harpoon to AbbVie in accordance with Section 3.1.3, after the completion of all activities under the Initial Development Plan, including, for clarity, [***], and comprised of the [***]. The Final Development Report shall include [***].

1.65 "**First Commercial Sale**" means, with respect to a Licensed Product and a country, the first sale for monetary value for use or consumption by the end user of such Licensed Product in such country after Regulatory Approval for such Licensed Product has been obtained in such country. [***] shall not be construed as a First Commercial Sale.

1.66 "**Harpoon**" has the meaning set forth in the preamble hereto.

1.67 "**Harpoon In-License Agreement**" means [***] agreement between Harpoon and a Third Party under which AbbVie is granted a sublicense or other right under this Agreement as provided in Section 5.9.

1.68 "**Harpoon Indemnitees**" has the meaning set forth in Section 11.1.

1.69 "**Harpoon Know-How**" means all Information that is (a) Controlled by Harpoon or any of its Affiliates as of the Effective Date or at any time during the Term, (b) not generally known and (c) necessary or reasonably useful for the Exploitation of any Licensed Compound or any Licensed Product, but excluding any Joint Know-How or Information published in any (i) Harpoon Patents or (ii) Joint Patents.

1.70 "**Harpoon Patents**" means all of the Patents that are (a) Controlled by Harpoon or any of its Affiliates as of the Effective Date or at any time during the Term and (b) necessary or reasonably useful (or, with respect to Patent applications, would be necessary or reasonably useful if such Patent applications were to issue as Patents) for the Exploitation of any Licensed Compound or any Licensed Product, but excluding Joint Patents. The Harpoon Patents include the Existing Patents.

1.71 [***] has the meaning set forth in [***].

1.72 "**Harpoon Reversion Products**" has the meaning set forth in Section 12.6.1.

1.73 "**HSR Act**" means the Hart-Scott-Rodino Antitrust Improvements Act of 1976, as amended.

1.74 "**HSR Filing**" has the meaning set forth in Section 3.2.4(b).

1.75 "**In-Licensed Patents**" has the meaning set forth in Section 10.2.3.

1.76 "**IND**" means an application filed with a Regulatory Authority for authorization to commence Clinical Studies, including (a) an Investigational New Drug Application as defined in the FFDCA or any successor application or procedure filed with the FDA, (b) any equivalent thereof in other countries or regulatory jurisdictions, (e.g., a Clinical Trial Application (CTA) in the European Union) and (c) all supplements, amendments, variations, extensions and renewals thereof that may be filed with respect to the foregoing.

1.77 "**Indemnification Claim Notice**" has the meaning set forth in Section 11.3.

1.78 "**Indemnified Party**" has the meaning set forth in Section 11.3.

1.79 "**Indication**" means, with respect to a Licensed Product, a use to which such Licensed Product is intended to be put for the treatment, prevention, mitigation, cure or diagnosis of a recognized disease

or condition, or of a manifestation of a recognized disease or condition, or for the relief of symptoms associated with a recognized disease or condition, in each case for any size patient population, which, if such Licensed Product is approved in the U.S., would be reflected in the "Indications and Usage" section of labeling pursuant to 21 C.F.R. §201.57(c)(2) or, to the extent applicable, any comparable labeling section outside the U.S., subject to the following: (a) subtypes of the same disease or condition are not additional Indications for such Licensed Product; (b) different symptom domains or domains of impairment of the same disease or condition are not additional Indications for such Licensed Product; (c) the approved use of such Licensed Product for such disease in different combinations or co-therapies of treatments are not additional Indications for such Licensed Product (e.g., monotherapy vs. add-on or combination therapy with another agent in the same disease); (d) treatment, prevention and cure of the same disease or the same disease subtype with such Licensed Product are not additional Indications for such Licensed Product; (e) the approved use of such Licensed Product for such disease in a different line of treatment or a different temporal position in a treatment algorithm for the same disease or condition are not additional Indications for such Licensed Product (e.g., first line vs. second line therapy in the same disease or condition); and (f) treatment of the same disease or condition with such Licensed Product in an expanded, modified or additional patient population are not additional Indications for such Licensed Product.

1.80 "**Indirect Taxes**" has the meaning set forth in Section 6.9.

1.81 [***]

1.82 "**Information**" means all information of a technical, scientific, business and other nature, including know-how, technology, means, methods, processes, practices, formulae, instructions, skills, techniques, procedures, experiences, ideas, technical assistance, designs, drawings, assembly procedures, computer programs, apparatuses, specifications, data, results and other material, regulatory data, and other biological, chemical, pharmacological, toxicological, pharmaceutical, physical and analytical, pre-clinical, clinical, safety, manufacturing and quality control data and information, including study designs and protocols, reagents (including all physical materials in connection with any of the foregoing such as plasmids, proteins, cell lines, assays, materials generated in connection with any CMC activities and compounds) and biological methodology; in each case (whether or not confidential, proprietary, patented or patentable, of commercial advantage or not) in written, electronic or any other form now known or hereafter developed.

1.83 "**Initial Development Activities**" means any and all Development activities set forth in the Initial Development Plan to be performed by Harpoon (or, pursuant to Section 3.1.2, AbbVie) in order to advance the Licensed Compound and Licensed Product to the point of readiness to commence [***] (or to proceed directly to pivotal clinical trials, if applicable) and ultimately support the filing of Drug Approval Applications and obtain Regulatory Approvals for a Licensed Product in the Field in the Territory.

1.84 "**Initial Development Plan**" means a development plan for the Licensed Compounds and Licensed Products setting forth (a) in reasonable detail all Development and regulatory activities to be performed by Harpoon with respect to the Licensed Compounds and Licensed Products through completion of the Phase I/IB Trial, including related activities as applicable (but, for clarity, except with respect to [***]), (b) all Clinical Data and other Information required to be delivered to AbbVie pursuant to Section 1.112 in order for AbbVie to determine whether to exercise the License Option, and (c) all Information to be included in the Final Development Report (i.e. as a result of

activities conducted after the delivery of the Opt-In Development Report), which Initial Development Plan is attached as Schedule 1.84, as the same may be amended from time to time in accordance with the terms hereof.

1.85 "**Initiation**" or "**Initiate**" means, with respect to a Clinical Study, the first dosing of the first human subject in such Clinical Study.

1.86 "**Intellectual Property**" has the meaning set forth in Section 12.5.1.

1.87 "**Joint Governance Committee**" or "**JGC**" has the meaning set forth in Section 2.1.1.

1.88 "**Joint Intellectual Property Rights**" has the meaning set forth in Section 7.1.2.

1.89 "**Joint Know-How**" has the meaning set forth in Section 7.1.2.

1.90 "**Joint Patents**" has the meaning set forth in Section 7.1.2.

1.91 "**Knowledge**" means [***] of the [***] of a Party, or any personnel holding positions equivalent to such job titles (but only to the extent such positions exist at such Party).

1.92 [***]

1.93 [***]

1.94 [***]

1.95 "**License Option**" has the meaning set forth in Section 3.2.3.

1.96 "**License Option Exercise Closing Date**" has the meaning set forth in Section 3.2.4.

1.97 "**License Option Exercise Notice**" has the meaning set forth in Section 3.2.3.

1.98 "**License Option Period**" has the meaning set forth in Section 3.2.3.

1.99 "**Licensed Compound**" means (a) the compound known as HPN217 (as described on Schedule 1.99), [***].

1.100 "**Licensed Product**" means any product, or portion thereof, containing a Licensed Compound, alone or in combination with one (1) or more other active ingredients, in any and all forms, in

current and future formulations, dosages forms and strengths, and delivery modes, including any improvements thereto. For clarity, Licensed Products that contain the same Licensed Compound (whether or not with one or more active ingredients (if applicable)), but in a different formulation, dosage form or delivery device, shall be considered the same Licensed Product for the purposes of calculating milestone and royalty payments hereunder.

1.101 "**Losses**" has the meaning set forth in Section 11.1.

1.102 "**MAA**" has the meaning set forth in the definition of "Drug Approval Application."

1.103 "**Major Market**" means each of [***].

1.104 "**Major Regulatory Filing**" means major regulatory filings and documents (including INDs, Drug Approval Applications, material labeling supplements, Regulatory Authority meeting requests, and core data sheets).

1.105 "**Manufacture**" and "**Manufacturing**" means all activities related to the synthesis, making, production, processing, purifying, formulating, filling, finishing, packaging, labeling, shipping, and holding of the Licensed Compound, any Licensed Product, or any intermediate thereof, including process development, process qualification and validation, scale-up, pre-clinical, clinical and commercial production and analytic development, product characterization, stability testing, quality assurance, and quality control.

1.106 "**Manufacturing Process**" has the meaning set forth in Section 4.6.1.

1.107 "**Manufacturing Technology Transfer**" has the meaning set forth in Section 4.6.1.

1.108 "**Net Sales**" means[***]

(a) [***]

(b) [***]

(c) [***]

(d) [***]

(e) [***]

(f) [***] of such Licensed Product and to the extent [***]

[***], where for purposes of this Net Sales definition, [***] of such Licensed Product;

(g) [***]

(h) [***]

(i) [***]

(j) [***], but which [***].

[***]

In the event that a Licensed Product is sold in any country or other jurisdiction [***]

(i) [***].

(ii) [***]

(iii) [***]

(iv) [***].

1.109 "**Non-Breaching Party**" has the meaning set forth in Section 12.2.1.

1.110 [***]

1.111 "**Opt-In Dataset**" has the meaning set forth in the definition of "Opt-In Development Report."

1.112 "**Opt-In Development Report**" means the written data package delivered by Harpoon to AbbVie and generated from the clinical dataset extracted from the [***] as it exists at the date that is [***] (the "**Opt-In Dataset**" and such date the "**Opt-In Development Report Dataset Cutoff Date**"). The Opt-In Dataset will arise from the conduct of the Initial Development Activities and will include information available in the [***] as of the Opt-In Development Report Generation Date related to [***]. In addition to the information and data set forth above based on the Opt-In Dataset, the Opt-In Development Report will include[***].

1.113 "**Opt-In Development Report Dataset Cut-Off Date**" has the meaning set forth in the definition of "Opt-In Development Report."

1.114 "**Other Product**" means, with respect to a Combination Product, such other therapeutically active pharmaceutical or biologic products referenced in Section 1.37(a) or such diagnostic or other product referenced in Section 1.37(b), in each case other than the Licensed Compound.

1.115 "**Owned Patents**" has the meaning set forth in Section 10.2.3.

1.116 "**Party**" and "**Parties**" has the meaning set forth in the preamble hereto.

1.117 "**Patents**" means (a) all national, regional and international patents and patent applications, including provisional patent applications, (b) all patent applications filed either from such patents, patent applications or provisional applications or from an application claiming priority from either of these, including divisionals, continuations, continuations-in-part, provisionals, converted provisionals and continued prosecution applications, (c) any and all patents that have issued or in the future issue from the foregoing patent applications ((a) and (b)), including utility models, petty patents and design patents and certificates of invention, (d) any and all extensions or restorations by existing or future extension or restoration mechanisms, including revalidations, reissues, re-examinations and extensions (including any pediatric exclusivity and other such exclusivities that are attached to patents, supplementary protection certificates and the like) of the foregoing patents or patent applications ((a), (b), and (c)), and (e) any similar rights, including so-called pipeline protection or any importation, revalidation, confirmation or introduction patent or registration patent or patent of additions to any of such foregoing patent applications and patents.

1.118 "**Person**" means an individual, sole proprietorship, partnership, limited partnership, limited liability partnership, corporation, limited liability company, business trust, joint stock company, trust, unincorporated association, joint venture or other similar entity or organization, including a government or political subdivision, department or agency of a government.

1.119 "**Phase 0**" means an exploratory, first-in-human trial conducted in accordance with the FDA 2006 Guidance on Exploratory Investigational New Drug Studies (or the equivalent in any country or other jurisdiction outside of the United States) and designed to expedite the development of therapeutic or imaging agents by establishing very early on whether the agent behaves in human subjects as was anticipated from pre-clinical studies.

1.120 "**Phase I**" means a human clinical trial of a Licensed Compound or Licensed Product, the principal purpose of which is a preliminary determination of safety, tolerability, pharmacological activity or pharmacokinetics in healthy individuals or patients or similar clinical study prescribed by the Regulatory Authorities, including the trials referred to in 21 C.F.R. §312.21(a), as amended.

1.121 "**Phase I/IB Trial**" means the Phase I or I/II study of a Licensed Compound or Licensed Product incorporating dose escalation and cohort expansion studies as described in the Initial Development Plan (as it may be amended from time to time in accordance with Section 3.1.1).

1.122 "**Phase II**" means a human clinical trial of a Licensed Compound or Licensed Product, the principal purpose of which is a determination of safety and efficacy in the target patient population, which is prospectively designed to generate sufficient data that may permit commencement of pivotal clinical trials, or a similar clinical study prescribed by the Regulatory Authorities, from time to time, pursuant to Applicable Law or otherwise, including the trials referred to in 21 C.F.R. §312.21(b), as amended.

1.123 "**Phase III**" means a human clinical trial of a Licensed Compound or Licensed Product on a sufficient number of subjects in an indicated patient population that is designed to establish that a Licensed Compound or Licensed Product is safe and efficacious for its intended use and to determine the benefit/risk relationship, warnings, precautions, and adverse reactions that are associated with such product in the dosage range to be prescribed, which trial is intended to support marketing approval of such Licensed Compound or Licensed Product, including all tests and studies that are required by the FDA from time to time, pursuant to Applicable Law or otherwise, including the trials referred to in 21 C.F.R. §312.21(c), as amended.

1.124 "**PHSA**" means the United States Public Health Service Act, as amended from time to time.

1.125 "**PMDA**" means Japan's Pharmaceuticals and Medical Devices Agency and any successor agency(ies) or authority having substantially the same function.

1.126 "**Post CSR Option Period**" has the meaning set forth in Section 12.6.3(e).

1.127 "**Prior NDA**" has the meaning set forth in Section 13.9.

1.128 "**Product Information**" has the meaning set forth in Section 9.1.

1.129 "**Product Infringement**" has the meaning set forth in Section 7.3.1.

1.130 "**Product Labeling**" means, with respect to a Licensed Product in a country or other jurisdiction in the Territory, (a) the full prescribing information for such Licensed Product as approved by the Regulatory Authority for such country or other jurisdiction, including any required patient information, and (b) all labels and other written, printed, or graphic matter upon a container, wrapper, or any package insert utilized with or for such Licensed Product in such country or other jurisdiction.

1.131 "**Product-Specific Claims**" has the meaning set forth in Section 7.2.1(a).

1.132 "**Product-Specific Patents**" has the meaning set forth in Section 7.2.1(b).

1.133 "**Product Trademarks**" means the Trademark(s) to be used by AbbVie or its Affiliates or its or their respective Sublicensees for the Development, Commercialization or Exploitation of Licensed Products in the Territory and any registrations thereof or any pending applications relating thereto in the Territory (excluding, in any event, any trademarks, service marks, names or logos that include any corporate name or logo of the Parties or their Affiliates).

1.134 "**Proposed Future In-Licensed Rights**" has the meaning set forth in Section 5.9.

1.135 "**Regulatory Approval**" means, with respect to a country or other jurisdiction in the Territory, all approvals (including Drug Approval Applications), licenses, registrations, or authorizations of

any Regulatory Authority necessary to Commercialize a Licensed Compound or Licensed Product in such country or other jurisdiction, including, where applicable, pricing or reimbursement approval in such country or other jurisdiction.

1.136 "**Regulatory Authority**" means any applicable supra-national, federal, national, regional, state, provincial, or local governmental or regulatory authority, agency, department, bureau, commission, council, or other entities (e.g., the FDA, EMA and PMDA) regulating or otherwise exercising authority with respect to activities contemplated in this Agreement, including the Exploitation of the Licensed Compound or Licensed Products in the Territory.

1.137 "**Regulatory Documentation**" means all (a) applications (including all INDs and Drug Approval Applications and other Major Regulatory Filings), registrations, licenses, authorizations, and approvals (including Regulatory Approvals), (b) correspondence and reports submitted to or received from Regulatory Authorities (including minutes and official contact reports relating to any communications with any Regulatory Authority) and all supporting documents with respect thereto, including all regulatory drug lists, advertising and promotion documents, adverse event files, and complaint files, and (c) Clinical Data and data contained or relied upon in any of the foregoing, in each case ((a), (b), and (c)) to the extent relating to a Licensed Compound or Licensed Product.

1.138 "**Regulatory Exclusivity**" means, with respect to any country or other jurisdiction in the Territory, an additional market protection, other than Patent protection, granted by a Regulatory Authority in such country or other jurisdiction which confers an exclusive Commercialization period during which AbbVie or its Affiliates or Sublicensees has the exclusive right to market and sell, and any unauthorized Third Party is prevented from marketing or selling, a Licensed Compound or Licensed Product in such country or other jurisdiction.

1.139 "**Royalty Term**" means, with respect to each Licensed Product and each country or other jurisdiction in the Territory, the period beginning on the date of the First Commercial Sale of such Licensed Product in such country or other jurisdiction, and ending on the latest to occur of (a) the expiration, invalidation or abandonment date of the last Harpoon Patent (i)[***] in such country or other jurisdiction; or (ii) [***] in such country or other jurisdiction; (b) the expiration of Regulatory Exclusivity in such country or other jurisdiction for such Licensed Product; or (c) the [***] of the First Commercial Sale of such Licensed Product in such country or other jurisdiction.

1.140 "**Segregate**" means, with respect to a [***] relating to such [***] relating to the [***] *provided* that, [***] in connection [***].

1.141 "**Senior Officer**" means, with respect to Harpoon, its [***], and with respect to AbbVie, its [***].

1.142 "**Sublicensee**" means a Person, other than an Affiliate or a Distributor, that is granted a sublicense by AbbVie or its Affiliate under the grants in Section 5.1 as provided in Section 5.3 but excluding any sublicense granted by AbbVie or its Affiliate as a result of settlement of patent litigation with respect to a Biosimilar Product.

1.143 "**Term**" has the meaning set forth in Section 12.1.1.

1.144 "**Terminated Territory**" means each Major Market with respect to which this Agreement is terminated by Harpoon pursuant to Section 12.2.2, each country with respect to which this Agreement is terminated by AbbVie pursuant to Section 12.3, or if this Agreement is terminated in its entirety, the entire Territory.

1.145 "**Territory**" means the entire world.

1.146 "**Third Party**" means any Person other than Harpoon, AbbVie and their respective Affiliates.

1.147 "**Third Party Claims**" has the meaning set forth in Section 11.1.

1.148 "**Third Party Provider**" has the meaning set forth in Section 3.7.

1.149 "**Trademark**" means any word, name, symbol, color, designation or device or any combination thereof that functions as a source identifier, including any trademark, trade dress, brand mark, service mark, trade name, brand name, logo, business symbol or domain name, whether or not registered.

1.150 "**United States**" or "**U.S.**" means the United States of America and its territories and possessions (including the District of Columbia and Puerto Rico).

1.151 "**Valid Claim**" means (a) a claim of any [***] Patent whose validity, enforceability, or patentability has not been rendered invalid by any of the following: (i) irretrievable lapse, abandonment, revocation, dedication to the public, or disclaimer; or (ii) a holding, finding, or decision of invalidity, unenforceability, or non-patentability by a court, governmental agency, national or regional patent office, or other appropriate body that has competent jurisdiction, such holding, finding, or decision being final and unappealable or unappealed within the time allowed for appeal, or (b) a claim in a Patent application that is filed and prosecuted in good faith and no more than [***] have lapsed from its earliest priority date. For clarity, (A) any claim in a Patent application, for which more than [***] have lapsed from its earliest priority date, shall not be considered a Valid Claim unless and until such claim is granted and meets the requirement of subclause (a) and (B) a holding, finding, or decision being final and unappealable or not appealed within the time allowed for appeal means a holding, finding, or decision from which no appeal (other than a petition to the United States Supreme Court for a writ of certiorari or a similar appeal that is subject to discretionary review) can be or has been taken.

1.152 "**Voting Stock**" has the meaning set forth in the definition of "Change in Control."

1.153 "**Withholding Amount**" has the meaning set forth in Section 6.8.1.

1.154 "**Withholding Party**" has the meaning set forth in Section 6.8.1.

1.155 "**Working Group**" has the meaning set forth in Section 2.6.

ARTICLE 2
COLLABORATION MANAGEMENT

2.1 Joint Governance Committee.

2.1.1 Formation. Within [***] after the Effective Date, the Parties shall establish a joint governance committee (the "**Joint Governance Committee**" or "**JGC**"). The JGC shall consist of [***] representatives from each of the Parties, each with the requisite experience and seniority to enable such person to make decisions on behalf of the Parties with respect to the issues falling within the jurisdiction of the JGC. From time to time, each Party may substitute [***] or more of its representatives to the JGC on written notice to the other Party. [***] shall select from its representatives the chairperson for the JGC. From time to time, [***]

2.1.2 Specific Responsibilities. The JGC shall develop the strategies for and oversee the Development related activities relating to the Licensed Compounds and the Licensed Products in accordance with the Initial Development Plan, and shall serve as a forum for the coordination of such activities. In particular, the JGC shall:

(a) oversee the Development activities performed pursuant to the Initial Development Plan;

(b) address issues that arise during the performance of the Initial Development Plan, [***]

(c) periodically (no less often than [***]) review and serve as a forum for discussing the Initial Development Plan, and review and approve amendments thereto;

(d) review and serve as a forum for discussing Information (including all Clinical Data) arising out of the Initial Development Plan;

(e) discuss any [***]

(f) prior to the License Option Exercise Closing Date, review and discuss regulatory activities and strategies for Licensed Compounds and Licensed Products;

(g) discuss the scope of any [***] contemplated under Section 4.6.1;

(h) review the activities of the CMC Working Group or any other Working Group established by the JGC, and resolve any disagreement between the designees of AbbVie and Harpoon on any Working Group;

(i) plan and oversee the conduct of activities set forth in Section 3.5;

(j) discuss and agree upon the [***] named AbbVie personnel;

(k) establish secure access methods (such as secure databases) for each Party to access Confidential Information; and

(l) perform such other functions as are set forth herein or as the Parties may mutually agree in writing, except where in conflict with any provision of this Agreement.

2.2 General Provisions Applicable to the JGC.

2.2.1 Meetings and Minutes. The JGC shall meet [***], or as otherwise agreed to by the Parties, with the location of such meetings alternating between locations designated by Harpoon and locations designated by AbbVie. The Alliance Managers shall be permitted to attend any such JGC meetings. The chairperson of the JGC shall be responsible for calling meetings on [***] notice. Each Party shall make all proposals for agenda items and shall provide all appropriate information with respect to such proposed items at least [***] in advance of the applicable meeting; *provided* that under exigent circumstances requiring input by the JGC, a Party may provide its agenda items to the other Party within a shorter period of time in advance of the meeting, or may propose that there not be a specific agenda for a particular meeting, so long as the other Party consents to such later addition of such agenda items or the absence of a specific agenda for such meeting. The chairperson of the JGC shall prepare and circulate for review and approval of the Parties minutes of each meeting within [***] after the meeting. The Parties shall agree on the minutes of each meeting promptly, but in no event later than the next meeting of the JGC.

2.2.2 Procedural Rules. The JGC shall have the right to adopt such standing rules as shall be necessary for its work, to the extent that such rules are not inconsistent with this Agreement. A quorum of the JGC shall exist whenever there is present at a meeting [***] appointed by each Party, each with the requisite experience and seniority to enable such person to make decisions on behalf of the Party it represents with respect to the issues falling within the jurisdiction of the JGC. Representatives of the Parties on the JGC may attend a meeting either in person or by telephone, video conference or similar means in which each participant can hear what is said by, and be heard by, the other participants. Representation by proxy shall be allowed. The JGC shall take action by consensus of the representatives present at a meeting at which a quorum exists, with each Party having a single vote irrespective of the number of representatives of such Party in attendance, or by a written resolution signed by [***] appointed by each Party. Employees or consultants of either Party that are not representatives of the Parties on the JGC may attend meetings of the JGC; *provided* that such attendees (i) shall not vote or otherwise participate in the decision-making process of the JGC, and (ii) are bound by obligations of confidentiality and non-disclosure equivalent to those set forth in Article 9.

2.2.3 Dispute Resolution. If the JGC cannot, or does not, reach consensus on an issue, then the dispute shall first be referred to the Senior Officers of the Parties, who shall confer in good faith on the resolution of the issue. Any final decision mutually agreed to by the Senior Officers shall be conclusive and binding on the Parties. If the Senior Officers are not able to agree on the resolution of any such issue within [***] after such issue was first referred to them, then:

(a) prior to the License Option Exercise Closing Date, the Senior Officer of Harpoon will finally and definitively resolve such dispute [***] provided that [***]

[***] or (ii) [***] and

(b) [***] Notwithstanding the foregoing, AbbVie may not, following the License Option Exercise Closing Date, use its final decision right to amend the Initial Development Plan in any way that would require Harpoon to perform additional activities than was required under the Initial Development Plan immediately prior to the License Option Exercise Closing Date, unless Harpoon agrees to perform such additional activities and AbbVie solely bears any additional expense.

As used herein, a "**Material Amendment**" to the Initial Development Plan shall mean an amendment to the Initial Development Plan that would [***].

2.2.4 Limitations on Authority. Each Party shall retain the rights, powers, and discretion granted to it under this Agreement and no such rights, powers, or discretion shall be delegated to or vested in the JGC unless such delegation or vesting of rights is expressly provided for in this Agreement or the Parties expressly so agree in writing. The JGC shall not have the power to amend, modify, or waive compliance with this Agreement, which may only be amended or modified as provided in Section 13.9 or compliance with which may only be waived as provided in Section 13.12.

2.2.5 Alliance Manager. Each Party shall appoint a person(s) who shall oversee contact between the Parties for all matters between meetings of the JGC, and shall have such other responsibilities as the Parties may agree in writing after the Effective Date (each, an "**Alliance Manager**"). Following the disbandment of the JGC after the License Option Exercise Closing Date, the Alliance Managers shall continue to act as a liaison between the Parties and shall be responsible for exchanging Information provided for under the terms of this Agreement. Each Party may replace its Alliance Manager at any time by notice in writing to the other Party. Following the License Option Exercise Closing Date and until the First Commercial Sale of a Licensed Product in a Major Market, Alliance Managers shall meet [***], or as otherwise agreed to by the Parties.

2.3 Discontinuation of the JGC. The JGC shall continue to exist until the first to occur of: (a) the Parties mutually agreeing to disband the JGC; (b) in the event of AbbVie's exercise of its License Option, upon the delivery of the Final Development Report pursuant to Section 3.1.3; and (c) expiration of the License Option Period without AbbVie exercising the License Option. Additionally, in the event of a Change in Control of Harpoon involving a Competitor, AbbVie shall have the right at any time and for any reason, effective upon written notice, to disband the JGC in accordance with Section 13.2.2. In the event that the JGC is disbanded pursuant to Section 13.2.2, (a) any information, documents or reports that a Party is otherwise required to provide to the JGC pursuant to this Agreement shall be provided directly to the other Party and (b) any matters delegated to the JGC shall be made by mutual agreement of the Parties, subject to the dispute resolution provisions of Section 2.2.3.

2.4 Interactions Between the JGC and Internal Teams. The Parties recognize that each Party possesses an internal structure (including various committees, teams and review boards) that will

be involved in administering such Party's activities under this Agreement. Nothing contained in this Article shall prevent a Party from making routine day-to-day decisions relating to the conduct of those activities for which it has a performance or other obligations hereunder, in each case in a manner consistent with the then-current Initial Development Plan and the terms and conditions of this Agreement.

2.5 CMC Working Group. Within [***] after the Effective Date, the Parties shall establish a CMC working group (the "**CMC Working Group**"). The CMC Working Group shall consist of two (2) representatives from each of the Parties, each with the requisite experience and seniority to enable such person to make decisions on behalf of the Parties with respect to the issues falling within the jurisdiction of the CMC Working Group. From time to time, each Party may substitute one (1) or more of its representatives to the CMC Working Group on written notice to the other Party. In particular, the CMC Working Group shall:

(a) review and approve [***] with respect thereto, and review and approve amendments thereto; and

(b) perform such other functions as are set forth herein or as the Parties may mutually agree in writing, except where in conflict with any provision of this Agreement.

2.6 Working Groups. In addition to the CMC Working Group, from time to time, the JGC may establish and delegate duties to sub-committees or directed teams (each, a "**Working Group**") on an "as-needed" basis to oversee particular projects or activities (for example, joint project team, joint finance group, and/or joint intellectual property group). Each such Working Group shall be constituted and shall operate as the JGC determines; provided that each Working Group shall have equal representation from each Party, unless otherwise mutually agreed. Working Groups may be established on an ad hoc basis for purposes of a specific project or on such other basis as the JGC may determine. Each Working Group and its activities shall be subject to the oversight, review and approval of, and shall report to, the JGC. In no event shall the authority of the Working Group exceed that specified for the JGC. All decisions of a Working Group shall be by consensus. Any disagreement between the designees of AbbVie and Harpoon on a Working Group shall be referred to the JGC for resolution.

2.7 Expenses. Each Party shall be responsible for all travel and related costs and expenses for its members and other representatives to attend meetings of, and otherwise participate on, the JGC or any Working Group.

ARTICLE 3
DEVELOPMENT AND REGULATORY

3.1 Initial Development Plan and Activities.

3.1.1 Initial Development Plan. Either Party, directly or through its representatives on the JGC, may propose amendments to the Initial Development Plan from time to time as appropriate, including in light of changed circumstances. Any and all such amendments shall be subject to approval by the JGC as set forth in Section 2.1.2, subject to the dispute resolution procedures set forth in Section 2.2.3. Within [***] of the Effective Date, the Parties, through the CMC Working Group, shall jointly develop an amendment to the Initial Development Plan to identify the [***] in accordance with the parameters set forth in the Initial Development Plan attached hereto as Schedule 1.84. For clarity, all [***].

3.1.2 Initial Development Activities. Harpoon shall perform the activities set forth in the Initial Development Plan in accordance with the timelines set forth therein, [***]. In the conduct of the Initial Development Activities, Harpoon shall use commercially reasonable efforts to ensure that clinical sites participating in the Phase I/IB Trial timely submit Clinical Data generated at such site into the clinical database. If at any time AbbVie has a reasonable basis to believe that Harpoon is in material breach of its obligation to perform any Initial Development Activities, then AbbVie may so notify Harpoon in writing, specifying the basis for its belief, and the Parties shall meet within [***] after such notice to discuss in good faith AbbVie's concerns. If Harpoon [***] Notwithstanding the foregoing, if Harpoon [***], then Harpoon may seek resolution on the existence of such material breach pursuant to Section 13.7; *provided* that (i) Harpoon's [***]. For clarity, if the arbitrator determines that notwithstanding [***]. The Parties acknowledge and agree that in the event AbbVie [***] Initial Development Activities in accordance with the Initial Development Plan. If AbbVie so elects to [***] permitted under the terms and conditions of the applicable agreement, Harpoon shall [***].

3.1.3 Certain Amendments to Initial Development Plan. Notwithstanding the role of the JGC in connection with amendments to the Initial Development Plan pursuant to Section 2.1.2(c) and Section 2.2.3, [***]

Alliance Manager). AbbVie shall have [***] in which to consider the proposed amendments and respond to Harpoon, following which:

(a) if AbbVie notifies Harpoon in writing that it consents to the amendments proposed by Harpoon to the Initial Development Plan, Harpoon may proceed to resubmit the clinical portion of the Initial Development Plan (including the clinical protocol for the Phase I/IB Trial, as applicable) to the FDA, [***];

(b) if AbbVie requests that Harpoon provide further information in connection with the proposed amendments, Harpoon shall [***] provide such information and make available appropriate personnel to respond to AbbVie's questions regarding the proposed amendments, and if AbbVie notifies Harpoon in writing following receipt of such information that it consents to the amendments as proposed by Harpoon to the Initial Development Plan, [***];

(c) if AbbVie notifies Harpoon that it does not consent to the proposed amendments (either before or following a request for more information under Section 3.1.3(b)), then such amendment (i) shall be [***], (ii) shall be referred [***] to a special meeting of the JGC (or such other discussion forum as the Parties may mutually agree in writing) and (iii) shall be subject [***], *provided* that solely with respect to amendment arising under this Section 3.1.3, (A) [***], and (B) [***]; and

(d) For clarity, if AbbVie provides no response to Harpoon's proposed amendments within the foregoing three [***] period, then [***].

By way of example only, if Harpoon provides AbbVie with a proposed amended Initial Development Plan on [***] respectively.

3.1.4 Final Development Report. Following AbbVie's exercise of the License Option, and within [***] after the [***], Harpoon shall provide AbbVie with the Final Development Report. AbbVie shall have the opportunity to review and inspect the Final Development Report and to reasonably ask questions of Harpoon and receive timely answers from Harpoon related thereto. Following AbbVie's receipt of the Final Development Report, AbbVie shall have [***] to provide notice to Harpoon identifying any Information set forth in Section 1.64, which

AbbVie believes in good faith is not included in the Final Development Report. Harpoon shall provide AbbVie such Information [***].

3.2 AbbVie Option.

3.2.1 Opt-In Development Report. Within [***] following the [***], Harpoon shall provide AbbVie with the Opt-In Development Report. AbbVie shall have the opportunity to review and inspect the Opt-In Development Report and to reasonably ask questions of Harpoon (*provided* that such questions are received by Harpoon prior to [***]) and receive timely answers from Harpoon related thereto until the expiration of the Harpoon Option Period. If, prior to the Development Report Review Deadline, AbbVie provides written notice to Harpoon reasonably requesting supplemental data or Information that is in Harpoon's possession or reasonably available to Harpoon (and that, in each case, can be provided without performing any additional research, studies or material scientific analysis, or generating any additional data) and is reasonably necessary for AbbVie to assess the Opt-In Development Report and make an informed decision about the exercise of the License Option (such notice to provide reasonable detail regarding the basis for such request), then Harpoon shall provide to AbbVie such requested supplemental data or Information within [***] of its receipt of such notice (or such longer period as the Parties may mutually agree is necessary to obtain and provide such supplemental data or Information) and the License Option Period shall be extended to [***] following the date of delivery of such supplemental data or Information, *provided* that in no event will the License Option Period be extended as a result of such request and additional information and data to more than [***] following the date Harpoon first provides the Opt-In Development Report to AbbVie under this Section 3.2.1.

3.2.2 [***]. AbbVie may, but shall not be obligated to, deliver to Harpoon a written notice requesting an [***] at any time on or after the [***]; *provided* that [***] within any [***] period prior to the date of AbbVie's receipt of the Opt-In Development Report, unless any additional request for [***] is approved by the JGC, with Harpoon's consent not to be unreasonably withheld, conditioned or delayed. Upon Harpoon's receipt of any such notice, Harpoon shall promptly, but in any event within [***] of Harpoon's receipt of any such notice, [***]. AbbVie shall [***]. If, prior to the Development Report Review Deadline, AbbVie provides written notice to Harpoon reasonably requesting supplemental data or Information that is in Harpoon's possession or reasonably available to Harpoon (and that, in each case, can be provided without performing any additional research, studies or material scientific analysis, or generating any additional data) and is reasonably necessary for AbbVie to make [***] (such notice to provide reasonable detail regarding the basis for such request), then Harpoon shall provide to AbbVie such requested supplemental data or Information within [***] of its receipt of such notice (or such longer period as the Parties may mutually agree is necessary to obtain and provide such supplemental data or Information). For purposes of clarity, [***] Opt-In Development Report and shall not trigger the [***] period set forth in Section 3.2.3 with respect to the License Option Period, unless [***] shall trigger the [***] period set forth in Section 3.2.3. If AbbVie [***].

3.2.3 License Option Exercise Notice. Upon the Effective Date, Harpoon hereby grants to AbbVie the exclusive right, but not the obligation, to obtain the licenses set forth in Section 5.1.3 (the "**License Option**"). AbbVie shall have the right to exercise its License Option by providing written notice of such election to Harpoon ("**License Option Exercise Notice**") at any time on or after the Effective Date and on or prior to the date that is [***] from AbbVie's receipt of the Opt-In Development Report containing all items required pursuant to Section 1.112, as such period may be extended pursuant to Section 3.2.1 (the "**License Option Period**"). If AbbVie does not provide a License Option Exercise Notice within the License Option Period, then (a) Harpoon shall have no further obligations to perform any Initial Development Activities, (b) AbbVie's License Option shall expire, and this Agreement shall terminate in accordance with Section 12.1.1, and (c) AbbVie shall have no further rights in connection with Licensed Compounds of the Licensed Products.

3.2.4 Exercise of the License Option.

(a) AbbVie shall be deemed to have entered into the licenses set forth in Section 5.1.3 on the later of (i) Harpoon's receipt of the License Option Exercise Notice, or (ii) the expiration or earlier termination of any waiting period (or any extension thereof) under the HSR Act in the U.S. (the date of such receipt by Harpoon or the date of any such expiration or earlier termination, as applicable, the "**License Option Exercise Closing Date**").

(b) If AbbVie provides the License Option Exercise Notice during the License Option Period, upon AbbVie's request, the Parties shall work together in good faith to conduct an analysis of whether any filings or notifications are or may be required to be filed under the HSR Act (the "**HSR Filing**") or any similar applicable foreign law or regulation in connection with AbbVie's exercise of the License Option. The Parties shall each, as soon as practicable after the date of Harpoon's receipt of the License Option Exercise Notice, file or cause to be filed with the U.S. Federal Trade Commission and the U.S. Department of Justice and any relevant foreign governmental authority any such notifications. The Parties shall use their commercially reasonable efforts to respond promptly to any requests for additional information made by such agencies. For the purposes of this Section 3.2.4(b), the commercially reasonable efforts of AbbVie shall not require AbbVie to agree to any condition, prohibition, limitation or the like proposed by the U.S. Federal Trade Commission or other government authority to dispose of or hold separate any material portion of the business or assets of AbbVie or its Affiliates. The Parties shall equally share the filing fees in conducting the HSR Filing, and each Party is responsible for the costs and expenses of its own legal and other advice in preparing and conducting the HSR Filing.

3.3 [***] At any time following the earlier of [***]. For clarity, if AbbVie's [***] shall be solely responsible for any cost or expense associated with such additional obligations, and for providing [***] to enable [***] in connection with the Licensed Compounds and Licensed Products prior to AbbVie's exercise of the License Option. AbbVie may elect to exercise its option to carry

out [***]and prior to the expiration of the License Option Period.

3.3.2 Upon the date AbbVie provides the [***], AbbVie shall be deemed to have entered into the license set forth in Section 5.1.2. AbbVie shall have the right, on a one-time only basis following[***]. AbbVie shall have final decision making authority with respect to all [***].

3.3.1 If AbbVie [***] and does not subsequently exercise the License Option, then AbbVie shall [***]. For clarity, (A) the foregoing license shall exclude [***], and notwithstanding anything in this Agreement to the contrary, except as necessary for Harpoon to exercise its rights under the foregoing subclause (a) or as required by the foregoing subclause (c), [***], and (B) the requirement under the foregoing subclause (c) shall [***] following the termination of this Agreement.

3.4 Post-Exercise Development Activities. Following the License Option Exercise Closing Date, except for Harpoon's responsibilities in completing the Initial Development Activities and delivering the Final Development Report, AbbVie shall have the sole right to Develop and Manufacture (and shall control all aspects of Development and Manufacturing), including seeking Regulatory Approvals for, Licensed Compounds and Licensed Products in the Field and in the Territory and, for clarity, Harpoon and its Affiliates shall have no right to do so. Following the License Option Exercise Closing Date, AbbVie shall use Commercially Reasonable Efforts to Develop and obtain Regulatory Approval for [***] Licensed Product for [***] for use in [***] Major Market. AbbVie shall have the right to satisfy its diligence obligations under this Section 3.4 through its Affiliates or Sublicensees. Except as set forth in this Section 3.4, AbbVie shall have no other diligence obligations, express or implied, with respect to the Development of the Licensed Compounds or Licensed Products in the Territory. Following the License Option Exercise Closing Date and until the First Commercial Sale of a Licensed Product in a Major Market, AbbVie will provide to Harpoon following disbandment of the JGC, [***] reports within [***] after the end of each [***], in each case summarizing the key Development activities undertaken and summarizing the results achieved with respect to the applicable Licensed Compounds and Licensed Products in all Major Markets during such [***]. Prior to the disbandment of the JGC, AbbVie shall provide the JGC

with interim updates on such activities and results at its regularly scheduled meetings. For clarity, if AbbVie [***], [***] and the Final Development Report), but AbbVie shall have final decision making authority with respect to the conduct of such Initial Development Activities; *provided* that in no event may AbbVie require Harpoon to conduct any Initial Development Activities, or to incur any costs or expenses in association with performing such Initial Development Activities following the License Option Exercise Closing Date, in excess of the activities set forth in the Initial Development Plan in existence immediately prior to the License Option Exercise Closing Date. AbbVie shall have the right, at AbbVie's sole election, to assume and complete some or all of such Initial Development Activities at AbbVie's sole cost and expense, and such step in following the License Option Exercise Closing Date shall not [***].

3.5 Supply of Technology for Development Purposes.

3.5.1 Immediately after the License Option Exercise Closing Date, Harpoon shall, and shall cause its Affiliates to, without additional compensation, disclose and make available to AbbVie (which obligation may be satisfied by granting personnel designated by AbbVie controlled access to an electronic data room), in such form as maintained by Harpoon in the ordinary course of business, Regulatory Documentation, Harpoon Know-How, Joint Know-How, and any other Information claimed or covered by any Harpoon Patent or Joint Patent to the extent necessary or reasonably useful for AbbVie's Exploitation of the Licensed Compound and thereafter until the completion of the Initial Development Activities, promptly after the earlier of the development, making, conception, or reduction to practice of such Regulatory Documentation, Harpoon Know-How, Joint Know-How, or other Information.

3.5.2 Immediately after the License Option Exercise Closing Date, [***], and (b) Harpoon shall provide AbbVie with all reasonable assistance required in order to transfer to AbbVie the Regulatory Documentation, Harpoon Know-How, Joint Know-How, and other Information required to be produced pursuant to Section 3.5.1 above, in each case in a timely manner, and shall reasonably assist AbbVie with respect to the Exploitation of any Licensed Compound and any Licensed Products, in each case subject to the limitations set forth in this Section 3.5.2. At AbbVie's request, Harpoon shall execute a bill of sale conveying such inventory. Without prejudice to the generality of the foregoing, if visits of Harpoon's representatives to AbbVie's facilities are reasonably requested by AbbVie for purposes of transferring the Regulatory Documentation, Harpoon Know-How, Joint Know-How, or other Information to AbbVie or for purposes of providing AbbVie the assistance referenced in the preceding sentence, Harpoon shall send appropriate representatives to AbbVie's facilities. Harpoon shall provide up to [***] and AbbVie shall [***] as mutually agreed by the Parties in writing.

3.6 Expenses and Invoicing. Except as expressly set forth in this Agreement, each Party shall bear all costs and expenses associated with the Development activities for which such Party is responsible under this Agreement and the Initial Development Plan; *provided* that (a) [***], Harpoon's obligation to bear out of pocket costs shall be limited to [***] (the "**[***]**") and AbbVie shall bear any out of pocket costs in

[***], and (b) [***] AbbVie has the right to assume following determination of Harpoon material breach pursuant to Section 3.1.2. To the extent that the costs of [***], Harpoon shall provide notice to the CMC Working Group. [***]. To the extent consistent with Harpoon's obligations under this Section 3.6, [***] If AbbVie assumes any Initial Development Activities in accordance with Section 3.1.2, then AbbVie shall invoice Harpoon each [***] for all reasonable direct internal (i.e. direct personnel costs) and documented, out-of-pocket costs associated with conducting such Initial Development Activities [***], and, Harpoon shall pay such invoices within [***] of receipt thereof.

Subcontracting.

Each Party shall have the right to subcontract any of its Development activities to a Third Party (a "**Third Party Provider**"); *provided* that, solely with respect of Third Party Providers performing services that are critical or material to the Licensed Compound or Licensed Products (such as contract research organizations and contract manufacturing organizations,) Harpoon must (a) [***] (b) except with respect to Third Party Providers [***] and (c) obtain a written undertaking from the Third Party Provider sufficient for Harpoon to comply with the applicable terms and conditions of this Agreement, including the confidentiality provisions of Article 9.

3.8 Regulatory Matters.

3.8.1 Pre-Exercise Regulatory Activities. Prior to the License Option Exercise Closing Date, the following shall apply:

(a) Harpoon shall have the sole right and responsibility to prepare, obtain and maintain all INDs necessary to perform its obligations under the Initial Development Plan, and to conduct communications with the applicable Regulatory Authorities with respect to such INDs[***] submission to the applicable Regulatory Authorities. Harpoon shall provide [***].

(b) Subject to the immediately following sentence, Harpoon shall provide AbbVie with (i) access to or copies of all material written or electronic correspondence (other than regulatory filings) relating to the Development of Licensed Compounds or Licensed Products received by Harpoon or its Affiliates from, or forwarded by Harpoon or its Affiliates to, the Regulatory Authorities in the Territory, and (ii) if available, copies of meeting minutes and summaries of material meetings, conferences, and discussions held by Harpoon or its Affiliates with the Regulatory Authorities in the Territory, in each case

((i) and (ii)) [***] of its receipt, forwarding or production of the foregoing, as applicable. If such written or electronic correspondence received from any such Regulatory Authority relates to the withdrawal, suspension, or revocation of a Regulatory Approval for a Licensed Product, the prohibition or suspension of the supply of a Licensed Compound or Licensed Product, or the initiation of any investigation, review, or inquiry by such Regulatory Authority concerning the safety of a Licensed Compound or Licensed Product, Harpoon shall notify AbbVie and provide AbbVie with copies of such written or electronic correspondence [***] after receipt of such correspondence.

(c) Harpoon shall provide AbbVie with prior written notice, to the extent Harpoon has advance knowledge, of any scheduled material meeting, conference, or discussion with a Regulatory Authority in the Territory relating to a Licensed Product, [***] after Harpoon or its Affiliates first receive notice of the scheduling of such material meeting, conference, or discussion (or within such shorter period as may be necessary in order to give AbbVie a reasonable opportunity to attend such material meeting, conference, or discussion). [***]

(d) For clarity, all Information provided by Harpoon to AbbVie under this Section 3.8.1 shall be the Confidential Information of Harpoon.

3.8.2 Post-Exercise Regulatory Activities. Effective on the License Option Exercise Closing Date, the following shall apply:

(a) Promptly after the License Option Exercise Closing Date and upon a mutually agreed upon date, but in any event no later than [***] after the License Option Exercise Closing Date, Harpoon shall transition to AbbVie all INDs for Licensed Compounds and Licensed Products.

(b) As between the Parties, AbbVie, at its sole expense, shall have the sole right to prepare, obtain, and maintain the Drug Approval Applications (including the setting of the overall regulatory strategy therefor), other Regulatory Approvals and other regulatory submissions, and to conduct communications with the Regulatory Authorities, for Licensed Compounds or Licensed Products in the Territory (which shall include filings of or with respect to INDs and other filings or communications with the Regulatory Authorities). Harpoon shall support AbbVie, as may be reasonably necessary, in obtaining Regulatory Approvals for the Licensed Products, and in the activities in support thereof, including providing necessary documents or other materials required by Applicable Law to obtain Regulatory Approvals, in each case in accordance with the terms and conditions of this Agreement and the Initial Development Plan.

(c) All Regulatory Documentation (including all Regulatory Approvals and Product Labeling) specifically relating to the Licensed Compounds or Licensed Products with respect to the Territory shall be owned by, and shall be the sole property and held in the name of, AbbVie or its designated Affiliate, Sublicensee or designee. Harpoon shall duly execute and deliver, or cause to be duly executed and delivered, such instruments and shall do and cause to be done such acts and things, including the filing of such assignments, agreements, documents, and instruments, as may be necessary under, or as AbbVie may reasonably request in connection with, or to carry out more effectively the purpose of, or to better assure and confirm unto AbbVie its rights under, this Section.

3.8.3 Recalls. AbbVie shall make every reasonable effort to notify Harpoon promptly (and in any event no later than [***]) following its determination that any event, incident, or circumstance has occurred that may result in the need for a recall, market suspension, or market withdrawal of a Licensed Product in the Territory, and shall include in such notice the reasoning behind such determination, and any supporting facts. AbbVie (or its Sublicensee) shall have the right to make the final determination whether to voluntarily implement any such recall, market suspension, or market withdrawal in the Territory. If a recall, market suspension, or market withdrawal is mandated by a Regulatory Authority in

the Territory, AbbVie (or its Sublicensee) shall initiate such a recall, market suspension, or market withdrawal in compliance with Applicable Law. For all recalls, market suspensions or market withdrawals undertaken pursuant to this Section 3.8.3, AbbVie (or its Sublicensee) shall be solely responsible for the execution thereof, and Harpoon shall reasonably cooperate in all such recall efforts, at AbbVie's expense.

3.8.4 Compliance. Each Party shall perform or cause to be performed, any and all of its Development activities, including Initial Development Activities, in good scientific manner and in compliance with all Applicable Law.

3.8.5 Records. Each of Harpoon and AbbVie shall, and shall use their commercially reasonable efforts to ensure that its Third Party Providers shall, maintain records in sufficient detail and in good scientific manner appropriate for patent and regulatory purposes, and in compliance with Applicable Law, which shall be complete and accurate and shall properly reflect all work done and results achieved in the performance of its Development activities which, following the Effective Date, shall record only such activities and shall, to the extent reasonably practicable, not include or be commingled with records of activities outside the scope of this Agreement. Such records shall be retained by Harpoon or AbbVie, as the case may be, for [***], or for such longer period as may be required by Applicable Law. Following the License Option Exercise Closing Date, upon AbbVie's request, Harpoon shall provide to AbbVie copies of the records it has maintained pursuant to this Section 3.8.5 which have not been provided or otherwise transferred to AbbVie pursuant to Section 3.5. AbbVie shall maintain such records and the information disclosed therein in confidence in accordance with Article 9.

3.8.6 Following the License Option Exercise Closing Date, if AbbVie reasonably considers that it has not been provided with all Information required to be provided under Section 3.5, or in connection with any request by a Regulatory Authority or required under Applicable Law, AbbVie shall have the right, [***], to inspect and copy all records of Harpoon maintained pursuant to Section 3.8.5. Prior to the License Option Exercise Closing Date, AbbVie shall not have such right to inspect or copy Harpoon's records, except to the extent required by Applicable Laws, or as reasonably necessary to comply with a request by a Regulatory Authority. AbbVie shall maintain such records and the information disclosed therein in confidence in accordance with Article 9.

ARTICLE 4
COMMERCIALIZATION

4.1 In General. Effective on the License Option Exercise Closing Date, AbbVie (itself or through its Affiliates or Sublicensees) shall have the sole right to Commercialize Licensed Compounds and Licensed Products in the Territory at its own cost and expense.

4.2 Commercialization Diligence. Following the License Option Exercise Closing Date, AbbVie shall use Commercially Reasonable Efforts to Commercialize [***] Licensed Product in [***] Major Market following receipt of Regulatory Approval therefor in such Major Market; *provided* that [***]; *provided* further that, for purposes of clarity, [***].

[***] If at any time Harpoon has a reasonable basis to believe that AbbVie is in material breach of its obligations under this Section 4.2, then Harpoon may so notify AbbVie, specifying the basis for its belief, and the Parties shall meet within [***] after such notice to discuss in good faith Harpoon's concerns.

4.3 Booking of Sales; Distribution. Effective on the License Option Exercise Closing Date, AbbVie shall have the sole right to invoice and book sales, establish all terms of sale (including pricing and discounts) and warehousing, and distribute the Licensed Products in the Territory and to perform or cause to be performed all related services. AbbVie shall handle all returns, recalls, or withdrawals, order processing, invoicing, collection, distribution, and inventory management with respect to the Licensed Products in the Territory.

4.4 Product Trademarks. Effective on the License Option Exercise Closing Date, AbbVie shall have the sole right to determine and own the Product Trademarks to be used with respect to the Exploitation of the Licensed Products on a worldwide basis. Harpoon shall not, and shall not permit its Affiliates to, attack, dispute, or contest the validity of or ownership of such Product Trademark anywhere in the Territory or any registrations issued or issuing with respect thereto or use in their respective businesses, any Trademark that is confusingly similar to, misleading or deceptive with respect to or that dilutes any (or any part) of the Product Trademarks. Notwithstanding the foregoing, to the extent required by Applicable Law in a country or other jurisdiction in the Territory, the promotional materials, packaging, and Product Labeling for the Licensed Products used by AbbVie and its Affiliates in connection with the Licensed Products in such country or other jurisdiction shall contain (a) the corporate name of Harpoon (and to the extent required, Harpoon grants AbbVie a license, with the right to sublicense, to use the same solely for such purpose), and (b) the logo and corporate name of the manufacturer (if other than AbbVie or an Affiliate).

4.5 Commercial Supply of Licensed Compounds or Licensed Products.

4.5.1 Commercial Supply of Licensed Compounds or Licensed Products. Effective on the License Option Exercise Closing Date, as between the Parties, AbbVie shall have the sole right, at its expense, to Manufacture (or have Manufactured) and supply the Licensed Compound and Licensed Products for commercial sale in the Territory by AbbVie and its Affiliates and Sublicensees.

4.5.2 Manufacturing Technology Transfer Upon AbbVie's Request. AbbVie shall have the right, at any time [***] the License Option Exercise Closing Date, as applicable, to require Harpoon to effect a one-time full transfer to AbbVie or its designee (which designee may be an Affiliate or a Third Party manufacturer of Licensed Compound or Licensed Product) of all Harpoon Know-How specifically relating to the then-current process for the Manufacture of the Licensed Compound and Licensed Products, including process qualification and validation, quality assurance and quality control but excluding [***] (the "**Manufacturing Process**") and to implement the Manufacturing Process at a facility designated by AbbVie (such transfer and implementation, as more fully described in this Section 4.5.2, the "**Manufacturing Technology Transfer**"). Harpoon shall provide, and shall use commercially reasonable efforts to cause its Third Party manufacturers to provide (including by using commercially reasonable efforts to negotiate contractual obligations for such Third Party manufacturers to do so under agreements entered into following the Effective Date), all reasonable assistance requested by AbbVie to enable AbbVie (or its Affiliate or designated Third Party manufacturer, as applicable) to implement the Manufacturing Process at the facility designated by AbbVie. If requested by AbbVie, such assistance shall include providing reasonable assistance to AbbVie to facilitate AbbVie entering into agreements with applicable Third Party suppliers relating to the Licensed Compound and Licensed Products. Without limitation

to the foregoing, in connection with the Manufacturing Technology Transfer, Harpoon shall, and shall use commercially reasonable efforts to cause its Third Party manufacturers (including by using commercially reasonable efforts to negotiate contractual obligations for such Third Party manufacturers to comply with the same obligations under agreements entered into following the Effective Date) to:

(a) make available to AbbVie (or its Affiliate or designated Third Party manufacturer, as applicable) from time to time as AbbVie may request, all [***]to use and practice the Manufacturing Process;

(b) cause all appropriate [***] assist with the working up and use of the Manufacturing Process [***];

(c) without limiting the generality of Section 4.5.2(b), cause all appropriate [***] employees and representatives of Harpoon and its Affiliates and its Third Party manufacturers to meet with employees or representatives of AbbVie (or its Affiliate or designated Third Party manufacturer, as applicable) at the applicable manufacturing facility and make available all necessary equipment, at mutually convenient times, to support and execute the transfer of all applicable analytical methods and the validation thereof (including, all applicable Harpoon Know-How, methods, validation documents and other documentation, materials and sufficient supplies of all primary and other reference standards);

(d) take such steps as are necessary to assist in reasonable respects AbbVie (or its Affiliate or designated Third Party manufacturer, as applicable) in obtaining any necessary licenses, permits or approvals from Regulatory Authorities with respect to the Manufacture of the Licensed Compound and Licensed Products at the applicable facilities; and

(e) provide such other assistance as AbbVie (or its Affiliate or designated Third Party manufacturer, as applicable) may reasonably request to enable AbbVie (or its Affiliate or designated Third Party manufacturer, as applicable) to use and practice the Manufacturing Process and otherwise to Manufacture Licensed Compounds and Licensed Products.

Except to the extent that a Manufacturing Technology Transfer is requested in connection with a breach of this Agreement, Harpoon's obligations to provide personnel and support under this Section 4.5.2 shall be limited to [***]. Thereafter, if requested by AbbVie, Harpoon shall use commercially reasonable efforts to continue to perform such obligations; *provided* that AbbVie will reimburse Harpoon for (i) [***]), and (ii) [***] For clarity,[***].

4.5.3 Subsequent Manufacturing Technology Transfer. Without limiting the foregoing, if Harpoon makes any invention, discovery, or improvement specifically relating to the Manufacture of a Licensed Compound or a Licensed Product during the Term, Harpoon shall promptly disclose such invention, discovery, or improvement to AbbVie, and shall, at AbbVie's request, perform technology transfer with respect to such invention, discovery, or improvement in the same manner as provided in Section 4.5.2, *provided* that any such further technology transfer occurring (a) prior to the License Option Exercise Closing Date shall be at Harpoon's sole expense and (b) after the License Option Exercise Closing Date shall be at AbbVie's sole expense.

ARTICLE 5
GRANT OF RIGHTS

5.1 Grants to AbbVie.

5.1.1 Effective upon the date that AbbVie commences performing Initial Development Activities pursuant to Section 3.1.2, Harpoon (on behalf of itself and its Affiliates) shall grant and hereby grants AbbVie a co-exclusive (with Harpoon), royalty-free license, with the right to grant sublicenses in accordance with Section 5.3, under the Harpoon Patents, the Harpoon Know-How, and Harpoon's interests in the Joint Patents and the Joint Know-How, solely to the extent necessary for AbbVie to conduct Initial Development Activities assumed by AbbVie in accordance with Section 3.1.2 (if any).

5.1.2 Upon the [***], Harpoon (on behalf of itself and its Affiliates) hereby grants to AbbVie a co-exclusive (with Harpoon), royalty-free (subject to [***] [***]) license, with the right to grant sublicenses in accordance with Section 5.3, under the Harpoon Patents, the Harpoon Know-How, and Harpoon's interests in the Joint Patents and the Joint Know-How, to Develop and Manufacture the Licensed Compounds and Licensed Products solely to the extent necessary for AbbVie to perform [***]. For clarity, with respect [***], AbbVie acknowledges and agrees that [***]. AbbVie further acknowledges and agrees that no sublicense is granted to AbbVie under certain intellectual property rights licensed from [***].

5.1.3 Upon the License Option Exercise Closing Date, Harpoon (on behalf of itself and its Affiliates) hereby grants to AbbVie:

(a) an exclusive (including with regard to Harpoon and its Affiliates, except as provided in Section 5.6) license (or sublicense), with the right to grant sublicenses in accordance with Section 5.3, under the Harpoon Patents, the Harpoon Know-How, and Harpoon's interests in the Joint Patents and the Joint Know-How, to Exploit the Licensed Compounds and Licensed Products in the Field in the Territory;

(b) an exclusive (including with regard to Harpoon and its Affiliates, except as provided in Section 5.6) license and right of reference, with the right to grant sublicenses and further rights of reference in accordance with Section 5.3, under the Regulatory Approvals and any other Regulatory Documentation that Harpoon or its Affiliates may Control with respect to the Licensed Compounds or Licensed Products solely for purposes of Exploiting the Licensed Compounds and Licensed Products in the Field in the Territory.

(c) The grants set forth in this Section 5.1.3 will automatically come into full force and effect on the License Option Exercise Closing Date without any further action required by either Party under this Agreement.

5.2 Grants to Harpoon. Upon the Effective Date, AbbVie hereby grants to Harpoon a non-exclusive, royalty-free license, without the right to grant sublicenses (other than to permitted subcontractors of Harpoon in accordance with Section 3.7), under the AbbVie Patents, AbbVie Know-How, and AbbVie's interests in the Joint Patents and the Joint Know-How, to Develop and Manufacture the Licensed Compounds or Licensed Products in the Territory solely to the extent necessary for Harpoon to perform its obligations as set forth in, and subject to, the Initial Development Plan.

5.3 Sublicenses. AbbVie shall have the right to grant sublicenses (or further rights of reference), through multiple tiers of Sublicensees, under the licenses and rights of reference granted in Sections 5.1.1, 5.1.2 and 5.1.3, to its Affiliates and other Persons; *provided* that any such sublicenses shall be consistent with the terms and conditions of this Agreement and AbbVie shall remain liable for its obligations under this Agreement and for the performance of all Sublicensees. AbbVie shall provide Harpoon with a copy of any such sublicense agreement within [***] after the execution thereof, which copy may be redacted with respect to information not pertinent to compliance with this Agreement.

5.4 Distributorships. AbbVie shall have the right, in its sole discretion, to appoint its Affiliates, and AbbVie and its Affiliates shall have the right, in their sole discretion, to appoint any other Persons, in the Territory or in any country or other jurisdiction of the Territory, to distribute, market, and sell the Licensed Products. Where AbbVie or its Affiliates appoints such a Person and such Person is not an Affiliate of AbbVie and does not have rights to, and does not, Manufacture any Licensed Product (except solely to package or label such Licensed Product purchased in bulk form from AbbVie or its Affiliates), that Person shall be a "Distributor" for purposes of this Agreement.

5.5 Co-Promotion Rights. For purposes of clarity, AbbVie and its Affiliates shall have the right, in their sole discretion, to co-promote the Licensed Products with any other Person(s), or to appoint one (1) or more Third Parties to promote the Licensed Products without AbbVie in all or any part of the Territory.

5.6 Retention of Rights.

5.6.1 Notwithstanding the exclusive licenses granted to AbbVie pursuant to Section 5.1.3, Harpoon retains the right to practice under the Harpoon Patents, the Harpoon Know-How, Harpoon's interests in the Joint Patents and the Joint Know-How, Regulatory Approvals and any other Regulatory Documentation (a) to perform (and to sublicense Third Parties to perform as permitted hereunder) its obligations under this Agreement and (b) for any purpose outside the scope of the licenses and rights granted pursuant to Sections 3.2.3 and 5.1, including to Exploit any products or services other than Licensed Compounds or Licensed Products, subject to Section 5.8. Except as expressly provided herein, Harpoon grants no other right or license, including any rights or licenses to the Harpoon Patents, the Harpoon Know-How, Harpoon's interests in the Joint Patents and Joint Know-How, the Regulatory Documentation or any other Patent or intellectual property rights not otherwise expressly granted herein. For clarity, if AbbVie does not exercise its License Option, Harpoon retains all rights under Harpoon's interests in the Joint Patents and the Joint Know-How, if any, to Exploit the Licensed Compounds and Licensed Products in its sole discretion without duty to account to AbbVie in connection with such use or Exploitation.

5.6.2 Except as expressly provided herein, AbbVie grants no other right or license, including any rights or licenses to the AbbVie Patents, the AbbVie Know-How, the Regulatory Documentation, or any other Patent or intellectual property rights not otherwise expressly granted herein.

5.7 Confirmatory Patent License. Harpoon shall if requested to do so by AbbVie immediately enter into confirmatory license agreements consistent with this Agreement in the form or substantially the form reasonably requested by AbbVie for purposes of recording the licenses granted under

this Agreement with such patent offices in the Territory as AbbVie considers appropriate. Until the execution of any such confirmatory licenses, so far as may be legally possible, Harpoon and AbbVie shall have the same rights in respect of the Harpoon Patents and Joint Patents and be under the same obligations to each other in all respects as if the said confirmatory licenses had been executed.

5.8 Exclusivity with Respect to the Territory.

5.8.1 Harpoon shall not, and shall cause its Affiliates not to (a) directly or indirectly, develop, commercialize or otherwise exploit any Competing Product in any country or other jurisdiction in the Territory, or (b) license, authorize, appoint, or otherwise enable any Third Party to directly or indirectly, develop, commercialize or otherwise exploit any Competing Product in any country or other jurisdiction in the Territory, except, in each case ((a) and (b)), as otherwise expressly provided in this Agreement.

5.8.2 Notwithstanding the provisions of Section 5.8, if, during the Term, (a) Harpoon or any of its Affiliates acquires, as the result of an Acquisition, rights to a Competing Product, such Acquisition, and the development, manufacture or commercialization of such Competing Product thereafter, shall not constitute a breach of Section 5.8 if Harpoon or such Affiliate, as applicable, [***]; or (b) Harpoon undergoes a Change in Control and the relevant acquirer is either then commercializing a Competing Product, or has in development any Competing Product, such Change in Control, and the commercialization (or development and subsequent commercialization, if such Competing Product receives Regulatory Approval) of such Competing Product by such relevant acquirer or any of its Affiliates, shall not constitute a breach of Section 5.8; *provided* that such (x) acquirer Segregates the Competing Product and (y) AbbVie shall have the right, in its sole and absolute discretion, by written notice delivered to Harpoon (or its successor) at any time during the [***] following the written notice contemplated by Section 13.2.1, to (i) terminate any or all provisions of this Agreement providing for any delivery by AbbVie to Harpoon of Confidential Information of AbbVie relating to activities contemplated by this Agreement, save only for (A) Article 6, (B) information regarding sublicenses pursuant to Section 5.3, (C) information regarding the prosecution, enforcement, defense, litigation, infringement and licensing of Patents pursuant to (1) Sections 7.2.1, 7.2.3, 7.3.1, 7.3.5, 7.4, and 7.5.2, (2) solely with respect to Joint Patents, Sections 7.2.2, 7.3.2, and 7.5.3, and (3) solely with respect to Joint Patents and Harpoon Patents, Sections 7.3.4 and 7.5.1, (D) notice of any license pursuant to Section 5.9.2, (E) safety data pursuant to Section 8.1, (F) proposed disclosures pursuant to Section 9.5, (G) communications under Section 11.4 and (H) notices pursuant to Sections 11.3 and 13.1; and (ii) disband the JGC and terminate its activities, in which case the provisions set forth in the last sentence of Section 2.3 shall apply.

5.9 In-License Agreements.

5.9.1 During the Term, neither Harpoon nor any of its Affiliates shall, [***], not to be unreasonably withheld, conditioned or delayed, enter into any agreement with a Third Party related to Information, Regulatory Documentation, materials, Patents, or other intellectual other property rights [***].

5.9.2 Following the License Option Exercise Closing Date, if [***] owned or controlled by a Third Party in a particular country or jurisdiction is necessary to Exploit a Licensed Compound or Licensed Product, AbbVie shall have the first right, but not the obligation, to negotiate and enter into an agreement with a Third Party in order to obtain a license or right under such Patent or intellectual property right. If AbbVie elects (in a written communication submitted to Harpoon) not to enter into any such agreement, Harpoon may enter into any such agreement. Notwithstanding the foregoing, if a [***] owned or controlled by a Third Party is [***]

[***], then [***] the costs associated with any such license to the Patent or other intellectual property right of such Third Party ("**AbbVie [***] Rights**").

5.9.3 If Harpoon or any of its Affiliates, after the Effective Date, become a party to a license, sublicense or other agreement for [***], or as permitted in Sections 5.9.1 or 5.9.2, then Harpoon shall inform AbbVie and shall provide AbbVie with a copy of such license, sublicense, or other agreement ("**Proposed Future In-Licensed Rights**"). If AbbVie notifies Harpoon in writing within [***] after receipt of such copy that AbbVie wishes to receive a license or sublicense (as applicable) under, and be subject to the rights and obligations of, the Proposed Future In-Licensed Rights as they apply to AbbVie and this Agreement, then the Proposed Future In-Licensed Rights shall automatically be included in the Harpoon Patents and/or Harpoon Know-How (as applicable) hereunder and AbbVie agrees to abide by all applicable terms and conditions of such license, sublicense or other agreement, as it relates to AbbVie and this Agreement, including payment of any financial obligations based upon AbbVie's practice of such intellectual property rights. Effective on and following the License Option Exercise Closing Date, AbbVie shall be solely responsible for payment of any financial obligations under [***], and any license, sublicense or other agreement AbbVie elects to enter into with a Third Party that grants rights to AbbVie in connection with the Manufacture of a Licensed Compound or Licensed Product. Except as provided in this Section 5.9.3, Harpoon shall be solely responsible for and shall bear any and all payments under any Harpoon In-License Agreements, including any agreement between Harpoon and a Third Party entered prior to or on the Effective Date. For the purpose of clarity, AbbVie shall not be responsible for [***], or (b) [***] relating to the manufacture of any compound or product other than the Licensed Compounds and Licensed Products.

ARTICLE 6
PAYMENTS AND RECORDS

6.1 Upfront Payment. No later than [***] following the Effective Date, AbbVie shall pay Harpoon an upfront, non-refundable, non-creditable amount equal to Thirty Million Dollars ($30,000,000).

6.2 Development and Regulatory Milestones. In partial consideration of the rights granted by Harpoon to AbbVie hereunder and subject to the terms and conditions set forth in this Agreement, AbbVie shall pay to Harpoon a non-refundable milestone payment within [***] after the achievement of each of the following milestones, calculated as follows:

6.2.1 upon the License Option Exercise Closing Date, Two Hundred Million Dollars ($200,000,000);

6.2.2 upon first Initiation of the Phase I/IB Trial under the Initial Development Plan for a Licensed Compound in the U.S., Fifty Million Dollars ($50,000,000); *provided* that subject to Section 3.1.3, (a) if [***] [***], but [***], this milestone payment shall be [***], and (b) if such [***] occurs on or after [***], this milestone payment shall be [***];

6.2.3 upon [***], [***];

6.2.4 upon [***], [***]; and

6.2.5 upon [***] and [***], [***].

Each milestone payment in this Section 6.2 shall be payable only upon the first achievement of such milestone and no amounts shall be due for subsequent or repeated achievements of such milestone, whether for the same or a different Licensed Compound or Licensed Product. The maximum aggregate amount payable by AbbVie pursuant to this Section 6.2 is [***].

6.3 First Commercial Sales Milestones. In partial consideration of the rights granted by Harpoon to AbbVie hereunder and subject to the terms and conditions set forth in this Agreement, AbbVie shall pay to Harpoon the following non-refundable milestone payments due within [***] after the achievement of each of the following milestones, calculated as follows:

6.3.1 upon [***] Licensed Product, [***]; and

6.3.2 upon the First Commercial Sale for the first Licensed Product to achieve such [***], [***].

Each milestone payment in this Section 6.3 shall be payable only upon the first achievement of such milestone and no amounts shall be due for subsequent or repeated achievements of such milestone, whether for the same or a different Licensed Compound or Licensed Product. The maximum aggregate amount payable by AbbVie pursuant to this Section 6.3 is [***].

6.4 Sales-Based Milestones. In partial consideration of the rights granted by Harpoon to AbbVie hereunder and subject to the terms and conditions set forth in this Agreement, AbbVie shall pay to Harpoon the following non-refundable milestone payments due within [***] after the end of the [***] in which such milestone was achieved for the aggregate sales of all Licensed Products in the Territory, calculated as follows:[***].

Each milestone payment in this Section 6.4 shall be payable only upon the first achievement of such milestone in a [***], and no amounts shall be due for subsequent or repeated achievements of such milestone in subsequent [***], whether for the same or a different Licensed Compound or Licensed Product. The maximum aggregate amount payable by AbbVie pursuant to this Section is [***].

6.5 Royalties.

6.5.1 Royalty Rates. As further consideration for the rights granted to AbbVie hereunder, subject to Section 6.5.3, commencing upon the First Commercial Sale of a Licensed Product in the Territory, on a Licensed Product-by-Licensed Product basis, AbbVie shall pay to Harpoon a royalty on Net Sales of each Licensed Product in the Territory (excluding Net Sales of each Licensed Product in any country or other jurisdiction in the Territory for which the Royalty Term for such Licensed Product in such country or other jurisdiction has expired) during [***] at the following rates:

Net Sales in the Territory of each Licensed Product in a [***]	**Royalty Rate**
For that portion of aggregate Net Sales of each Licensed Product[***]	[***]
For that portion of aggregate Net Sales of each Licensed Product[***]	[***]
For that portion of aggregate Net Sales of each Licensed Product[***]	[***]

With respect to each Licensed Product in each country or other jurisdiction in the Territory, [***].

6.5.2 Royalty Term. AbbVie shall have no obligation to pay any royalty with respect to Net Sales of any Licensed Product in any country or other jurisdiction after the Royalty Term for such Licensed Product in such country or other jurisdiction has expired.

6.5.3 Reductions. Notwithstanding the foregoing:

(a) if in any country or other jurisdiction in the Territory during the Royalty Term for a Licensed Product (i) there is [***], then for each such country or other jurisdiction, starting with the [***] occurs, the royalties payable to Harpoon for the Net Sales of such Licensed Product in such country or other jurisdiction shall be [***] set forth in Section 6.5.1; (ii) there [***], then for each such country or other jurisdiction, starting with the [***], the royalties payable to Harpoon for the Net Sales of such Licensed Product in such country or other jurisdiction shall be [***] set forth in Section 6.5.1; and (iii) if for any [***] during the Royalty Term [***] in such country or other jurisdiction during such [***], then the royalties due to Harpoon pursuant to this Section 6.5 in such country or other jurisdiction shall be [***] in each such [***]. For purposes herein, (A) [***] (B) [***]

[***] in each case ((A) and (B)) of the unit sales of such Licensed Product sold in that country or other jurisdiction by AbbVie, its Affiliates and Sublicensees. Unless otherwise agreed by the Parties, [***] sold during a [***] shall be as reported by [***] or any successor or any other independent sales auditing firm reasonably agreed upon by the Parties;

(b) if AbbVie enters into an agreement with a Third Party in order to obtain a license or right under [***] owned or controlled by such Third Party in a particular country or other jurisdiction pursuant to Section 5.9.2, AbbVie shall be entitled to deduct from [***] hereunder with respect to a Licensed Product for a particular country or other jurisdiction [***] of [***] paid to such Third Party (excluding [***]) as consideration for the grant of the license or sublicense in connection with such Licensed Product (and to the extent reasonably allocable to the Licensed Product, if such Third Party agreement is also applicable to other programs or products of AbbVie) for such country or other jurisdiction; *provided* that in no case shall such deduction reduce such [***] set forth in [***] [***]. For clarity, no reduction shall apply in connection with payments made by AbbVie in connection with any [***];

(c) [***] in a country or other jurisdiction in the Territory, then, for the purposes of calculating the royalties payable with respect to such Licensed Product under Section 6.5.1, [***]; and

(d) if, and in such case from and after the date on which, a Licensed Product is Exploited in a country or other jurisdiction and such Licensed Product is not either or both (i) [***] or (ii) covered by (A) [***] Licensed Product in such country or other jurisdiction or (B) a [***] in such country or other jurisdiction, then the royalty rate set forth in Section 6.5.1 with respect to such country or other jurisdiction (for purposes of calculations under Section 6.5.1), shall be reduced by [***];.

(e) In no event will the cumulative reductions under the foregoing Sections 6.5.3(a) through 6.5.3(d) reduce the [***] payable to Harpoon on any Licensed Product in any [***] by greater than [***] of the amounts otherwise payable under Section 6.5.1 for such Licensed Product. Credits not exhausted in any [***] may be carried into future [***], subject to the foregoing sentence.

6.6 Royalty Payments and Reports. AbbVie shall calculate all amounts payable to Harpoon pursuant to Section 6.5 at the end of each [***], which amounts shall be converted to Dollars, in accordance with Section 6.7. AbbVie shall pay to Harpoon the royalty amounts due with respect to a given [***] within [***] after the end of such [***]. Each payment of royalties due to Harpoon shall be accompanied by a statement of the amount of Net Sales of each Licensed Product in each country or other jurisdiction the Territory during the applicable [***] (including such amounts expressed in local currency and as converted to Dollars) and a calculation of the amount of royalty payment due on such Net Sales for such [***], including the amount of any reductions pursuant to Section 6.5.3.

6.7 Mode of Payment; Offsets. All payments to either Party under this Agreement shall be made by deposit of Dollars in the requisite amount to such bank account as the receiving Party may from

time to time designate by notice to the paying Party. For the purpose of calculating any sums due under, or otherwise reimbursable pursuant to, this Agreement (including the calculation of Net Sales expressed in currencies other than Dollars), a Party shall convert any amount expressed in a foreign currency into Dollar equivalents using its, its Affiliate's or Sublicensee's standard conversion methodology consistent with Accounting Standards. [***].

6.8 Withholding Taxes.

6.8.1 Withholding Amounts. Where any sum due to be paid to either Party hereunder is subject to any withholding or similar tax, the Parties shall use their commercially reasonable efforts to do all such acts and things and to sign all such documents as will enable them to take advantage of any applicable double taxation agreement or treaty. In the event there is no applicable double taxation agreement or treaty, or if an applicable double taxation agreement or treaty reduces but does not eliminate such withholding or similar tax, the payor shall remit such withholding or similar tax to the appropriate government authority, deduct the amount paid from the amount due to payee and secure and send to payee the best available evidence of the payment of such withholding or similar tax. Any such amounts deducted by the payor in respect of such withholding or similar tax shall be treated as having been paid by the payor for purposes of this Agreement. If withholding or similar taxes are paid to a government authority, each Party will provide the other such assistance as is reasonably required to obtain a refund of the withheld or similar taxes, or to obtain a credit with respect to such taxes paid. In the event that a government authority retroactively determines that a payment made by the paying Party to the receiving Party pursuant to this Agreement should have been subject to withholding or similar (or to additional withholding or similar) taxes, and such paying Party (the "**Withholding Party**") remits such withholding or similar taxes to the government authority, including any interest and penalties that may be imposed thereon (together with the tax paid, the "**Withholding Amount**"), the Withholding Party will have the right (a) to offset the Withholding Amount against future payment obligations of the Withholding Party under this Agreement or (b) to invoice the receiving Party for the Withholding Amount (which shall be payable by the receiving Party within [***] of its receipt of such invoice), or to pursue reimbursement of the Withholding Amount by any other available remedy.

6.8.2 Withholding Actions. Notwithstanding the foregoing, the Parties acknowledge and agree that if AbbVie (or its assignee pursuant to Section 13.4) is required by Applicable Law to withhold taxes in respect of any amount payable under this Agreement, and if such withholding obligation arises as a result of any action taken by AbbVie or its Affiliate or successor or assignee, including without limitation an assignment of this Agreement as permitted under Section 13.4 of this Agreement, a change in tax residency of AbbVie, or payments arise or are deemed to arise through a branch of AbbVie and such withholding taxes exceed the amount of withholding taxes that would have been applicable if such action had not occurred (each an "**AbbVie Withholding Tax Action**"), then, any such amount payable shall be increased to take into account such increased withholding taxes as may be necessary so that, after making all required withholdings Harpoon (or its assignee pursuant to Section 13.4) receives an amount equal to the sum it would have received had no such AbbVie Withholding Tax Action occurred. Harpoon shall (a) use its commercially reasonable efforts to obtain an exemption of such withheld amounts to the extent practicable under Applicable Law and (b) cooperate with AbbVie to obtain a reduction or refund of such withheld amounts.

6.9 Indirect Taxes. Except as otherwise provided in this Agreement, all payments due under this Agreement are exclusive of value added taxes, sales taxes, consumption taxes and other similar taxes (the "**Indirect Taxes**"). Notwithstanding anything to the contrary in this Agreement, AbbVie shall be responsible for any Indirect Taxes as well as any transfer, documentary, sales use, stamp, registration, value added or other similar tax that is imposed with respect to the payments or the related transfer of rights or other property pursuant to the terms of this Agreement. If the Indirect Taxes originally paid or otherwise borne by the paying Party are in whole or in part subsequently determined not to have been chargeable, all reasonably necessary steps will be taken by the receiving Party to receive a refund of these undue Indirect Taxes from the

applicable governmental authority or other fiscal authority and any amount of undue Indirect Taxes repaid by such authority to the receiving Party will be transferred to the paying Party within [***] of receipt.

6.10 Interest on Late Payments. If any payment due to either Party under this Agreement is not paid when due, then such paying Party shall pay interest thereon (before and after any judgment) at [***] such interest to run from the date on which payment of such sum became due until payment thereof in full together with such interest; *provided* however that [***], then such interest [***], as adjusted from time to time on the [***].

6.11 Audit. AbbVie shall, shall cause its Affiliates to, and shall use commercially reasonable efforts to cause its Sublicensees to, keep complete and accurate books and records pertaining to Net Sales of Licensed Products, in sufficient detail to calculate all amounts payable hereunder. At the request of Harpoon, AbbVie shall permit an independent public accounting firm of nationally recognized standing designated by Harpoon and reasonably acceptable to AbbVie, [***], to audit the books and records maintained pursuant to this Section 6.11 to ensure the accuracy of all reports and payments made hereunder, including any permitted deductions from Net Sales pursuant to Section 1.108. Such examinations may not (a) be conducted for any [***] [***] (b) be conducted more than once in any [***] period or (c) be [***] (unless a previous audit revealed an underpayment with respect to such [***]). The accounting firm shall disclose to Harpoon only whether the reports are correct or not, and the specific details concerning any discrepancies. No other information shall be shared. Except as provided below, the cost of this audit shall be borne by Harpoon, unless the audit reveals a variance [***] from the reported amounts or [***], in which case AbbVie shall bear the cost of the audit.

6.12 Audit Dispute. In the event of a dispute with respect to any audit under Section 6.11, Harpoon and AbbVie shall work in good faith to resolve the disagreement. If the Parties are unable to reach a mutually acceptable resolution of any such dispute within [***], the dispute shall be submitted for resolution to a certified public accounting firm jointly selected by each Party's certified public accountants or to such other Person as the Parties shall mutually agree (the "**Audit Expert**"). The decision of the Audit Expert shall be final and the costs of such determination as well as the initial audit shall be borne between the Parties in such manner as the Audit Expert shall determine. Not later than [***] after such decision and in accordance with such decision, AbbVie shall pay the additional amounts or Harpoon shall reimburse the excess payments, as applicable.

6.13 Confidentiality. The receiving Party shall treat all information subject to review under this Article 6 in accordance with the confidentiality provisions of Article 9 and the Parties shall cause the Audit Expert to enter into a reasonably acceptable confidentiality agreement with AbbVie obligating such firm to retain all such financial information in confidence pursuant to such confidentiality agreement.

6.14 [***] The development and regulatory milestone payments, first commercial sales milestone payments, sales-based milestone payments and royalties in Sections 6.2, 6.3 6.4, and 6.5 shall not apply at the same rates to Development and Commercialization of Licensed Compounds or Licensed Products [***] for eligibility to be treated for such disease, state, or condition with a Licensed Compound or Licensed Product or for monitoring patients who are or have been treated with a Licensed Compound or Licensed Product. In the event that a Licensed Compound or Licensed Product is Developed for any such purposes, [***] for the sale of such Licensed Product that [***] of such Licensed Product and [***], as applicable; *provided* that, for clarity, any such [***]

[***] [***] under this Agreement with respect to Licensed Compounds or Licensed Products that are [***].

6.15 No Other Compensation. Each Party hereby agrees that the terms of this Agreement fully define all consideration, compensation and benefits, monetary or otherwise, to be paid, granted or delivered by one Party to the other Party in connection with the transactions contemplated herein. Neither Party previously has paid or entered into any other commitment to pay, whether orally or in writing, any of the other Party's employees, directly or indirectly, any consideration, compensation or benefits, monetary or otherwise, in connection with the transaction contemplated herein.

ARTICLE 7
INTELLECTUAL PROPERTY

7.1 Ownership of Intellectual Property.

7.1.1 Ownership of Technology. Subject to Section 3.8.2(c) and Section 7.1.2, as between the Parties, each Party, or their respective Affiliates, shall own and retain all right, title, and interest in and to any and all: (a) Information and inventions that are conceived, discovered, developed, or otherwise made by or on behalf of such Party or its Affiliates (including subcontractors thereof) under or in connection with this Agreement, whether or not patented or patentable, and any and all Patents and other intellectual property rights with respect thereto, except to the extent that any such Information or invention or any Patent or intellectual property rights with respect thereto, is Joint Know-How or Joint Patents, and (b) other Information, inventions, Patents, and other intellectual property rights that are owned or otherwise Controlled (other than pursuant to the license grants set forth in Sections 5.1 and 5.2) by such Party or its Affiliates.

7.1.2 Ownership of Joint Patents and Joint Know-How. Subject to Section 3.8.2(c), as between the Parties, each Party, or their respective Affiliates, shall own an equal, undivided interest in and to any and all (a) Information and inventions that are conceived, discovered, developed or otherwise made jointly by or on behalf of Harpoon or its Affiliates (including subcontractors thereof), on the one hand, and AbbVie or its Affiliates (including subcontractors thereof), on the other hand, in connection with the work conducted under or in connection with this Agreement, in each case whether or not patented or patentable (the "**Joint Know-How**"), and (b) Patents (the "**Joint Patents**") and other intellectual property rights with respect to the Information and inventions described in subclause (a) (together with Joint Know-How and Joint Patents, the "**Joint Intellectual Property Rights**"). Each Party shall promptly disclose to the other Party in writing, and shall cause its Affiliates, licensees and sublicensees to so disclose, the development, making, conception or reduction to practice of any Joint Know-How or Joint Patents. Subject to the licenses and rights of reference granted under Sections 5.1 and 5.2 and, in the case of Harpoon, its exclusivity obligations hereunder, each Party shall have the right to Exploit the Joint Intellectual Property Rights without a duty of seeking consent from or accounting to the other Party. Notwithstanding the foregoing, with respect to (1) any [***], and (2) any [***].

7.1.3 United States Law. The determination of whether Information and inventions are conceived, discovered, developed, or otherwise made by a Party for the purpose of allocating proprietary rights (including Patent, copyright or other intellectual property rights) therein, shall, for purposes of this Agreement, be made in accordance with Applicable Law in the United States.

7.1.4 Assignments.

(a) Each Party shall cause all Persons who perform activities for such Party under this Agreement to prospectively or be under an obligation to assign (or, if Applicable Law does not permit such Person to agree to such assignment obligation despite such Party's using commercially reasonable efforts to negotiate such assignment obligation, provide a license under) all of their rights in any Information and inventions resulting therefrom to such Party, except where Applicable Law requires otherwise and except in the case of governmental, not-for-profit and public institutions which have standard policies against such an assignment (in which case a suitable license, or right to obtain such a license, shall be obtained).

(b) Each Party will promptly disclose to the other Party in writing, the conception, discovery, development or making of any Joint Know-How or Joint Patents by Persons who perform activities for it under this Agreement. Each Party will execute and record assignments and other necessary documents consistent with such ownership promptly upon request.

7.2 Maintenance and Prosecution of Patents.

7.2.1 Patent Prosecution and Maintenance of Harpoon Patents and Joint Patents.

(a) Subject to Section 7.2.1(b), Harpoon shall have the right, but not the obligation, through the use of internal or outside counsel to prepare, file, prosecute, and maintain the Harpoon Patents and Joint Patents worldwide, at Harpoon's sole cost and expense. Where a Harpoon Patent or Joint Patent [***]. Harpoon shall [***] with regard to the preparation, filing, prosecution, and maintenance of such Harpoon Patents or Joint Patents, including by providing AbbVie with a copy of material communications to and from any patent authority in the Territory regarding such Harpoon Patents or Joint Patents, and by providing AbbVie drafts of any material filings or responses to be made to such patent authorities in the Territory sufficiently in advance of submitting such filings or responses so as to allow for a reasonable opportunity for AbbVie to review and comment thereon. Harpoon shall consider in good faith the requests and suggestions of AbbVie with respect to such drafts and with respect to strategies for filing and prosecuting such Harpoon Patents or Joint Patents in the Territory. Notwithstanding the foregoing, Harpoon shall promptly inform AbbVie of any adversarial patent office proceeding or *sua sponte* filing, including a request for, or filing or declaration of, any interference, opposition, or re-examination relating to a Harpoon Patent or Joint Patent in the Territory. The Parties shall thereafter consult and cooperate to determine a course of action with respect to any such proceeding in the Territory and Harpoon shall consider in good faith all comments, requests and suggestions provided by AbbVie. [***] If Harpoon decides not to prepare, file, prosecute, or maintain a Harpoon Patent or Joint Patent in a country or other jurisdiction in the Territory, Harpoon shall provide reasonable prior written notice to AbbVie of such intention (which notice shall, in any event, be given no later than [***] prior to the next deadline for any action that may be taken with respect to such Harpoon Patent or Joint Patent in such country or other jurisdiction), AbbVie shall thereupon have the option, in its sole discretion, to assume the control and direction of the preparation, filing, prosecution, and maintenance of such Harpoon Patent or Joint Patent at its expense in such country or other jurisdiction. Upon AbbVie's written acceptance of such option, AbbVie shall assume the responsibility and control for the preparation, filing, prosecution, and maintenance of such Harpoon Patent or Joint Patent. In such event, Harpoon shall reasonably cooperate with AbbVie in such country or other jurisdiction as provided under Section 7.2.3.

(b) On and after the License Option Exercise Closing Date with respect to a Licensed Compound or Licensed Product, AbbVie shall have the responsibility for and control over the

preparation, filing, prosecution, and maintenance of all Harpoon Patents that [***](“**Product-Specific Patents**”) and Joint Patents, at AbbVie’s sole cost and expense. For clarity, Product-Specific Patents shall not include [***], including any Patent that [***] as long as such Harpoon Patent does not include any claim [***]. AbbVie shall keep Harpoon fully informed of all material steps with regard to the preparation, filing, prosecution, and maintenance of Product-Specific Patents or Joint Patents. If AbbVie decides not to prepare, file, prosecute, or maintain a Product-Specific Patent or Joint Patent in a country or other jurisdiction in the Territory, AbbVie shall provide reasonable prior written notice to Harpoon of such intention (which notice shall, in any event, be given no later than [***] prior to the next deadline for any action that may be taken with respect to such Product-Specific Patent or Joint Patent in such country or other jurisdiction), and Harpoon shall thereupon have the option, in its sole discretion, to assume the control and direction of the preparation, filing, prosecution, and maintenance of such Product-Specific Patent or Joint Patent at its sole cost and expense in such country or other jurisdiction. Upon Harpoon’s written acceptance of such option, Harpoon shall assume the responsibility and control for the preparation, filing, prosecution, and maintenance of such specific Product-Specific Patent or Joint Patent. In such event, AbbVie shall reasonably cooperate with Harpoon in such country or other jurisdiction as provided under Section 7.2.3.

7.2.2 Patent Prosecution and Maintenance of AbbVie Patents. AbbVie shall have the right, but not the obligation, to prepare, file, prosecute, and maintain the AbbVie Patents worldwide, at AbbVie’s sole cost and expense.

7.2.3 Cooperation. The Parties agree to cooperate fully in the preparation, filing, prosecution, and maintenance of the Harpoon Patents and Joint Patents in the Territory under this Agreement. Cooperation shall include:

(a) without limiting any other rights and obligations of the Parties under this Agreement, cooperating with respect to the timing, scope and filing of such Patents to preserve and enhance the patent protection for Licensed Compounds and Licensed Products, including the manufacture and use thereof;

(b) executing all papers and instruments, or requiring its employees or contractors to execute such papers and instruments, so as to (i) effectuate the ownership of intellectual property set forth in Section 7.1.1 and 7.1.2; (ii) enable the other Party to apply for and to prosecute Patent applications in the Territory; and (iii) obtain and maintain any Patent extensions, supplementary protection certificates, and the like with respect to the Harpoon Patents and Joint Patents in the Territory, in each case ((i), (ii), and (iii)) to the extent provided for in this Agreement;

(c) consistent with this Agreement, assisting in any license registration processes with applicable governmental authorities that may be available in the Territory for the protection of a Party’s interests in this Agreement; and

(d) promptly informing the other Party of any matters coming to such Party’s attention that may materially affect the preparation, filing, prosecution, or maintenance of any such Patents in the Territory.

7.2.4 Patent Term Extension and Supplementary Protection Certificate. AbbVie shall be responsible for making decisions regarding patent term extensions, including supplementary protection certificates and any other extensions that are now or become available in the future, wherever applicable, for AbbVie Patents, Joint Patents and Product-Specific Patents in any country or other jurisdiction

and for applying for any extension (including patent term extension and supplementary protection certificate) with respect to such Patents in the Territory. Harpoon shall provide prompt and reasonable assistance, as requested by AbbVie, including by taking such action as patent holder as is required under any Applicable Law to obtain such extension. AbbVie shall pay all expenses in regard to obtaining such extension in the Territory.

7.2.5 European Patents. On or after the License Option Exercise Closing Date, AbbVie shall have the sole right to decide whether a Joint Patent or a Product-Specific Patent should be validated or maintained as a Unitary Patent, whether and when such Patent should be opted out of or opted in to the jurisdiction of the Unified Patent Court (UPC) (including withdrawal of an opt-out), as well as any other issues concerning the jurisdiction of the UPC in connection with such Patent. Harpoon shall, at AbbVie's cost and expense, cooperate with AbbVie and provide to AbbVie and submit to authorities all necessary documents to effect such decision.

7.2.6 Patent Listings. With respect to each Licensed Product, AbbVie will have the sole right to list Joint Patents and Product-Specific Patents with Regulatory Authorities or other agencies, including as required or allowed under Applicable Law. AbbVie shall notify Harpoon in writing of any Harpoon Patents that it intends to list with Regulatory Authorities related to the Licensed Products and, prior to filing any such listing, consult with and consider in good faith the requests and suggestions of Harpoon regarding the same.

7.3 Enforcement of Patents.

7.3.1 Enforcement of Harpoon Patents. Each Party shall promptly notify the other Party in writing of any alleged or threatened infringement of the Product-Specific Patents by a Third Party in the Territory of which such Party becomes aware based on the development, commercialization or Exploitation of, or an application to market, a Licensed Product or a product containing a Licensed Compound in the Territory (the "**Product Infringement**"). AbbVie shall have the sole right, but not the obligation, to prosecute any Product Infringement involving any claims of Product-Specific Patents at its sole expense and AbbVie shall retain control of the prosecution of such claim, suit or proceeding. Harpoon shall have the right to join as a party to such claim, suit, or proceeding in the Territory and participate with its own counsel at its own expense; *provided* that AbbVie shall retain control of the prosecution of such claim, suit, or proceeding. During any such claim, suit, or proceeding, AbbVie shall keep Harpoon reasonably informed of all material developments in connection with such claim, suit or proceeding. If AbbVie does not take commercially reasonable steps to prosecute (including settling) such a Product Infringement in a country or jurisdiction, then (a) Harpoon may, but is not obligated to, prosecute the Product Infringement at its own expense in such country or jurisdiction, and (b) if Harpoon prosecutes such Product Infringement and obtains an injunction that prevents the sale of a Biosimilar Product by such Third Party in such country or jurisdiction, AbbVie shall not be entitled to apply any royalty reductions pursuant to Section 6.5.3(a) that would otherwise apply as a result of the sale of such Biosimilar Product by such Third Party after the period of such injunction.

7.3.2 Enforcement of AbbVie Patents and Joint Patents.

(a) Each Party shall promptly notify the other Party in writing of any alleged or threatened infringement of the Harpoon Patents that are not Product-Specific Patents, AbbVie Patents or Joint Patents by a Third Party in the Territory of which such Party becomes aware based on the development, commercialization, Exploitation, or an application to market a Licensed Product or a product containing a Licensed Compound in the Territory.

(b) Subject to Sections 7.3.3 and 7.3.4, Harpoon shall have the first right, but not the obligation, to prosecute any such alleged or threatened infringement of Harpoon Patents that are not Product-Specific Patents in the Territory at its sole expense and Harpoon shall retain control of the

prosecution of such claim, suit or proceeding. If Harpoon prosecutes any such infringement, AbbVie shall have the right to join as a party to such claim, suit or proceeding in the Territory and participate with its own counsel at its own expense; *provided* that Harpoon shall retain control of the prosecution of such claim, suit or proceeding. During any such claim, suit, or proceeding, Harpoon shall keep AbbVie reasonably informed of all material developments in connection with such claim, suit or proceeding. If Harpoon does not take commercially reasonable steps to prosecute the alleged or threatened infringement in the Territory with respect to such Harpoon Patents, then solely following the License Option Exercise Closing Date, AbbVie may prosecute such infringement in the Territory at its own expense, unless Harpoon reasonably believes that the prosecution of such infringement by AbbVie would have a material adverse impact on Harpoon's global patent portfolio, or upon the use or application of such Harpoon Patents in connection with other products and compounds Controlled by Harpoon, its Affiliates or sublicensees. For clarity, this Section 7.3.2(b) is inapplicable to any biosimilar patent litigation relating to any Licensed Compound or Licensed Product as set forth in Sections 7.3.3 and 7.3.4.

(c) AbbVie shall have the sole right, but not the obligation, to prosecute any such infringement of the AbbVie Patents in the Territory at its sole expense and AbbVie shall retain control of the prosecution of such claim, suit or proceeding.

(d) AbbVie shall have the first right, but not the obligation, to prosecute any such infringement of Joint Patents in the Territory at its sole expense and AbbVie shall retain control of the prosecution of such claim, suit or proceeding. If AbbVie prosecutes any such infringement, Harpoon shall have the right to join as a party to such claim, suit or proceeding in the Territory and participate with its own counsel at its own expense; *provided* that AbbVie shall retain control of the prosecution of such claim, suit or proceeding. During any such claim, suit, or proceeding, AbbVie shall keep Harpoon reasonably informed of all material developments in connection with such claim, suit or proceeding. If AbbVie does not take commercially reasonable steps to prosecute the alleged or threatened infringement in the Territory with respect to such Joint Patents, then Harpoon may prosecute such infringement in the Territory at its own expense.

7.3.3 Patent Exclusivity Listings. If either Party receives a copy of an application submitted to the FDA under subsection (k) of Section 351 of the PHSA (a "**Biosimilar Application**") naming a Licensed Product as a reference product or otherwise becomes aware that such a Biosimilar Application has been filed (such as in an instance described in Section 351(l)(9)(C) of the PHSA), such Party shall, within [***], notify the other Party so that the other Party may seek permission to view the application and related confidential information from the filer of the Biosimilar Application under Section 351(l)(1)(B)(iii) of the PHSA. If either Party receives any equivalent or similar certification or notice in any other jurisdiction in the Territory, either Party shall, within [***], notify and provide the other Party with copies of such communication. Regardless of the Party that is the "reference product sponsor" for purposes of such Biosimilar Application, (a) [***]; (b) AbbVie shall have the right to list any AbbVie Patents, Joint Patents, Product-Specific Patents, and, upon the written consent of Harpoon, such consent not to be unreasonably withheld, conditioned or delayed (taking into account, without limitation, the potential impact of such consent on Harpoon's platform technology and/or other products undergoing development or commercialization by Harpoon or its Third Party licensees and covered by such Harpoon Patents), other Harpoon Patents, insofar as they cover the Biosimilar Product as required pursuant to Section 351(l)(3)(A), Section 351(l)(5)(b)(i)(II), or Section 351(l)(7) of the PHSA, to respond to any communications with respect to such lists from the filer of the Biosimilar Application, and to negotiate with the filer of the Biosimilar Application as to whether to utilize a different mechanism for information exchange than that specified in Section 351(l) of the PHSA; and (c) [***] shall have the sole right to identify such Patents or respond to communications under any equivalent or similar listing in any other jurisdiction in the Territory. If required pursuant to Applicable Law, [***] shall prepare such lists and make such responses at [***] Harpoon shall cooperate with AbbVie's reasonable requests in connection therewith, including meeting any submission deadlines, in each case, to the extent required or permitted by Applicable Law. AbbVie shall (A) reasonably consult with [***]

[***] to a Third Party as contemplated by this Section 7.3.3, and shall consider in good faith Harpoon's advice, requests and suggestions with respect thereto, and (B) notify Harpoon of any such lists or communications promptly after they are made.

7.3.4 Conduct of Biosimilar Patent Litigation Including Under the Biologics Price Competition and Innovation Act. Notwithstanding anything to the contrary in this Section 7.3, AbbVie shall be responsible for initiating and managing any biosimilar litigation relating to Licensed Compounds or Licensed Products worldwide. AbbVie shall have the first right to bring an action for infringement of the AbbVie Patents, Joint Patents, Product-Specific Patents and, upon the written consent of Harpoon, such consent not to be unreasonably withheld, conditioned or delayed (taking into account, without limitation, the potential impact of such consent on Harpoon's platform technology and/or other products undergoing development or commercialization by Harpoon or its Third Party licensees and covered by such Harpoon Patents), other Harpoon Patents, including as required under Section 351(l)(6) of the PHSA following the agreement on a list of patents for litigation under Section 351(l)(4) or exchange of Patent lists pursuant to Section 351(l)(5)(B) of such act, or as required following any equivalent or similar certification or notice in any other jurisdiction. If Harpoon decides pursuant to this Agreement not to allow AbbVie to include such other Harpoon Patents in a litigation against a biosimilar applicant for a biosimilar product, Harpoon shall not assert such Patent in any litigation against the same biosimilar applicant for the same biosimilar product without written approval by AbbVie. The Parties' rights and obligations with respect to the foregoing legal actions shall be as set forth in Sections 7.3.1 through 7.3.5; *provided* that within [***] of reaching agreement on a list of Patents for litigation under Section 351(l)(4) or exchange of Patent lists pursuant to Section 351(l)(5)(B), AbbVie shall notify Harpoon as to whether or not it elects to prosecute such infringement. Either Party shall, within [***], notify and provide the other Party with copies of any notice of commercial marketing provided by the filer of a Biosimilar Application pursuant to Section 351(l)(8)(A) of the PHSA, or any equivalent or similar certification or notice in any other jurisdiction. Thereafter, AbbVie shall have the first right to seek an injunction or other remedies against such commercial marketing as permitted pursuant to Section 351(l)(8)(B) of the PHSA.

7.3.5 Cooperation. The Parties agree to cooperate fully in any infringement action pursuant to this Section 7.3. Where a Party brings such an action in accordance with this Agreement, the other Party shall, where necessary, furnish a power of attorney solely for such purpose or shall join in, or be named as a necessary party to, such action. Unless otherwise set forth herein, the Party entitled to bring any patent infringement litigation in accordance with this Section 7.3 shall have the right to settle such claim; *provided* that neither Party shall have the right to settle any patent infringement litigation under this Section 7.3 in a manner that imposes any costs or liability on, or involves any admission by, the other Party, without the express written consent of such other Party. The Party commencing the litigation shall provide the other Party with copies of all pleadings and other documents filed with the court if doing so would not waive any privilege or violate any court order or Applicable Law, and shall consider reasonable input from the other Party during the course of the proceedings.

7.3.6 Recovery. Any recovery realized as a result of such litigation described in Section 7.3.1, 7.3.2, or 7.3.5 (whether by way of settlement or otherwise) shall be first, allocated to reimburse the Parties for their costs and expenses in making such recovery (which amounts shall be allocated pro rata if insufficient to cover the totality of such expenses). [***]

7.4 Infringement Claims by Third Parties. If the manufacture, sale, or use of a Licensed Compound or Licensed Product in the Territory pursuant to this Agreement results in, or may result

in, any claim, suit, or proceeding by a Third Party alleging patent infringement by AbbVie (or its Affiliates or Sublicensees), AbbVie shall promptly notify Harpoon thereof in writing. Subject to Section 11.2, AbbVie shall have the first right, but not the obligation, to defend and control the defense of any such claim, suit, or proceeding at its own expense, using counsel of its own choice. Harpoon may participate in any such claim, suit, or proceeding with counsel of its choice at its own expense. The assumption of the defense of a claim that may be subject to Section 11.2 by either AbbVie or Harpoon shall not be construed as an acknowledgment that Harpoon is liable to indemnify any AbbVie Indemnitee in respect of such indemnity claim, nor shall it constitute a waiver by Harpoon of any defenses it may assert against an AbbVie Indemnitee's claim for indemnification. Without limitation of the foregoing, if AbbVie finds it necessary or desirable to join Harpoon as a party to any such action, Harpoon shall, at AbbVie's expense, execute all papers and perform such acts as shall be reasonably required. If AbbVie elects (in a written communication submitted to Harpoon within a reasonable amount of time after notice of the alleged patent infringement) not to defend or control the defense of, or otherwise fails to initiate and maintain the defense of, any such claim, suit, or proceeding, within such time periods so that Harpoon is not prejudiced by any delays, Harpoon may conduct and control the defense of any such claim, suit, or proceeding at its own expense. Each Party shall keep the other Party reasonably informed of all material developments in connection with any such claim, suit, or proceeding. [***] under this Section 7.4 shall be [***]

7.5 Invalidity or Unenforceability Defenses or Actions.

7.5.1 Notice. Each Party shall promptly notify the other Party in writing of any alleged or threatened assertion of invalidity, unpatentability or unenforceability of any of the Harpoon Patents, AbbVie Patents, or Joint Patents by a Third Party, in each case in the Territory and of which such Party becomes aware.

7.5.2 Harpoon Patents.

(a) Subject to Section 7.5.2(b), Harpoon shall have the first right, but not the obligation, to defend and control the defense of the validity, patentability and enforceability of the Harpoon Patents at its own expense in the Territory. AbbVie may participate in any such claim, suit, or proceeding in the Territory with counsel of its choice at its own expense; *provided* that Harpoon shall retain control of the defense in such claim, suit, or proceeding. If Harpoon elects not to defend or control the defense of such Harpoon Patents in a suit brought in the Territory, or otherwise fails to initiate and maintain the defense of any such claim, suit, or proceeding, then solely with respect to Product-Specific Patents included in the Harpoon Patents, and subject to Section 7.5.2(b), AbbVie may request to conduct and control the defense of any such claim, suit, or proceeding at its own expense, with Harpoon's consent not to be unreasonably withheld, conditioned or delayed.

(b) On and after the License Option Exercise Closing Date, AbbVie shall have the responsibility for and control over the defense of the validity, patentability and enforceability of Product-Specific Patents at AbbVie's sole cost and expense. Harpoon may participate in any such claim, suit, or proceeding in the Territory with counsel of its choice at its own expense; *provided* that AbbVie shall retain control of the defense in such claim, suit, or proceeding. If AbbVie elects not to defend or control the defense of such Product-Specific Patents in a suit brought in the Territory, or otherwise fails to initiate and maintain

the defense of any such claim, suit, or proceeding, then Harpoon may conduct and control the defense of any such claim, suit, or proceeding at its own expense.

7.5.3 AbbVie Patents and Joint Patents.

(a) AbbVie shall have the sole right, but not the obligation, to defend and control the defense of the validity and enforceability of the AbbVie Patents at its own expense in the Territory.

(b) The Party who is prosecuting the Joint Patents at the relevant time shall have the first right, but not the obligation, to defend and control the defense of the validity and enforceability of the Joint Patents at its own expense in the Territory. The other Party may participate in any such claim, suit, or proceeding in the Territory related to the Joint Patents with counsel of its choice at its own expense; *provided* that the Party who is prosecuting the Joint Patents at the relevant time shall retain control of the defense in such claim, suit, or proceeding. If the Party who is prosecuting the Joint Patents at the relevant time elects not to defend or control the defense of the Joint Patents in a suit brought in the Territory, or otherwise fails to initiate and maintain the defense of any such claim, suit, or proceeding, then the other Party may conduct and control the defense of any such claim, suit, or proceeding, at its own expense.

7.5.4 Cooperation. Each Party shall assist and cooperate with the other Party as such other Party may reasonably request from time to time in connection with its activities set forth in this Section 7.5, including by being joined as a party plaintiff in such action or proceeding, providing access to relevant documents and other evidence, and making its employees available at reasonable business hours. In connection with any such defense or claim or counterclaim, the controlling Party shall consider in good faith any comments from the other Party and shall keep the other Party reasonably informed of any steps taken, and shall provide copies of all documents filed, in connection with such defense, claim, or counterclaim provided that doing so would not waive any privilege or violate any court order or Applicable Law. In connection with the activities set forth in this Section 7.5, each Party shall consult with the other as to the strategy for the defense of the Harpoon Patents and Joint Patents. Neither Party shall have the right to settle any claim, suit, or proceeding under this Section 7.5 in a manner that imposes any costs or liability on, or involves any admission by, the other Party, without the express written consent of such other Party.

7.5.5 Relationship to Enforcement of Patents. Notwithstanding anything herein to the contrary, the defense to any challenge of validity, enforceability or patentability of any of the Harpoon Patents, AbbVie Patents, or Joint Patents that is raised in connection with or in response to an infringement action or a biosimilar litigation shall be controlled by the Party who controls that infringement action or biosimilar litigation, and such Party shall have the right to manage, resolve, settle or dispose any such challenge according to Section 7.3, *provided* that (a) with respect to any Harpoon Patents that are not Product-Specific Patents and are not involved in any biosimilar patent litigation, where AbbVie is the controlling Party in connection with an infringement action, AbbVie shall not resolve, settle or dispose of such action or litigation in any way that would admit liability on the part of Harpoon, or materially impact the validity, scope or enforceability of such Harpoon Patent, without Harpoon's prior written consent, not to be unreasonably withheld or delayed, and (b) with respect to any Harpoon Patents for which Harpoon did not give its consent to include within a biosimilar litigation, and Harpoon is the controlling Party in connection with an infringement action involving such Patents, then Harpoon shall be the controlling Party in connection with the defense to any challenge of validity, enforceability or patentability of such Harpoon Patents, but shall reasonably consult with AbbVie in connection with any such defense, and shall consider in good faith AbbVie's reasonable comments in relation thereto.

7.6 Product Trademarks. As between the Parties, AbbVie shall own all right, title, and interest to the Product Trademarks in the Territory, and shall be responsible for the registration, prosecution, maintenance and enforcement thereof. All costs and expenses of registering, prosecuting, maintaining and enforcing the Product Trademarks shall be borne solely by AbbVie. Harpoon shall provide all assistance and

documents reasonably requested by AbbVie in support of its prosecution, registration, maintenance and enforcement of the Product Trademarks.

7.7 International Nonproprietary Name. As between the Parties, AbbVie shall have the sole right and responsibility to select the International Nonproprietary Name or other name or identifier for any Licensed Compound or Licensed Product. AbbVie shall have the sole right and responsibility to apply for submission to the World Health Organization for the International Nonproprietary Name, and submission to the United States Adopted Names Council for the United States Adopted Name.

7.8 Inventor's Remuneration. Each Party shall be solely responsible for any remuneration that may be due such Party's inventors under any applicable inventor remuneration laws.

7.9 Common Interest. All information exchanged between the Parties regarding the prosecution, maintenance, enforcement and defense of Patents under this Article 7 will be deemed to be Confidential Information of the disclosing Party. In addition, the Parties acknowledge and agree that, with regard to such prosecution, maintenance, enforcement and defense, the interests of the Parties as collaborators and Harpoon and licensee are to, for their mutual benefit, obtain patent protection and plan patent defense against potential infringement activities by Third Parties, and as such, are aligned and are legal in nature. The Parties agree and acknowledge that they have not waived, and nothing in this Agreement constitutes a waiver of, any legal privilege concerning Patents under this Article 7, including privilege under the common interest doctrine and similar or related doctrines. Notwithstanding anything to the contrary in this Agreement, to the extent a Party has a good faith belief that any information required to be disclosed by such Party to the other Party under this Article 7 is protected by attorney-client privilege or any other applicable legal privilege or immunity, such Party shall not be required to disclose such information and the Parties shall in good faith cooperate to agree upon a procedure (which may include entering into a specific common interest agreement, disclosing such information on a "for counsel eyes only" basis or similar procedure) under which such information may be disclosed without waiving or breaching such privilege or immunity.

ARTICLE 8
PHARMACOVIGILANCE AND SAFETY

8.1 Pharmacovigilance. Within [***] after the License Option Exercise Closing Date, the Parties shall enter into an agreement to initiate a process for the exchange of adverse event safety data in a mutually agreed format, including postmarketing spontaneous reports received by the Party or its Affiliates in order to (a) with respect to AbbVie, monitor the safety of the Licensed Compound or Licensed Product and to meet reporting requirements with any applicable Regulatory Authority and (b) with respect to Harpoon, permit reasonable access to adverse event safety data for Licensed Compounds or Licensed Products, in each case ((a) and (b)) at AbbVie's expense. Notwithstanding the forgoing, if any adverse event safety data is received or otherwise generated by Harpoon following the License Option Exercise Closing Date and prior to the execution of such agreement, Harpoon shall, within [***] of receiving or otherwise generating such data, provide such data to AbbVie by email to: [***].

8.2 Global Safety Database. Harpoon shall initially set up, hold and maintain (at its sole cost and expense) the global safety database for Licensed Compounds and Licensed Products with respect to safety data obtained in connection with the Initial Development Activities. Within [***] after the License Option Exercise Closing Date, Harpoon shall transfer to AbbVie, in an electronic format reasonably satisfactory to AbbVie, the complete contents of the safety database maintained by Harpoon pursuant to the immediately foregoing sentence, and thereafter AbbVie shall set up, hold, and maintain (at AbbVie's sole cost and expense) the global safety database for Licensed Compounds or Licensed Products. Harpoon shall provide AbbVie with all information necessary or desirable for AbbVie to comply with its pharmacovigilance responsibilities in the Territory, including, as applicable, any adverse drug experiences, from pre-clinical or clinical laboratory, animal toxicology and pharmacology studies, Clinical Studies, and commercial experiences

with a Licensed Compound or Licensed Product, in each case in any form agreed upon between AbbVie and Harpoon at the time of the request.

ARTICLE 9
CONFIDENTIALITY AND NON-DISCLOSURE

9.1 Product Information. Harpoon recognizes that by reason of AbbVie's status as an exclusive optionee pursuant to the grants under Section 3.2.3, AbbVie has an interest in Harpoon maintaining the confidentiality of certain information of Harpoon. Accordingly, following the License Option Exercise Closing Date and for the remainder of the Term, Harpoon shall, and shall cause its Affiliates and its and their respective officers, directors, employees, and agents to, keep confidential, and not publish or otherwise disclose, and not use directly or indirectly for any purpose other than to fulfill Harpoon's obligations hereunder any Information owned or otherwise Controlled by Harpoon or any of its Affiliates specifically relating to any Licensed Compound or Licensed Product, or the Exploitation of any of the foregoing (the "**Product Information**"); except to the extent (a) the Product Information is in the public domain through no fault of Harpoon, its Affiliates or any of its or their respective officers, directors, employees, or agents; (b) such disclosure or use is expressly permitted under Section 9.3, or (c) such disclosure or use is otherwise expressly permitted by the terms of this Agreement. Product Information shall not include [***]. For purposes of Section 9.3, effective as of License Option Exercise Closing Date and for the remainder of the Term, AbbVie shall be deemed to be the disclosing Party with respect to Product Information under Section 9.3 and Harpoon shall be deemed to be the receiving Party with respect thereto. For further clarification, (i) without limiting this Section 9.1, to the extent Product Information is disclosed by Harpoon to AbbVie pursuant to this Agreement, such information shall, subject to the other terms and conditions of this Article 9, also constitute Confidential Information of Harpoon with respect to the use and disclosure of such Information by AbbVie, but (ii) the disclosure by Harpoon to AbbVie of Product Information shall not cause such information to cease to be subject to the provisions of this Section 9.1 with respect to the use and disclosure of such Confidential Information by Harpoon. [***].

9.2 Confidentiality Obligations. At all times during the Term and for a period of [***] following termination or expiration hereof in its entirety, each Party shall, and shall cause its officers, directors, employees and agents to, keep confidential and not publish or otherwise disclose to a Third Party and not use, directly or indirectly, for any purpose, any Confidential Information furnished or otherwise made known to it, directly or indirectly, by the other Party, except to the extent such disclosure or use is expressly permitted by the terms of this Agreement or is necessary or reasonably useful for the performance of, or the exercise of such Party's rights under, this Agreement. Notwithstanding the foregoing, to the extent the receiving Party can demonstrate by documentation or other competent proof, the confidentiality and non-use obligations under this Section 9.2 with respect to any Confidential Information shall not include any information that:

9.2.1 has been published by a Third Party or otherwise is or hereafter becomes part of the public domain by public use, publication, general knowledge or the like through no wrongful act, fault or negligence on the part of the receiving Party;

9.2.2 has been in the receiving Party's possession prior to disclosure by the disclosing Party without any obligation of confidentiality with respect to such information; *provided* that the foregoing exception shall not apply with respect to Regulatory Documentation (excluding clinical protocols) or Joint Know-How;

9.2.3 is subsequently received by the receiving Party from a Third Party without restriction and without breach of any agreement between such Third Party and the disclosing Party;

9.2.4 is generally made available to Third Parties by the disclosing Party without restriction on disclosure; or

9.2.5 has been independently developed by or for the receiving Party without reference to, or use or disclosure of, the disclosing Party's Confidential Information; *provided* that the foregoing exception shall not apply with respect to Regulatory Documentation (excluding clinical protocols) or Joint Know-How.

Specific aspects or details of Confidential Information shall not be deemed to be within the public domain or in the possession of the receiving Party merely because the Confidential Information is embraced by more general information in the public domain or in the possession of the receiving Party. Further, any combination of Confidential Information shall not be considered in the public domain or in the possession of the receiving Party merely because individual elements of such Confidential Information are in the public domain or in the possession of the receiving Party unless the combination and its principles are in the public domain or in the possession of the receiving Party.

9.3 Permitted Disclosures. Each Party may disclose Confidential Information to the extent that such disclosure is:

9.3.1 in the reasonable opinion of the receiving Party's legal counsel, required to be disclosed pursuant to law, regulation or a valid order of a court of competent jurisdiction or other supra-national, federal, national, regional, state, provincial or local governmental body of competent jurisdiction, (including by reason of filing with securities regulators, but subject to Section 9.5); *provided* that the receiving Party shall first have given prompt written notice (and to the extent possible, at least [***] notice) to the disclosing Party and given the disclosing Party a reasonable opportunity to take whatever action it deems necessary to protect its Confidential Information. In the event that no protective order or other remedy is obtained, or the disclosing Party waives compliance with the terms of this Agreement, the receiving Party shall furnish only that portion of Confidential Information which the receiving Party is advised by counsel is legally required to be disclosed;

9.3.2 made by or on behalf of the receiving Party to the Regulatory Authorities as required in connection with any filing, application or request for Regulatory Approval of a Licensed Product in accordance with the terms of this Agreement; *provided* that reasonable measures shall be taken to assure confidential treatment of such Confidential Information to the extent practicable and consistent with Applicable Law;

9.3.3 made by or on behalf of the receiving Party to a patent authority as may be necessary or reasonably useful for purposes of preparing, obtaining, defending or enforcing a Patent in accordance with the terms of this Agreement; *provided* that reasonable measures shall be taken to assure confidential treatment of such Confidential Information, to the extent such protection is available;

9.3.4 made to its or its Affiliates' financial and legal advisors who have a need to know such disclosing Party's Confidential Information and are either under professional codes of conduct giving rise to expectations of confidentiality and non-use or under written agreements of confidentiality and

non-use, in each case, at least as restrictive as those set forth in this Agreement; *provided* that the receiving Party shall remain responsible for any failure by such financial and legal advisors, to treat such Confidential Information as required under this Article;

9.3.5 made by the receiving Party or its Affiliates to potential or actual investors or acquirers as may be necessary in connection with their evaluation of such potential or actual investment or acquisition; *provided* that such Persons shall be subject to obligations of confidentiality and non-use with respect to such Confidential Information substantially similar to the obligations of confidentiality and non-use of the receiving Party pursuant to this Article 9;

9.3.6 made by AbbVie or its Affiliates or Sublicensees to its or their advisors, consultants, clinicians, vendors, service providers, contractors, existing or prospective collaboration partners, licensees, sublicensees, or other Third Parties as may be necessary or useful in connection with the Exploitation of the Licensed Compound, the Licensed Products, or otherwise in connection with the performance of its obligations or exercise of its rights as contemplated by this Agreement; *provided* that such Persons shall be subject to obligations of confidentiality and non-use with respect to such Confidential Information substantially similar to the obligations of confidentiality and non-use of AbbVie pursuant to this Article 9; or

9.3.7 made by Harpoon or its Affiliates after receiving advanced approval from AbbVie, to its or their advisors, consultants, clinicians, vendors, service providers, contractors, or other Third Parties as may be necessary or useful in connection with the performance of their obligations or exercise of their rights as contemplated by this Agreement; *provided* that such Persons shall be subject to obligations of confidentiality and non-use with respect to such Confidential Information of AbbVie substantially similar to the obligations of confidentiality and non-use of Harpoon pursuant to this Article 9; *provided*, further, that the advanced approval requirement set forth in this Section 9.3.7 shall not apply to Third Party Providers approved by AbbVie pursuant to Section 3.7.

9.4 Use of Name. Except as expressly provided herein, neither Party shall mention or otherwise use the name, logo, or Trademark of the other Party or any of its Affiliates (or any abbreviation or adaptation thereof) in any publication, press release, marketing and promotional material, or other form of publicity without the prior written approval of such other Party in each instance. The restrictions imposed by this Section 9.4 shall not prohibit either Party from making any disclosure identifying the other Party that, in the opinion of the disclosing Party's counsel, is required by Applicable Law; *provided* that such Party shall submit the proposed disclosure identifying the other Party in writing to the other Party as far in advance as reasonably practicable (and in no event less than [***] prior to the anticipated date of disclosure) so as to provide a reasonable opportunity to comment thereon.

9.5 Public Announcements. Neither Party shall issue any other public announcement, press release, or other public disclosure regarding this Agreement or its subject matter without the other Party's prior written consent, except for any such disclosure that is, in the opinion of the disclosing Party's counsel, required by Applicable Law or the rules of a stock exchange on which the securities of the disclosing Party are listed (or to which an application for listing has been submitted). Notwithstanding the foregoing, Harpoon shall be free to issue any public announcement, press release, or other public disclosure related to (a) [***], (b) [***], (c) [***], and (d) any publication, presentation or disclosure that was permitted under Section 9.6, *provided* that any such disclosure under (a) through (d) does not contain any Confidential Information of AbbVie. In the event a Party is, in the opinion of its counsel, required by Applicable Law or

the rules of a stock exchange on which its securities are listed (or to which an application for listing has been submitted) to make such a public disclosure, such Party shall submit the proposed disclosure in writing to the other Party as far in advance as reasonably practicable (and to the extent possible, at least [***] prior to the anticipated date of disclosure) so as to provide a reasonable opportunity to comment thereon. Notwithstanding the foregoing, AbbVie, its Sublicensees and its and their respective Affiliates shall have the right to publicly disclose research, development and commercial information (including with respect to regulatory matters) regarding the Licensed Compound and Licensed Products, *provided* that any such disclosure does not contain any Confidential Information of Harpoon.

9.6 Publications. The Parties acknowledge that scientific publications must be monitored to prevent any adverse effect from premature publication of results of the activities contemplated hereunder. Prior to the License Option Exercise Closing Date, if Harpoon intends to publish, present (including presentation at any scientific meeting) or otherwise disclose Information related specifically to the Exploitation of the Licensed Compound or Licensed Products, Harpoon shall provide AbbVie with such proposed publication, presentation or disclosure at least [***] prior to the intended publication date, *provided* that [***]. AbbVie will have the right to reasonably review and comment to such publication, presentation or disclosure, and Harpoon shall in good faith consider any comments made by AbbVie in such [***] period. If such publication, presentation or disclosure contains Confidential Information of AbbVie, then upon AbbVie's request during such [***] period, Harpoon shall delete any such information identified by AbbVie. If there is a dispute regarding Harpoon's right to publish prior to the License Option Exercise Closing Date, such dispute shall be escalated to the Senior Officers of each Party for resolution, *provided* that subject to the foregoing sentence, Harpoon shall have the right to make a final decision with respect to such publication. Following the License Option Exercise Closing Date, Harpoon shall not publish, present, or otherwise disclose, and shall cause its Affiliates and Third Party Providers and its and their employees and agents not to disclose any Product Information without the prior written consent of AbbVie, except as required by Applicable Law.

9.7 Return of Confidential Information. Upon the effective date of the termination of this Agreement for any reason, either Party may request in writing, and the other Party shall either, with respect to Confidential Information (in the event of termination of this Agreement with respect to [***] Terminated Territories but not in its entirety, solely to the extent relating specifically and exclusively to such Terminated Territories) to which such other Party does not retain rights under the surviving provisions of this Agreement: (a) as soon as reasonably practicable, destroy all copies of such Confidential Information in the possession of the other Party and confirm such destruction in writing to the requesting Party; or (b) as soon as reasonably practicable, deliver to the requesting Party, at such other Party's expense, all copies of such Confidential Information in the possession of such other Party; *provided* that such other Party shall be permitted to retain one (1) copy of such Confidential Information for the sole purpose of performing any continuing obligations or exercising any surviving rights hereunder, as required by Applicable Law, or for litigation or archival purposes. Notwithstanding the foregoing, such other Party also shall be permitted to retain such additional copies of or any computer records or files containing such Confidential Information that have been created solely by such Party's automatic archiving and back-up procedures, to the extent created and retained in a manner consistent with such other Party's standard archiving and back-up procedures, but not for any other use or purpose.

9.8 Survival. All Confidential Information shall continue to be subject to the terms of this Agreement for the period set forth in Section 9.2.

ARTICLE 10
REPRESENTATIONS AND WARRANTIES

10.1 Mutual Representations and Warranties. Harpoon and AbbVie each represents and warrants to the other, as of the Effective Date, as follows:

10.1.1 Organization. It is a corporation duly incorporated, validly existing, and in good standing under the laws of the jurisdiction of its incorporation, and has all requisite corporate power and authority, to execute, deliver, and perform this Agreement.

10.1.2 Authorization. The execution and delivery of this Agreement and the performance by it of the transactions contemplated hereby have been duly authorized by all necessary corporate action, and do not violate (a) such Party's charter documents, bylaws, or other organizational documents, (b) in any material respect, any agreement, instrument, or contractual obligation to which such Party is bound, (c) any requirement of any Applicable Law, or (d) any order, writ, judgment, injunction, decree, determination, or award of any court or governmental agency presently in effect applicable to such Party.

10.1.3 Binding Agreement. This Agreement is a legal, valid, and binding obligation of such Party enforceable against it in accordance with its terms and conditions, subject to the effects of bankruptcy, insolvency, or other laws of general application affecting the enforcement of creditor rights, judicial principles affecting the availability of specific performance, and general principles of equity (whether enforceability is considered a proceeding at law or equity).

10.1.4 No Inconsistent Obligation. It is not under any obligation, contractual or otherwise, to any Person that conflicts with or is inconsistent in any material respect with the terms of this Agreement, or that would impede the diligent and complete fulfillment of its obligations hereunder.

10.1.5 No Misstatements or Omissions. The representations and warranties of such Party in this Agreement, and the Information, documents and materials furnished to the other Party in response to such Party's written requests for due diligence information prior to the Effective Date, do not, taken as a whole, (a) contain any untrue statement of a material fact, or (b) omit to state any material fact necessary to make the statements or facts contained therein, in light of the circumstances under which they were made, not misleading.

10.2 Additional Representations and Warranties of Harpoon. Except as set forth on Schedule 10.2, Harpoon further represents and warrants to AbbVie, as of the Effective Date, as follows:

10.2.1 All Harpoon Patents existing as of the Effective Date are listed on Schedule 10.2.1 (the "**Existing Patents**"). To Harpoon's Knowledge, all Existing Patents existing as of the Effective Date are subsisting and, to Harpoon's Knowledge, are not invalid or unenforceable, in whole or in part, are being diligently prosecuted in the applicable patent offices in the Territory in accordance with Applicable Law, and have been filed and maintained properly and correctly in all material aspect and all applicable fees have been paid on or before the due date for payment.

10.2.2 There are no judgments, or settlements against, or amounts with respect thereto, owed by Harpoon or any of its Affiliates relating to the Existing Patents, or the Harpoon Know-How. No claim or litigation has been brought or threatened in writing or any other form by any Person alleging, and Harpoon has no Knowledge of any claim, whether or not asserted, that the Existing Patents are invalid or unenforceable. To Harpoon's Knowledge, the Development or Commercialization of the Licensed Compounds or Licensed Products as contemplated herein, does not or will not violate, infringe, misappropriate or otherwise conflict or interfere with, any Patent or other intellectual property or proprietary right of any Third

Party. To Harpoon's Knowledge, no Person is infringing or threatening to infringe or misappropriating or threatening to misappropriate the Existing Patents or the Harpoon Know-How.

10.2.3 Harpoon is (a) the sole and exclusive owner of the entire right, title and interest in the Existing Patents listed on Schedule 10.2.1, Part A (the "**Owned Patents**") and the Harpoon Know-How and (b) the sole and exclusive licensee of the Existing Patents listed on Schedule 10.2.1, Part B (the "**In-Licensed Patents**") which are subject to valid and enforceable in-license agreements, in each case ((a) and (b)) free of any encumbrance, lien, or claim of ownership by any Third Party. Harpoon is entitled to grant the licenses specified herein. The Owned Patents and In-Licensed Patents represent all of the Existing Patents.

10.2.4 Harpoon has the right to use and license (or sublicense as the case may be) to AbbVie all Information and Patents necessary to Develop, Manufacture and Commercialize the Licensed Compounds and the Licensed Products as contemplated herein. The Harpoon Patents and Harpoon Know-How are not and will not be subject to any license or other agreement to which Harpoon or any of its Affiliates is a party other than a Harpoon In-License Agreement.

10.2.5 As of the Effective Date, none of Harpoon or its Affiliates and, to Harpoon's Knowledge, any Third Party is in material breach of any Harpoon In-License Agreement.

10.2.6 True, complete, and correct copies of: (a) Harpoon In-License Agreements; and (b) all material adverse information with respect to the safety and efficacy of the Licensed Compounds known to Harpoon, in each case ((a) through (c)) have been provided or made available to AbbVie prior to the Effective Date.

10.2.7 Harpoon and its Affiliates have generated, prepared, maintained, and retained all Regulatory Documentation that is required to be maintained or retained pursuant to and in accordance with Applicable Law, and all such information is in all material aspect true, complete and correct and what it purports to be.

10.2.8 Each Person who has or has had any rights in or to any Owned Patents or any Harpoon Know-How, including any current or former officer, employee, agent or consultant of Harpoon or any of its Affiliates, has assigned and has executed an agreement assigning its entire right, title, and interest in and to such Owned Patents and Harpoon Know-How to Harpoon. To Harpoon's Knowledge, no current or former officer, employee, agent, or consultant of Harpoon or any of its Affiliates is in material violation of any term of any assignment or other agreement regarding the protection of Patents or other intellectual property or proprietary information of Harpoon or any Third Party related to the Harpoon Patents, Harpoon Know-How, Licensed Compounds or Licensed Products.

10.2.9 All rights in all inventions and discoveries, made, developed, or conceived by any employee or independent contractor of Harpoon or any of its Affiliates, and included in Harpoon Know-How or that are the subject of one (1) or more Existing Patents have been assigned in writing to Harpoon or such Affiliate.

10.2.10 Harpoon has obtained the right (including under any Patents and other intellectual property rights) to use all material Information and other materials (including any formulations and manufacturing processes and procedures) developed or delivered by any Third Party under any agreements between Harpoon and any such Third Party that is necessary or reasonably useful for the Development or Commercialization of Licensed Compounds, and Harpoon has the rights under each such agreement to license and transfer such Information or other materials to AbbVie and its designees and to grant AbbVie the right to use such Information or other materials in the Development or Commercialization of the Licensed Compounds or the Licensed Products as set forth in this Agreement.

10.2.11 Harpoon has made (and will make) available to AbbVie, as set forth in Section 3.5.1, all Regulatory Documentation and Harpoon Know-How and all such Regulatory Documentation and Harpoon Know-How are (and, if made available after the Effective Date, will be), to Harpoon's Knowledge, true, complete, and correct. Neither Harpoon nor any of its Affiliates has any Knowledge of [***] that has not been disclosed to AbbVie as of the Effective Date. [***] of a Licensed Product.

10.2.12 Neither Harpoon nor any of its Affiliates, nor any of its or their respective officers, employees, or, to Harpoon's Knowledge, agents has made an untrue statement of material fact or fraudulent statement to the FDA or any other Regulatory Authority with respect to the Development of the Licensed Compounds or the Licensed Products, failed to disclose a material fact required to be disclosed to the FDA or any other Regulatory Authority with respect to the Development of the Licensed Compounds or the Licensed Products, or committed an act, made a statement, or failed to make a statement with respect to the Development of the Licensed Compounds or the Licensed Products that could reasonably be expected to provide a basis for the FDA to invoke its policy respecting "Fraud, Untrue Statements of Material Facts, Bribery, and Illegal Gratuities", set forth in 56 Fed. Reg. 46191 (September 10, 1991) and any amendments thereto or any analogous laws or policies in the Territory.

10.2.13 There are no amounts that will be required to be paid to a Third Party as a result of the Development or Commercialization of the Licensed Compounds or Licensed Products that arise out of any agreement to which Harpoon or any of its Affiliates is a party.

10.2.14 Neither Harpoon nor any of its employees nor, to Harpoon's Knowledge, agents performing hereunder, have ever been, are currently, or are the subject of a proceeding that could lead to it or such employees or agents becoming, as applicable, a Debarred Entity or Debarred Individual, an Excluded Entity or Excluded Individual or a Convicted Entity or Convicted Individual or added to the FDA's Disqualified/Restricted List. If, during the Term, Harpoon, or any of its employees or agents performing hereunder, become or are the subject of a proceeding that could lead to a Person becoming, as applicable, a Debarred Entity or Debarred Individual, an Excluded Entity or Excluded Individual or a Convicted Entity or Convicted Individual or added to the FDA's Disqualified/Restricted List, Harpoon shall immediately notify AbbVie, and AbbVie shall have the right, exercisable upon written notice given by AbbVie to terminate this Agreement. For purposes of this Agreement, the following definitions shall apply:

(a) A "**Debarred Individual**" is an individual who has been debarred by the FDA pursuant to 21 U.S.C. §335a (a) or (b) from providing services in any capacity to a Person that has an approved or pending drug or biological product application.

(b) A "**Debarred Entity**" is a corporation, partnership or association that has been debarred by the FDA pursuant to 21 U.S.C. §335a (a) or (b) from submitting or assisting in the submission of any Drug Approval Application, or a subsidiary or affiliate of a Debarred Entity.

(c) An "**Excluded Individual**" or "**Excluded Entity**" is (A) an individual or entity, as applicable, who has been excluded, debarred, suspended or is otherwise ineligible to participate in federal health care programs such as Medicare or Medicaid by the Office of the Inspector General (OIG/HHS) of the U.S. Department of Health and Human Services, or (B) is an individual or entity, as applicable, who has been excluded, debarred, suspended or is otherwise ineligible to participate in federal procurement and non-procurement programs, including those produced by the U.S. General Services Administration (GSA).

(d) A "**Convicted Individual**" or "**Convicted Entity**" is an individual or entity, as applicable, who has been convicted of a criminal offense that falls within the ambit of 21 U.S.C. §335a (a) or 42 U.S.C. §1320a - 7(a), but has not yet been excluded, debarred, suspended or otherwise declared ineligible.

(e) "**FDA's Disqualified/Restricted List**" is the list of clinical investigators restricted from receiving investigational drugs, biologics, or devices if the FDA has determined that the investigators have repeatedly or deliberately failed to comply with regulatory requirements for studies or have submitted false Information to the study sponsor or the FDA..

10.2.15 The inventions claimed or covered by the Existing Patents (a) were not conceived, discovered, developed, or otherwise made in connection with any research activities funded, in whole or in part, by the federal government of the United States or any agency thereof, and (b) are not a "subject invention" as that term is described in 35 U.S.C. Section 201(f).

10.3 Covenants of Harpoon. Harpoon covenants to AbbVie as follows:

10.3.1 During the Term, neither Harpoon nor any of its Affiliates shall encumber or diminish the rights granted to AbbVie hereunder with respect to the Harpoon Patents, including by not (a) committing any acts or knowingly permitting the occurrence of any omissions that would cause the breach or termination of any Harpoon In-License Agreement, or (b) amending or otherwise modifying or permitting to be amended or modified, any Harpoon In-License Agreement, where such amendment or modification would adversely affect the rights granted to AbbVie hereunder. Harpoon shall promptly provide AbbVie with notice of any alleged, threatened, or actual breach of any Harpoon In-License Agreement.

10.3.2 At any time following the [***] and prior to the expiration of the Option Period (as[***]), at AbbVie's request, Harpoon shall, at its sole cost and expense, exercise its option to acquire the Commercial License [***] for Licensed Products pursuant to [***]. Harpoon shall exercise such Commercial License promptly following written notice of such election by AbbVie to Harpoon. For clarity, Harpoon shall not be responsible for any payment of any financial obligations resulting from any agreement AbbVie elects to enter into with a Third Party in connection with the Manufacture of a Licensed Compound or Licensed Product under [***].

10.3.3 Harpoon and its Affiliates will employ Persons with appropriate knowledge, expertise and experience to conduct and to oversee the Initial Development Activities.

10.3.4 Harpoon shall have obtained from each of its Affiliates, sublicensees, employees and agents who are participating in the Exploitation of the Licensed Compounds or Licensed Products or who otherwise have access to any AbbVie Information or other Confidential Information of AbbVie in connection with activities under this Agreement, rights to any and all Information that arises from or relates to such participation and is necessary or reasonably useful for the Development or Commercialization of Licensed Compounds or Licensed Products, in each case prior to the performance of or participation in such activities, such that AbbVie shall, by virtue of this Agreement, receive from Harpoon, without payments beyond those required by Article 6, the licenses and other rights granted to AbbVie hereunder.

10.4 Covenants of AbbVie. AbbVie covenants to Harpoon as follows:

10.4.1 AbbVie shall have obtained from each of its Affiliates, Sublicensees, employees and agents who are participating in the Exploitation of the Licensed Compounds or Licensed Products or who otherwise have access to any Harpoon Information or other Confidential Information of Harpoon in connection with activities under this Agreement, rights to any and all Information that arises from

or relates to such participation or access and is necessary or reasonably useful for the Development or Commercialization of Licensed Compounds or Licensed Products, in each case prior to the performance of or participation in such activities, such that Harpoon shall, by virtue of this Agreement, receive from AbbVie, without additional consideration, the licenses specified in Section 5.2.

10.5 DISCLAIMER OF WARRANTIES. EXCEPT FOR THE EXPRESS WARRANTIES SET FORTH HEREIN, NEITHER PARTY MAKES ANY REPRESENTATIONS OR GRANTS ANY WARRANTIES, EXPRESS OR IMPLIED, EITHER IN FACT OR BY OPERATION OF LAW, BY STATUTE OR OTHERWISE, AND EACH PARTY SPECIFICALLY DISCLAIMS ANY OTHER WARRANTIES, WHETHER WRITTEN OR ORAL, OR EXPRESS OR IMPLIED, INCLUDING ANY WARRANTY OF QUALITY, MERCHANTABILITY, OR FITNESS FOR A PARTICULAR USE OR PURPOSE OR ANY WARRANTY AS TO THE VALIDITY OF ANY PATENTS OR THE NON-INFRINGEMENT OF ANY INTELLECTUAL PROPERTY RIGHTS OF THIRD PARTIES.

ARTICLE 11
INDEMNITY

11.1 Indemnification of Harpoon. AbbVie shall indemnify Harpoon, its Affiliates and its and their respective directors, officers, employees, and agents (the "**Harpoon Indemnitees**") and defend and save each of them harmless, from and against any and all losses, damages, liabilities, penalties, costs, taxes (including penalties and interest) and expenses (including reasonable attorneys' fees and expenses) (collectively, "**Losses**") in connection with any and all suits, investigations, claims, or demands of Third Parties (collectively, "**Third Party Claims**") incurred by or rendered against the Harpoon Indemnitees arising from or occurring as a result of: [***]

11.2 Indemnification of AbbVie. Harpoon shall indemnify AbbVie, its Affiliates and its and their respective directors, officers, employees, and agents (the "**AbbVie Indemnitees**"), and defend and save each of them harmless, from and against any and all Losses in connection with any and all Third Party Claims incurred by or rendered against the AbbVie Indemnitees arising from or occurring as a result of: [***]

11.3 Notice of Claim. All indemnification claims in respect of a Party, its Affiliates, or their respective directors, officers, employees and agents shall be made solely by such Party to this Agreement (the "**Indemnified Party**"). The Indemnified Party shall give the indemnifying Party prompt written notice (an "**Indemnification Claim Notice**") of any Losses or discovery of fact upon which such Indemnified Party intends to base a request for indemnification under this Article 11, but in no event shall the indemnifying Party be liable for any Losses to the extent resulting from any delay in providing such notice. Each Indemnification Claim Notice must contain a description of the claim and the nature and amount of such Loss (to the extent

that the nature and amount of such Loss is known at such time). The Indemnified Party shall furnish promptly to the indemnifying Party copies of all papers and official documents received in respect of any Losses and Third Party Claims.

11.4 Control of Defense.

11.4.1 In General. Subject to the provisions of Sections 7.4 (if applicable), 7.5 and 7.6, at its option, the indemnifying Party may assume the defense of any Third Party Claim by giving written notice to the Indemnified Party within [***] after the indemnifying Party's receipt of an Indemnification Claim Notice. The assumption of the defense of a Third Party Claim by the indemnifying Party shall not be construed as an acknowledgment that the indemnifying Party is liable to indemnify the Indemnified Party in respect of the Third Party Claim, nor shall it constitute a waiver by the indemnifying Party of any defenses it may assert against the Indemnified Party's claim for indemnification. Upon assuming the defense of a Third Party Claim, the indemnifying Party may appoint as lead counsel in the defense of the Third Party Claim any legal counsel selected by the indemnifying Party which shall be reasonably acceptable to the Indemnified Party. In the event the indemnifying Party assumes the defense of a Third Party Claim, the Indemnified Party shall promptly deliver to the indemnifying Party all original notices and documents (including court papers) received by the Indemnified Party in connection with the Third Party Claim. Should the indemnifying Party assume the defense of a Third Party Claim, except as provided in Section 11.4.2, the indemnifying Party shall not be liable to the Indemnified Party for any legal expenses subsequently incurred by such Indemnified Party in connection with the analysis, defense or settlement of the Third Party Claim unless specifically requested in writing by the indemnifying Party. In the event that it is ultimately determined that the indemnifying Party is not obligated to indemnify, defend or hold harmless the Indemnified Party from and against the Third Party Claim, the Indemnified Party shall reimburse the indemnifying Party for any Losses incurred by the indemnifying Party in its defense of the Third Party Claim.

11.4.2 Right to Participate in Defense. Without limiting Section 11.4.1, any Indemnified Party shall be entitled to participate in, but not control, the defense of such Third Party Claim and to employ counsel of its choice for such purpose; *provided* that such employment shall be at the Indemnified Party's own expense unless (a) the employment thereof, and the assumption by the indemnifying Party of such expense, has been specifically authorized by the indemnifying Party in writing, (b) the indemnifying Party has failed to assume the defense and employ counsel in accordance with Section 11.4.1 (in which case the Indemnified Party shall control the defense), or (c) the interests of the Indemnified Party and the indemnifying Party with respect to such Third Party Claim are sufficiently adverse to prohibit the representation by the same counsel of both Parties under Applicable Law, ethical rules or equitable principles (in which case the Indemnifying Party shall control its defense and the Indemnified Party shall control the defense of the Indemnified Party).

11.4.3 Settlement. With respect to any Losses relating solely to the payment of money damages in connection with a Third Party Claim and that shall not result in the Indemnified Party's becoming subject to injunctive or other relief, and as to which the indemnifying Party shall have acknowledged in writing the obligation to indemnify the Indemnified Party hereunder, the indemnifying Party shall have the sole right to consent to the entry of any judgment, enter into any settlement or otherwise dispose of such Loss, on such terms as the indemnifying Party, in its sole discretion, shall deem appropriate. With respect to all other Losses in connection with Third Party Claims, where the indemnifying Party has assumed the defense of the Third Party Claim in accordance with Section 11.4.1, the indemnifying Party shall have authority to consent to the entry of any judgment, enter into any settlement or otherwise dispose of such Loss; *provided* that it obtains the prior written consent of the Indemnified Party (which consent shall not be unreasonably withheld, conditioned or delayed). If the indemnifying Party does not assume and conduct the defense of a Third Party Claim as provided above, the Indemnified Party may defend against such Third Party Claim. Regardless of whether the indemnifying Party chooses to defend or prosecute any Third Party Claim, no Indemnified Party shall admit any liability with respect to, or settle, compromise or dispose of, any Third Party Claim without

the prior written consent of the indemnifying Party. The indemnifying Party shall not be liable for any settlement, compromise or other disposition of a Loss by an Indemnified Party that is reached without the written consent of the indemnifying Party.

11.4.4 Cooperation. Regardless of whether the indemnifying Party chooses to defend or prosecute any Third Party Claim, the Indemnified Party shall, and shall cause each indemnitee to, cooperate in the defense or prosecution thereof and shall furnish such records, information and testimony, provide such witnesses and attend such conferences, discovery proceedings, hearings, trials and appeals as may be reasonably requested in connection therewith. Such cooperation shall include access [***] afforded to the indemnifying Party to, and reasonable retention by the Indemnified Party of, records and information that are reasonably relevant to such Third Party Claim, and making Indemnified Parties and other employees and agents available on a mutually convenient basis to provide additional information and explanation of any material provided hereunder, and the indemnifying Party shall reimburse the Indemnified Party for all its reasonable out-of-pocket expenses in connection therewith, subject to refund if the Indemnifying Party is ultimately held not to be obligated to indemnify the Indemnified Party.

11.4.5 Expenses. Except as provided above, the reasonable and verifiable costs and expenses, including fees and disbursements of counsel, incurred by the Indemnified Party in connection with any Third Party Claim shall be reimbursed on a [***] basis in arrears by the indemnifying Party, without prejudice to the indemnifying Party's right to contest the Indemnified Party's right to indemnification and subject to refund in the event the indemnifying Party is ultimately held not to be obligated to indemnify the Indemnified Party.

11.5 Special, Indirect, and Other Losses. EXCEPT (A) FOR FRAUD, WILLFUL MISCONDUCT OR GROSS NEGLIGENCE, (B) FOR A PARTY'S BREACH OF ITS OBLIGATIONS UNDER [ARTICLE 9 OR SECTION 5.8], (C) AS PROVIDED UNDER [***] AND (D) TO THE EXTENT ANY SUCH DAMAGES ARE REQUIRED TO BE PAID TO A THIRD PARTY AS PART OF A CLAIM FOR WHICH A PARTY PROVIDES INDEMNIFICATION UNDER THIS ARTICLE 11, NEITHER PARTY NOR ANY OF ITS AFFILIATES SHALL BE LIABLE FOR INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, PUNITIVE OR CONSEQUENTIAL DAMAGES, INCLUDING LOSS OF PROFITS OR BUSINESS INTERRUPTION, HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, TORT, NEGLIGENCE, BREACH OF STATUTORY DUTY OR OTHERWISE IN CONNECTION WITH OR ARISING IN ANY WAY OUT OF THE TERMS OF THIS AGREEMENT OR THE TRANSACTIONS CONTEMPLATED HEREBY OR THE USE OF THE LICENSED COMPOUNDS OR LICENSED PRODUCTS, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

11.6 Insurance. Each Party shall obtain and carry in full force and effect the minimum insurance requirements set forth herein. Such insurance (a) shall be primary insurance with respect to each Party's own participation under this Agreement, (b) shall be issued by a recognized insurer rated by A.M. Best "A-VII" (or its equivalent) or better, or an insurer pre-approved in writing by the other Party, and (c) shall list the other Party as an additional insured under the General Liability Policy.

11.6.1 Types and Minimum Limits. The types of insurance, and minimum limits shall be:

(a) Worker's Compensation with statutory limits in compliance with the Worker's Compensation laws of the state or states in which the Party has employees in the United States (excluding Puerto Rico).

(b) Employer's Liability coverage with a minimum limit of [***] *provided* that a Party has employees in the United States (excluding Puerto Rico).

(c) General Liability Insurance with a minimum limit of [***] and [***] in the aggregate. General Liability Insurance shall include Clinical Trial Insurance. The limits may be met with a combination of primary and commercial umbrella insurance.

11.6.2 Certificates of Insurance. Upon request by a Party, the other Party shall provide Certificates of Insurance evidencing compliance with this Section. The insurance policies shall be under an occurrence form, but if only a claims-made form is available to a Party, then such Party shall continue to maintain such insurance after the expiration or termination of this Agreement for the longer of (a) a period of [***] following termination or expiration of this Agreement in its entirety, or (b) with respect to a particular Party, [***] by a Party.

11.6.3 Self-Insurance. Notwithstanding the foregoing, AbbVie may self-insure, in whole or in part, the insurance requirements described above.

ARTICLE 12
TERM AND TERMINATION

12.1 Term.

12.1.1 Term. This Agreement shall commence on the Effective Date and, unless earlier terminated in accordance herewith, shall continue in force and effect until (a) the date of expiration of the last Royalty Term for the last Licensed Product, or (b) the expiration of the License Option Period and the failure of AbbVie to exercise the License Option (such period, the "**Term**").

12.1.2 Effect of Expiration of the Term. Following the expiration of the Term pursuant to clause (a) (but not clause (b)) of Section 12.1.1, the grants in Section 5.1.3 shall become non-exclusive, fully-paid, royalty-free and irrevocable.

12.2 Termination for Material Breach.

12.2.1 Material Breach. If either Party (the "**Non-Breaching Party**") believes that the other Party (the "**Breaching Party**") has materially breached one (1) or more of its material obligations under this Agreement, then the Non-Breaching Party may deliver notice of such material breach to the Breaching Party (a "**Default Notice**"). If the Breaching Party does not dispute that it has committed a material breach of one (1) or more of its material obligations under this Agreement, then if the Breaching Party fails to cure such breach within ninety (90) days after receipt of the Default Notice, or if such compliance cannot be fully achieved within such ninety-(90-) day period and the Breaching Party has failed to commence compliance or has failed to use diligent efforts to achieve full compliance as soon thereafter as is reasonably possible, the Non-Breaching Party may terminate this Agreement upon written notice to the Breaching Party. If the Breaching Party disputes that it has materially breached one (1) or more of its material obligations under this Agreement, the dispute shall be resolved pursuant to Section 13.7. If, as a result of the application of such dispute resolution procedures, the Breaching Party is determined to be in material breach of one (1) or more of its material obligations under this Agreement (an "**Adverse Ruling**"), then if the Breaching Party fails to complete the actions specified by the Adverse Ruling to cure such material breach within [***] after such ruling, or if such compliance cannot be fully achieved within such [***] period and the Breaching Party has failed to commence diligent efforts to achieve full compliance as soon thereafter as is reasonably possible or as prescribed by the Arbitrator, then the Non-Breaching Party may terminate this Agreement upon written notice to the Breaching Party.

12.2.2 Material Breach Related to Diligence in a Major Market. Notwithstanding Section 12.2.1, if the material breach and failure to cure contemplated by Section 12.2.1 is

with respect to AbbVie's Commercialization diligence obligations under Section 4.2 with respect to any Major Market, [***].

12.2.3 Invocation of Material Breach. Notwithstanding the foregoing, the Parties agree that termination pursuant to this Section 12.2 is a remedy to be invoked only if the breach is not (a) cured in accordance with Section 12.2.1 (including the timeframes set forth therein), (b) remedied through the payment of money damages determined in accordance with Section 13.7 or (c) adequately remedied through a combination of (a) and (b).

12.3 Additional Termination Rights by AbbVie. AbbVie may terminate this Agreement in its entirety, or on a country or other jurisdiction -by-country or other jurisdiction basis, for any or no reason, upon ninety (90) days' prior written notice to Harpoon.

12.4 Termination for Insolvency. In the event that either Party (a) files for protection under bankruptcy or insolvency laws, (b) makes an assignment for the benefit of creditors, (c) appoints or suffers appointment of a receiver or trustee over substantially all of its property that is not discharged within [***] after such filing, (d) is a party to any dissolution or liquidation, (e) files a petition under any bankruptcy or insolvency act or has any such petition filed against it that is not discharged within [***] of the filing thereof, or (f) admits in writing its inability generally to meet its obligations as they fall due in the general course, then the other Party may terminate this Agreement in its entirety effective immediately upon written notice to such Party.

12.5 Rights in Bankruptcy.

12.5.1 Applicability of 11 U.S.C. § 365(n). All rights and licenses (collectively, the "**Intellectual Property**") granted under or pursuant to this Agreement, including all rights and licenses to use improvements or enhancements developed during the Term, are intended to be, and shall otherwise be deemed to be, for purposes of Section 365(n) of the United States Bankruptcy Code (the "**Bankruptcy Code**") or any analogous provisions in any other country or jurisdiction, licenses of rights to "intellectual property" as defined under Section 101(35A) of the Bankruptcy Code. The Parties agree that the licensee of such Intellectual Property under this Agreement shall retain and may fully exercise all of its rights and elections under the Bankruptcy Code, including Section 365(n) of the Bankruptcy Code, or any analogous provisions in any other country or jurisdiction. All of the rights granted to either Party under this Agreement shall be deemed to exist immediately before the occurrence of any bankruptcy case in which the other Party is the debtor.

12.5.2 Rights of non-Debtor Party in Bankruptcy. If a bankruptcy proceeding is commenced by or against either Party under the Bankruptcy Code or any analogous provisions in any other country or jurisdiction, the non-debtor Party shall be entitled to a complete duplicate of (or complete access to, as appropriate) any Intellectual Property and all embodiments of such Intellectual Property, which, if not already in the non-debtor Party's possession, shall be delivered to the non-debtor Party within [***] of such request; *provided* that the debtor Party is excused from its obligation to deliver the Intellectual Property to the extent the debtor Party continues to perform all of its obligations under this Agreement and the Agreement has not been rejected pursuant to the Bankruptcy Code or any analogous provision in any other country or jurisdiction.

12.6 Termination in Entirety.

12.6.1 In the event of a termination of this Agreement in its entirety by AbbVie pursuant to Section 12.3, or by Harpoon pursuant to Section 12.2.1 or 12.4:

(a) all rights and licenses granted by Harpoon hereunder shall immediately terminate;

(b) all rights and licenses granted by AbbVie hereunder shall immediately terminate;

(c) subject to Section 12.10.2 and Section 12.7 (solely following the License Option Exercise Closing Date), AbbVie shall cease any and all Exploitation of Licensed Compounds and Licensed Products and transfer to Harpoon, or destroy (at Harpoon's sole election), copies of all data and Information generated by AbbVie in connection with the Exploitation of Licensed Compounds or Licensed Products, and all rights in such Licensed Compounds and Licensed Products shall revert back to Harpoon; and

(d) if such termination occurs following the License Option Exercise Closing Date, Section 12.7 shall apply with respect to Licensed Compounds and Licensed Products that revert to Harpoon (the "**Harpoon Reversion Products**").

12.6.2 If AbbVie terminates this Agreement in its entirety pursuant to Section 12.2.1 (subject to Section 12.6.3 and Section 12.6.4) or 12.4:

(a) all rights and licenses granted by Harpoon hereunder shall immediately terminate, and AbbVie shall have no further rights in connection with Licensed Compounds and Licensed Products; and

(b) all rights and licenses granted by AbbVie hereunder shall immediately terminate.

12.6.3 Prior to the exercise of the License Option, if AbbVie has the right to terminate this Agreement in its entirety pursuant to Section 12.2.1 (i.e. by mutual agreement or as may be finally determined by an Adverse Ruling), then within [***] following the expiration of the relevant cure period, if any, AbbVie may, by written notice to Harpoon, and as its sole and exclusive remedy in lieu of exercising its right under Section 12.2.1 with respect to such breach, elect to continue this Agreement as modified by this Section 12.6.3, in which case, effective as of the date AbbVie delivers notice of such election to Harpoon:

(a) [***]

(b) [***]

(c) [***]

(d) [***]

(e) [***]

(f) [***]

(g) Following the License Exercise Option Closing Date, all provisions of this Agreement with respect to AbbVie's rights and obligations following the exercise of the License Option shall apply, *provided* that [***]; and

(h) If the Post CSR Option Period expires without AbbVie delivering a License Option Exercise Notice, then all rights and licenses granted by Harpoon hereunder shall immediately terminate, and AbbVie shall have no further rights in connection with Licensed Compounds and Licensed Products.

12.6.4 Following the License Option Exercise Closing Date, if AbbVie has the right to terminate this Agreement in its entirety pursuant to Section 12.2.1 (i.e. by mutual agreement or as may be finally determined by an Adverse Ruling), then within [***] following the expiration of the relevant cure period, if any, AbbVie may, by written notice to Harpoon, and as its sole and exclusive remedy in lieu of exercising its right under Section 12.2.1 with respect to such breach, elect to continue this Agreement as modified by this Section 12.6.4, in which case, effective as of the date AbbVie delivers notice of such election to Harpoon :

(a) [***]

(b) [***]

(c) [***]

(d) [***]

12.6.5 Following the License Option Exercise Closing Date, if AbbVie has the right to terminate this Agreement in its entirety pursuant to Section 12.4, but elects to retain its rights and licenses pursuant to Section 12.5:

(a) [***]

(b) [***]

(c) [***]

(d) [***].

12.7 Reversion of Harpoon Products. Following the License Option Exercise Closing Date, if this Agreement terminates in its entirety, except for termination by AbbVie pursuant to Section 12.2.1 or Section 12.4, the following shall apply with respect to Harpoon Reversion Products.

12.7.1 At Harpoon's sole election by written notice to AbbVie, AbbVie shall grant, and hereby grants to Harpoon, effective as of the effective date of termination, [***] (the "**AbbVie Reversion IP**"); *provided* that the foregoing license shall exclude (1) any license or other rights with respect to any active ingredient that is not a Licensed Compound and (2) any license or other rights with respect to any other Patents or Know-How owned or controlled by AbbVie or any of its Affiliates. The foregoing license under the AbbVie Reversion IP shall be payable on a country-by-country basis and [***] (applied mutatis mutandis to Harpoon) by Harpoon, its Affiliates or sublicensees of Harpoon Reversion Products, beginning [***].

12.7.2 AbbVie shall [***], within a reasonable time following the effective date of termination,[***] that was transferred by Harpoon to AbbVie with respect to each Harpoon Reversion Product.

12.7.3 At Harpoon's request, AbbVie shall [***] in connection with Harpoon Reversion Products prior to reversion of such Harpoon Reversion Products.

12.7.4 AbbVie shall [***] pertaining to the applicable Harpoon Reversion Products in its possession or Control.

12.7.5 With respect to any Licensed Product that becomes a Harpoon Reversion Product during any period in which AbbVie is [***] for such Licensed Product, AbbVie shall [***]

[***], *provided* that Harpoon [***] the foregoing obligations.

12.7.6 If a [***], AbbVie shall [***]. Additionally, upon any Licensed Compound or Licensed Product becoming a Harpoon Reversion Product, AbbVie shall [***]

12.7.7 To the extent that AbbVie [***] for the Commercialization of a Harpoon Reversion Product [***], Harpoon shall have the right to [***]. Harpoon shall exercise such right by written notice to AbbVie within [***] after such Licensed Compound or Licensed Product becomes a Harpoon Reversion Product.

12.7.8 AbbVie shall [***], as may be necessary under, or as Harpoon may reasonably request in connection with Harpoon's rights under this Section 12.7.

12.8 Termination of Terminated Territory. In the event of a termination of this Agreement with respect to a country or other jurisdiction by AbbVie pursuant to Section 12.3 or with respect to a Terminated Territory by Harpoon pursuant to Section 12.2.2 (but not in the case of any termination of this Agreement in its entirety), the term "Territory" shall be automatically amended to exclude the Terminated Territory and all rights and licenses granted by Harpoon hereunder (a) shall automatically be deemed to be amended to exclude, if applicable, the right to market, promote, detail, distribute, import, sell, offer for sale, file any Drug Approval Application for, or seek any Regulatory Approval for Licensed Compound or Licensed Products in such Terminated Territory, and (b) shall otherwise survive and continue in effect in such Terminated Territory solely for the purpose of furthering any Commercialization of the Licensed Compounds or Licensed Products in the Territory other than the Terminated Territory or any Development or Manufacturing in support thereof.

12.9 Remedies. Except as otherwise expressly provided herein, termination of this Agreement (either in its entirety or with respect to one (1) or more country(ies) or other jurisdiction(s)) in accordance with the provisions hereof shall not limit remedies that may otherwise be available in law or equity.

12.10 Accrued Rights; Surviving Obligations.

12.10.1 Termination or expiration of this Agreement (either in its entirety or with respect to one (1) or more country(ies) or other jurisdiction(s)) for any reason shall be without prejudice to any rights that shall have accrued to the benefit of a Party prior to such termination or expiration. Such termination or expiration shall not relieve a Party from obligations that are expressly indicated to survive the termination or expiration of this Agreement. Without limiting the foregoing, Sections 3.6 [***]; 3.8.5 (solely for the purposes, and in accordance with the time periods, set forth therein); 4.6.1 (with respect to any amounts incurred prior to the effective date of termination and subject to reimbursement by AbbVie); 6.2 through 6.6 (with respect to payments for milestone events or Net Sales occurring prior to the effective date of termination); Sections 6.7 through 6.13; Sections 7.1.1 through 7.1.4 (with respect to Patents and Know-How conceived, discovered, developed, or otherwise made prior to expiration or termination of this

Agreement); Section 7.9 (with respect to information exchanged prior to the effective date of termination); Sections 11.1 through 11.5; 12.1.2 and the grants referenced therein (with respect to expiration, but not termination, of this Agreement), 12.5 through 12.8 (with respect to termination, but not expiration, of this Agreement and in accordance with the time periods set forth therein), 12.10, 13.2, 13.3 through 13.13, and 13.15 through 13.20 of this Agreement shall survive the termination or expiration of this Agreement for any reason (unless the reason is expressly limited therein), and Articles 1 (to the extent used in other surviving provisions) and 9 of this Agreement shall survive the termination or expiration of this Agreement for any reason. If this Agreement is terminated with respect to the Terminated Territory but not in its entirety, then following such termination the foregoing provisions of this Agreement shall remain in effect with respect to the Terminated Territory (to the extent they would survive and apply in the event the Agreement expires or is terminated in its entirety), and all provisions not surviving in accordance with the foregoing shall terminate upon termination of this Agreement with respect to the Terminated Territory and be of no further force and effect (and, for purposes of clarity, all provisions of this Agreement shall remain in effect with respect to all countries in the Territory other than the Terminated Territory).

12.10.2 If AbbVie terminates this Agreement with respect to a country or other jurisdiction, or in its entirety pursuant to Section 12.3, AbbVie shall have the right for at least [***] and no more than [***], which period shall be determined by Harpoon in its sole discretion, after the effective date of such termination with respect to such country or other jurisdiction to sell or otherwise dispose of all Licensed Compound or Licensed Product then in its inventory and any in-progress inventory, in each case that is intended for sale or disposition in such country or other jurisdiction, as though this Agreement had not terminated with respect to such country or other jurisdiction, and such sale or disposition shall not constitute infringement of Harpoon's or its Affiliates' Patent or other intellectual property or other proprietary rights. Within [***] from the expiration from this period, AbbVie shall furnish Harpoon a statement showing the quantities of Licensed Products then in AbbVie's inventory and any in-progress inventory. For purposes of clarity, AbbVie shall continue to make payments thereon as provided in Article 6 (as if this Agreement had not terminated with respect to such Major Market or country or other jurisdiction).

ARTICLE 13
MISCELLANEOUS

13.1 Force Majeure. Neither Party shall be held liable or responsible to the other Party or be deemed to have defaulted under or breached this Agreement for failure or delay in fulfilling or performing any term of this Agreement when such failure or delay is caused by or results from events beyond the reasonable control of the non-performing Party, including fires, floods, earthquakes, hurricanes, embargoes, shortages, epidemics, quarantines, war, acts of war (whether war be declared or not), terrorist acts, insurrections, riots, civil commotion, acts of God or acts, omissions or delays in acting by any governmental authority (except to the extent such delay results from the breach by the non-performing Party or any of its Affiliates of any term or condition of this Agreement). The non-performing Party shall notify the other Party of such force majeure within [***] after such occurrence by giving written notice to the other Party stating the nature of the event, its anticipated duration, and any action being taken to avoid or minimize its effect. The suspension of performance shall be of no greater scope and no longer duration than is necessary and the non-performing Party shall use commercially reasonable efforts to remedy its inability to perform.

13.2 Change in Control of Harpoon.

13.2.1 Harpoon (or its successor) shall provide AbbVie with written notice of any Change in Control of Harpoon or Acquisition by Harpoon within [***] following the closing date of such transaction.

13.2.2 In the event of [***]

13.3 Export Control. This Agreement is made subject to any restrictions concerning the export of products or technical information from the United States or other countries that may be imposed on the Parties from time to time. Each Party agrees that it will not export, directly or indirectly, any technical information acquired from the other Party under this Agreement or any products using such technical information to a location or in a manner that at the time of export requires an export license or other governmental approval, without first obtaining the written consent to do so from the appropriate agency or other governmental entity in accordance with Applicable Law.

13.4 Assignment.

13.4.1 Without the prior written consent of the other Party, such consent not to be unreasonably withheld, conditioned, or delayed, neither Party shall sell, transfer, assign, delegate, pledge, or otherwise dispose of, whether voluntarily, involuntarily, by operation of law or otherwise, this Agreement or any of its rights or duties hereunder; *provided* that either Party may make such an assignment without the other Party's consent to its Affiliate or to a successor, whether in a merger, sale of stock, sale of assets or any other transaction, of the business to which this Agreement relates. With respect to an assignment to an Affiliate, the assigning Party shall remain responsible for the performance by such Affiliate of the rights and obligations hereunder. Any attempted assignment or delegation in violation of this Section 13.4 shall be void and of no effect. All validly assigned and delegated rights and obligations of the Parties hereunder shall be binding upon and inure to the benefit of and be enforceable by and against the successors and permitted assigns of Harpoon or AbbVie, as the case may be. The permitted assignee or transferee shall assume all obligations of its assignor or transferor under this Agreement. Without limiting the foregoing, the grant of rights set forth in this Agreement shall be binding upon any successor or permitted assignee of Harpoon, and the obligations of AbbVie, including the payment obligations, shall run in favor of any such successor or permitted assignee of Harpoon's benefits under this Agreement.

13.4.2 [***]

13.5 Severability. If any provision of this Agreement is held to be illegal, invalid, or unenforceable under any present or future law, and if the rights or obligations of either Party under this Agreement will not be materially and adversely affected thereby, (a) such provision shall be fully severable, (b) this Agreement shall be construed and enforced as if such illegal, invalid, or unenforceable provision had never comprised a part hereof, (c) the remaining provisions of this Agreement shall remain in full force and effect and shall not be affected by the illegal, invalid, or unenforceable provision or by its severance herefrom, and (d) in lieu of such illegal, invalid, or unenforceable provision, there shall be added automatically as a part of this Agreement a legal, valid, and enforceable provision as similar in terms to such illegal, invalid, or unenforceable provision as may be possible and reasonably acceptable to the Parties. To the fullest extent permitted by Applicable Law, each Party hereby waives any provision of law that would render any provision hereof illegal, invalid, or unenforceable in any respect.

13.6 Governing Law, Jurisdiction and Service.

13.6.1 Governing Law. This Agreement or the performance, enforcement, breach or termination hereof shall be interpreted, governed by and construed in accordance with the laws of the State of Delaware, United States, excluding any conflicts or choice of law rule or principle that might otherwise refer construction or interpretation of this Agreement to the substantive law of another jurisdiction; *provided* that all questions concerning (a) inventorship of Patents under this Agreement shall be determined in accordance with Section 7.1.3 and (b) the construction or effect of Patents shall be determined in accordance with the laws of the country or other jurisdiction in which the particular Patent has been filed or granted, as the case may be. The Parties agree to exclude the application to this Agreement of the United Nations Convention on Contracts for the International Sale of Goods.

13.6.2 Service. Each Party further agrees that service of any process, summons, notice or document by registered mail to its address set forth in Section 13.8.2 shall be effective service of process for any action, suit, or proceeding brought against it under this Agreement in any such court.

13.7 Dispute Resolution. Except for disputes resolved by the procedures set forth in Sections 2.2.3, 3.1.2, 6.12 or 13.11, if a dispute arises between the Parties in connection with or relating to this Agreement, including the determination of the scope or applicability of this Section 13.7 and the agreement to arbitrate, or any document or instrument delivered in connection herewith (a "**Dispute**"), it shall be resolved pursuant to this Section 13.7.

13.7.1 General. Any Dispute shall first be referred to the Senior Officers of the Parties, who shall confer in good faith on the resolution of the issue. Any final decision mutually agreed to by the Senior Officers shall be conclusive and binding on the Parties. If the Senior Officers are not able to agree on the resolution of any such issue within [***] (or such other period of time as mutually agreed by the Senior Officers) after such issue was first referred to them, then, except as otherwise set forth in Section 13.7.2, either Party may, by written notice to the other Party, elect to initiate an arbitration proceeding pursuant to the procedures set forth in Section 13.7.3, which shall fully and finally settle the Dispute.

13.7.2 Intellectual Property Disputes. In the event that a Dispute arises with respect the validity, enforceability, or patentability of any Patent, Trademark or other intellectual property rights, and such Dispute cannot be resolved in accordance with Section 13.7.1, unless otherwise agreed by the Parties in writing, such Dispute shall not be submitted to an arbitration proceeding in accordance with Section 13.7.3 and instead, either Party may initiate litigation in a court of competent jurisdiction, notwithstanding Section 13.6, in any country or other jurisdiction in which such rights apply. In case of a Dispute between the Parties with respect to inventorship, the Parties shall jointly select a patent attorney registered before the United States Patent and Trademark Office and submit such Dispute to the mutually-selected patent attorney for resolution under the United States patent law. The decision of such patent attorney with respect to inventorship shall be final, and the Parties agree to be bound by the decision and share equally the expenses of such patent attorney.

13.7.3 Arbitration. Any arbitration proceeding under this Agreement shall take place pursuant to the procedures set forth in Schedule 13.7.3.

13.7.4 Adverse Ruling. Any determination pursuant to this Section 13.7 that a Party is in material breach of its material obligations hereunder shall specify a (nonexclusive) set of actions to be taken to cure such material breach, if feasible.

13.7.5 Interim Relief. Notwithstanding anything herein to the contrary, nothing in this Section 13.7 shall preclude either Party from seeking interim or provisional relief, including a temporary restraining order, preliminary injunction or other interim equitable relief concerning a Dispute, if necessary to protect the interests of such Party. This Section shall be specifically enforceable.

13.8 Notices.

13.8.1 Notice Requirements. Any notice, request, demand, waiver, consent, approval, or other communication permitted or required under this Agreement shall be in writing, shall refer specifically to this Agreement and shall be deemed given only if (a) delivered by hand, (b) sent by facsimile transmission (with transmission confirmed), or (c) by internationally recognized overnight delivery service that maintains records of delivery, addressed to the Parties at their respective addresses specified in Section 13.8.2 or to such other address as the Party to whom notice is to be given may have provided to the other Party in accordance with this Section 13.8.1. Such notice shall be deemed to have been given as of the date delivered by hand or transmitted by facsimile (with transmission confirmed) or on the [***] (at the place of delivery) after deposit with an internationally recognized overnight delivery service. Any notice delivered by facsimile shall be confirmed by a hard copy delivered as soon as practicable thereafter. This Section 13.8.1 is not intended to govern the day-to-day business communications necessary between the Parties in performing their obligations under the terms of this Agreement.

13.8.2 Address for Notice.

If to AbbVie, to:

AbbVie Biotechnology LTD
c/o Conyers, Dill & Pearman,
Clarendon House,
2 Church Street,
Hamilton HM 11 Bermuda

with a copy (which shall not constitute notice) to:

AbbVie Inc.
1 North Waukegan Road
North Chicago, Illinois 60064 United States
Attention: [***]
Facsimile: [***]

If to Harpoon, to:

Harpoon Therapeutics, Inc.
131 Oyster Point Blvd, Suite 300
South San Francisco, CA 94080
Attention: [***]

with a copy (which shall not constitute notice) to:

Cooley LLP
3175 Hanover Street
Palo Alto, CA 94304
Attention: [***]
Email: [***]

13.9 Entire Agreement; Amendments. This Agreement, together with the Schedules attached hereto, sets forth and constitutes the entire agreement and understanding between the Parties with respect to the subject matter hereof and all prior agreements, understandings, promises, and representations, whether written or oral, with respect thereto are superseded hereby (including that certain Mutual Confidentiality Disclosure Agreement between the Parties or their respective Affiliates dated [***] (the "**Prior NDA**"). The foregoing shall not be interpreted as a waiver of any remedies available to either Party as a result of any breach, prior to the Effective Date, by the other Party (or its Affiliates) of its obligations under the Prior NDA. Each Party confirms that it is not relying on any representations or warranties of the other Party except as specifically set forth in this Agreement. No amendment, modification, release, or discharge with respect to this Agreement shall be binding upon the Parties unless in writing and duly executed by authorized representatives of both Parties.

13.10 English Language. This Agreement shall be written and executed in, and all other communications under or in connection with this Agreement shall be in, the English language. Any translation into any other language shall not be an official version thereof, and in the event of any conflict in interpretation between the English version and such translation, the English version shall control.

13.11 Equitable Relief. Each Party acknowledges and agrees that the restrictions set forth in Section 5.8 and Articles 7 and 9 are reasonable and necessary to protect the legitimate interests of the other Party and that such other Party would not have entered into this Agreement in the absence of such restrictions, and that any breach or threatened breach of any provision of such Section or Articles may result in irreparable injury to such other Party for which there may be no adequate remedy at law. In the event of a breach or threatened breach of any provision of such Section or Articles, the non-breaching Party shall be authorized and entitled to seek from any court of competent jurisdiction injunctive relief, whether preliminary or permanent, specific performance, and an equitable accounting of all earnings, profits, and other benefits arising from such breach, which rights shall be cumulative and in addition to any other rights or remedies to which such non-breaching Party may be entitled in law or equity. Both Parties agree to waive any requirement that the other (a) post a bond or other security as a condition for obtaining any such relief, and (b) show irreparable harm, balancing of harms, consideration of the public interest, or inadequacy of monetary damages as a remedy. Nothing in this Section 13.11 is intended, or should be construed, to limit either Party's right to equitable relief or any other remedy for a breach of any other provision of this Agreement.

13.12 Waiver and Non-Exclusion of Remedies. Any term or condition of this Agreement may be waived at any time by the Party that is entitled to the benefit thereof, but no such waiver shall be effective unless set forth in a written instrument duly executed by or on behalf of the Party waiving such term or condition. The waiver by either Party hereto of any right hereunder or of the failure to perform or of a breach by the other Party shall not be deemed a waiver of any other right hereunder or of any other breach or failure by such other Party whether of a similar nature or otherwise. The rights and remedies provided herein are cumulative and do not exclude any other right or remedy provided by Applicable Law or otherwise available except as expressly set forth herein.

13.13 No Benefit to Third Parties. Except as provided in Article 11, covenants and agreements set forth in this Agreement are for the sole benefit of the Parties hereto and their successors and permitted assigns, and they shall not be construed as conferring any rights on any other Persons.

13.14 Further Assurance. Each Party shall duly execute and deliver, or cause to be duly executed and delivered, such further instruments and do and cause to be done such further acts and things, including the filing of such assignments, agreements, documents, and instruments, as may be necessary or as the other Party may reasonably request in connection with this Agreement or to carry out more effectively the provisions and purposes hereof, or to better assure and confirm unto such other Party its rights and remedies under this Agreement.

13.15 Relationship of the Parties. It is expressly agreed that Harpoon, on the one hand, and AbbVie, on the other hand, shall be independent contractors and that the relationship between the Parties shall not constitute a partnership, joint venture, or agency, including for all tax purposes. Further, the Parties (and any successor, assignee, transferee, or Affiliate of a Party) shall not treat or report the relationship between the Parties arising under this Agreement as a partnership for United States tax purposes, without the prior written consent of the other Party unless required by a final "determination" as defined in Section 1313 of the United States Internal Revenue Code of 1986, as amended. Neither Harpoon, on the one hand, nor AbbVie, on the other hand, shall have the authority to make any statements, representations, or commitments of any kind, or to take any action, which shall be binding on the other, without the prior written consent of the other Party to do so. All persons employed by a Party shall be employees of such Party and not of the other Party and all costs and obligations incurred by reason of any such employment shall be for the account and expense of such Party.

13.16 Performance by Affiliates. AbbVie may use one (1) or more of its Affiliates to perform its obligations and duties hereunder and such AbbVie Affiliates are expressly granted certain rights herein; *provided* that each such Affiliate shall be bound by the corresponding obligations of AbbVie and, subject to an assignment to such Affiliate pursuant to Section 13.4, AbbVie shall remain liable hereunder for the prompt payment and performance of all their respective obligations hereunder.

13.17 Counterparts; Facsimile Execution. This Agreement may be executed in two (2) counterparts, each of which shall be deemed an original, but all of which together shall constitute one (1) and the same instrument. This Agreement may be executed by facsimile or electronically transmitted signatures and such signatures shall be deemed to bind each Party hereto as if they were original signatures.

13.18 References. Unless otherwise specified, (a) references in this Agreement to any Article, Section or Schedule shall mean references to such Article, Section or Schedule of this Agreement, (b) references in any Section to any clause are references to such clause of such Section, and (c) references to any agreement, instrument, or other document in this Agreement refer to such agreement, instrument, or other document as originally executed or, if subsequently amended, replaced, or supplemented from time to time, as so amended, replaced, or supplemented and in effect at the relevant time of reference thereto.

13.19 Schedules. In the event of any inconsistencies between this Agreement and any schedules or other attachments hereto, the terms of this Agreement shall control.

13.20 Construction. Except where the context otherwise requires, wherever used, the singular shall include the plural, the plural the singular, the use of any gender shall be applicable to all genders and the word "or" is used in the inclusive sense (and/or). Whenever this Agreement refers to a number of days, unless otherwise specified, such number refers to calendar days. The captions of this Agreement are for convenience of reference only and in no way define, describe, extend, or limit the scope or intent of this Agreement or the intent of any provision contained in this Agreement. The term "including," "include," or "includes" as used herein shall mean "including, but not limited to," and shall not limit the generality of any description preceding such term. The language of this Agreement shall be deemed to be the language mutually chosen by the Parties and no rule of strict construction shall be applied against either Party hereto. Each Party represents that it has been represented by legal counsel in connection with this Agreement and acknowledges that it has participated in the drafting hereof. In interpreting and applying the terms and provisions of this

Agreement, the Parties agree that no presumption will apply against the Party which drafted such terms and provisions.

[SIGNATURE PAGE FOLLOWS]

THIS AGREEMENT IS EXECUTED by the authorized representatives of the Parties as of the Effective Date.

HARPOON THERAPEUTICS, INC.	**ABBVIE BIOTECHNOLOGY LTD**
By: /s/ Gerald McMahon	By: /s/ Robert Michael
Name: Gerald McMahon	Name: Robert Michael
Title: President and CEO	Title: Director

[Signature Page to Development and Option Agreement]

Schedule 1.84

Initial Development Plan

[***]

Schedule 1.99

Licensed Compound

[***]

Schedule 3.7

Pre-Approved Third Party Providers

[***]

Schedule 10.2

Disclosure Schedules

[***]

Schedule 10.2.1

Existing Patents

[***]

Schedule 13.7.3

Arbitration

[***]

Confidential

EXECUTION COPY

CERTAIN CONFIDENTIAL INFORMATION CONTAINED IN THIS DOCUMENT, MARKED BY [***], HAS BEEN OMITTED BECAUSE IT IS BOTH NOT MATERIAL AND WOULD BE COMPETITIVELY HARMFUL IF PUBLICLY DISCLOSED.

SECOND AMENDED AND RESTATED ASSIGNMENT AND LICENSE AGREEMENT

This Second Amended and Restated Assignment and License Agreement (this "**Agreement**") is entered into as of December 20, 2019 (the "**Second Amendment Date**"), by and between Werewolf Therapeutics, Inc., a Delaware corporation, with a place of business at 1030 Massachusetts Avenue, 2nd Floor, Cambridge, MA 02138 ("**Werewolf**"), and Harpoon Therapeutics, Inc., a Delaware corporation with a place of business at 4000 Shoreline Court, Suite 250, South San Francisco, CA 94080 ("**Harpoon**").

RECITALS

Harpoon and Werewolf were parties to that certain Assignment and License Agreement (the "**Original Agreement**") dated March 19, 2018 (the "**Effective Date**") and are parties to that certain First Amended and Restated Assignment and License Agreement (the "**First Amended and Restated Agreement**") dated October 19, 2018, which previously amended and restated the Original Agreement in its entirety; and

Harpoon and Werewolf seek to amend and restate the First Amended and Restated Agreement in its entirety as set forth herein;

Now, therefore, in consideration of the premises and the mutual covenants contained herein, the parties hereby agree as follows:

1. Definitions.

As used in this Agreement, the following capitalized terms shall have the meanings indicated:

1.1 "**Affiliate**" means any person or entity directly or indirectly controlled by, controlling or under common control with a party. A person or entity is deemed to be in "control" if it: (a) owns fifty percent (50%) (or such lesser percentage which is the maximum allowed to be owned by a foreign entity or investor in a particular jurisdiction) or more of the outstanding voting stock or other ownership interest of the other entity, or (b) possesses the power to (i) elect, appoint, direct or remove fifty percent (50%) or more of the members of the governing body of the entity or (ii) otherwise direct or cause the direction of the management or policies of the entity by contract, law or otherwise. Notwithstanding anything to the contrary in this Agreement, Werewolf and Harpoon shall not be deemed to be Affiliates of each other for purposes of this Agreement.

1.2 "**Control**" means, with respect to any patent or patent application, the possession of the right, whether directly or indirectly, and whether by ownership, license or otherwise (other than by operation of the license or other grants set forth in this Agreement), to grant a license, sublicense or other right to or under such patent or patent application as provided for in this

Agreement without violating the terms of, or incurring any royalty or other expense under, any agreement or other arrangement with any third party.

1.3 "**Covered Products**" means Harpoon Licensed Patent Covered Products and/or Harpoon Disclosing Patent Covered Products, as the context requires.

1.4 "[***]" means [***].

1.5 "[***] **Patent**" is any patent or patent application of which the applicable party obtains Control on or before the first anniversary of the Second Amendment Date that is [***]. The [***] Patents do not include [***]. For clarity, [***] Patents exclude patents and patent applications directed to inventions or discoveries developed or purchased independently by an acquirer of the applicable party without reference to or reliance upon any of such party's Confidential Information. [***] Patents shall be set forth on Exhibit 1.5 attached hereto, which may be updated from time to time upon written notice from the applicable party, provided, however that failure to include any [***] Patent on Exhibit 1.5 shall not affect whether or not an applicable patent or patent application is a [***] Patent.

1.6 "[***] **Product**" means any product [***], the manufacture, use or sale of which would, but for the license under Section 2.2.1, infringe a Valid Claim of the other party's [***] Patent.

1.7 "**Harpoon Assigned Patents**" means: (a) the patent applications listed in Exhibit 1.7 attached hereto; (b) all patent applications that claim priority to any patent application referenced in the foregoing clause (a) that are filed in any jurisdiction;(c) all patents issuing on the patent applications referenced in the foregoing clauses (a) and (b); and (d) all reissues and extensions of any of the patents referenced in the foregoing clause (c).

1.8 "**Harpoon Disclosing Patents**" means: (a) the patent applications listed in Exhibit 1.8 attached hereto; (b) any other patent applications filed by Harpoon from [***] to [***], including but not limited to [***]; (c) all patent applications that claim priority to any patent application referenced in the foregoing clause (b) that are filed in any jurisdiction; (d) all patents issuing on the patent applications referenced in the foregoing clauses (a) through (c); and (e) all reissues and extensions of any of the patents referenced in the foregoing clause (d). Any patent assigned to Werewolf pursuant to Section 3.5 is also deemed to be a Harpoon Disclosing Patent for purposes of Sections 1.11, 1.21, 4.5.3 and 4.5.4.

1.9 "**Harpoon Licensed Patents**" means: (a) the patent applications listed in Exhibit 1.9 attached hereto; (b) all patent applications that claim priority to any patent application referenced in the foregoing clause (a) that are filed in any jurisdiction; (c) all patents issuing on the patent applications referenced in the foregoing clauses (a) and (b); and (d) all reissues and extensions of any of the patents referenced in the foregoing clause (c).

1.10 "**Harpoon Licensed Patent Covered Product**" means any product, the manufacture, use or sale of which would, but for the license under Section 2.1.1(a), infringe a Valid Claim of the Harpoon Licensed Patents.

1.11 "**Harpoon Disclosing Patent Covered Product**" means any product, the manufacture, use or sale of which would, but for the license under Section 2.1.1(b), infringe a Valid Claim of the Harpoon Disclosing Patents.

1.12 "**Harpoon Subject Matter**" means [***].

1.13 "**huSA**" means human serum albumin.

1.14 "**Licensed Field**" means [***].

1.15 "**Licensed Sequence**" means any amino acid sequence for a polypeptide binding to huSA that is disclosed or claimed in a Harpoon Licensed Patent, including any such sequence that is used in any of Harpoon's product candidates under development as of the Effective Date.

1.16 "**Net Sales**" means the gross amount invoiced by Werewolf and its Affiliates and licensees (each, a "**Selling Party**") for the sale, transfer or other disposition of applicable Covered Products less the following deductions (in each case, to the extent actually incurred, allowed, paid, accrued or allocated with respect to such sale, transfer or disposition): (a) normal and customary trade, quantity and cash discounts; (b) rebates and chargebacks; (c) credits or allowances for returns, rejections and billing errors; (d) sales taxes, value added taxes or similar taxes, including duties or other governmental charges, imposed on the sale of applicable Covered Products to third parties, to the extent included in the invoice price and not reimbursable, refundable or creditable to the Selling Party; and (e) prepaid freight, insurance and handling fees to the extent included in the invoice price, in each case (clauses (a) through (e)) as determined from books and records of the Selling Party maintained in accordance with GAAP. Sales of applicable Covered Products between or among Werewolf and its Affiliates and licensees shall be excluded from the computation of Net Sales if such sales are not intended for end use, but Net Sales shall include the subsequent final sales to third parties by such Affiliates and licensees. If a sale, transfer or other disposition with respect to applicable Covered Products involves consideration other than cash or is not at arm's length, then the Net Sales from such sale, transfer or other disposition shall be calculated based upon the arm's length fair market value of the applicable Covered Product, which generally shall mean the Selling Party's average sales price for the quarter in the country where such sale took place.

1.17 "**Period of Collaboration**" means the period starting on the Second Amendment Date and ending [***] thereafter.

1.18 "**Territory**" means worldwide.

1.19 "**Werewolf Assigned Patents**" means: (a) the patent applications listed in Exhibit 1.19 attached hereto; (b) all patent applications that claim priority to any patent application referenced in the foregoing clause (a) that are filed in any jurisdiction; (c) all patents issuing on the patent applications referenced in the foregoing clauses (a) and (b); and (d) all reissues and extensions of any of the patents referenced in the foregoing clause (c).

1.20 "**Werewolf Subject Matter**" means [***].

1.21 "**Valid Claim**" means: (a) a claim of a Harpoon Licensed Patent or a Harpoon Disclosing Patent, as applicable, that has not expired, been cancelled or been held unenforceable or invalid by an agency or a court of competent jurisdiction without possibility of appeal, and that has not been admitted to be invalid or unenforceable through reissue, disclaimer or otherwise, or (b) a claim of a pending Harpoon Licensed Patent or Harpoon Disclosing Patent, as applicable, that has not been withdrawn, abandoned or finally rejected without possibility of appeal or re-filing, provided that a claim of a patent application pending for more than [***] from the date of first examination thereof shall thereupon cease to be a Valid Claim unless and until such claim subsequently issues.

2. License; Assignment.

2.1 Licenses.

2.1.1 **License Grants**. Subject to the terms and conditions set forth in this Agreement, Harpoon hereby grants to Werewolf: (a) a non-exclusive, royalty-bearing, sublicenseable (subject to Section 2.1.2) license under the Harpoon Licensed Patents solely to make, have made, use, sell, offer for sale and import Harpoon Licensed Patent Covered Products in the Licensed Field in the Territory; and (b) an exclusive (even as to Harpoon), irrevocable, royalty-bearing, transferable, assignable, sublicenseable (subject to Section 2.1.2) license under the Harpoon Disclosing Patents solely to make, have made, use, sell, offer for sale and import Harpoon Disclosing Patent Covered Products in the Licensed Field in the Territory.

2.1.2 **Sublicensing**. Werewolf may grant and authorize the further grant of sublicenses of not greater scope than the licenses granted to Werewolf under Section 2.1.1, provided that (a) Werewolf shall promptly provide Harpoon with a copy of each sublicense agreement (which copy may be redacted with respect to information not pertinent to compliance with this Agreement) and (b) Werewolf shall remain fully liable for the performance of such sublicensees ("**Sublicensees**").

2.2 [***] Patent Cross Licenses.

2.2.1 **Cross License Grants**. Subject to the terms and conditions set forth in this Agreement, each party hereby grants to the other party a perpetual, non-exclusive, irrevocable, royalty-free license under its rights in the [***] Patents Controlled by such party to make, have made, use, sell, offer for sale and import [***] Products, in the case of Werewolf, within the Werewolf Subject Matter and in the case of Harpoon, within the Harpoon Subject Matter. Each such license granted under this Section 2.2.1 shall only be: (a) transferable or assignable in connection with a permitted assignment of all of such party's rights under this Agreement pursuant to Section 10.6; and (b) sublicensable to the extent each such sublicense is limited to [***] Products, (i) with respect to Werewolf, which are within the Werewolf Subject Matter and as to which Werewolf has materially contributed to the discovery or development, and (ii) with respect to Harpoon, which are within the Harpoon Subject Matter and as to which Harpoon has materially contributed to the discovery or development (the foregoing criteria under this clause (b), the "**Sublicensing Criteria**"). For clarity and without limitation, for purposes of this Section 2.2.1, a [***] Product shall be deemed not "within" the Werewolf Subject Matter or Harpoon Subject Matter, as applicable, if any component of such product (including any portion not covered by the

applicable Patent), falls within the Harpoon Subject Matter (in the case of a sublicense by Werewolf) or within the Werewolf Subject Matter (in the case of a sublicense by Harpoon).

2.2.2 Expedited Arbitration. In the event any dispute or disagreement arises between the parties relating to whether the applicable Sublicensing Criteria have been satisfied, either party may, by written notice to the other party, elect to submit such dispute or disagreement for final settlement via binding arbitration conducted in New York in accordance with the Expedited Procedures of the ICC arbitration rules. The arbitration will be conducted by a single, mutually acceptable arbitrator who shall not be a current or former employee or director, or a current stockholder, of either party or any of their respective Affiliates and who shall have at least fifteen (15) years of pharmaceutical industry experience. The arbitrator will, in rendering his/her decision, apply the intellectual property laws of the United States and the substantive law of the State of California, without reference to its conflict of laws principles, as applicable. The decision rendered by the arbitrator shall be limited to the Sublicensing Criteria. The decision rendered by the arbitrator shall be final, binding and non-appealable, and judgment may be entered upon it in any court of competent jurisdiction. Each party shall bear its own attorney's fees, costs, and disbursements arising out of the arbitration, and shall pay an equal share of the fees and costs of the arbitrator.

2.3 Harpoon Assignment. Harpoon hereby sells, assigns and transfers the Harpoon Assigned Patents to Werewolf, to the extent not previously sold, assigned and transferred to Werewolf pursuant to the Original Agreement or the First Amended and Restated Agreement. Upon request, Harpoon shall execute and deliver such reasonable documents and instruments as necessary to effect the foregoing assignment.

2.4 Werewolf Assignment. Werewolf hereby sells, assigns and transfers the Werewolf Assigned Patents to Harpoon, to the extent not previously sold, assigned and transferred to Harpoon pursuant to the Original Agreement or the First Amended and Restated Agreement. Upon request, Werewolf shall execute and deliver such reasonable documents and instruments as necessary to effect the foregoing assignment.

2.5 No Other Grant of Rights. Each party acknowledges that the rights and licenses granted under this Agreement are limited to the licenses expressly granted in Sections 2.1 and 2.2 and the assignments expressly granted in Sections 2.3, 2.4 and 3.5. No other right, title, or interest of any nature whatsoever is granted, whether by implication, estoppel, reliance, or otherwise. Werewolf shall not practice under the Harpoon Licensed Patents or Harpoon Disclosing Patents outside the scope of the licenses granted to Werewolf in Section 2.1.1. Neither party shall practice under the other party’s [***] Patents outside the scope of the license granted such party in Section 2.2.1.

3. Intellectual Property.

3.1 Prosecution of Harpoon Licensed Patents. As between the parties, Harpoon shall have the sole right to file for, prosecute and maintain the Harpoon Licensed Patents, using patent counsel of its choice, and all decision-making authority with regard to such filing, prosecution and maintenance shall vest in Harpoon (including as to whether to maintain or abandon any patent, patent application or claim within the Harpoon Licensed Patents).

3.2 Enforcement of Harpoon Licensed Patents and Harpoon Disclosing Patents. In the event that Werewolf reasonably believes that the Harpoon Licensed Patents or the Harpoon Disclosing Patents are being infringed by a third party, Werewolf shall promptly notify Harpoon and provide Harpoon with its evidence thereof. Except with respect to [***], in no event shall Werewolf contact or otherwise notify any such third party regarding such infringement without the prior written consent of Harpoon; provided that [***]. As between the parties, Harpoon shall have the sole right to enforce the Harpoon Licensed Patents and, except as provided herein, the Harpoon Disclosing Patents with respect to any infringement thereof, or to defend any declaratory judgment action with respect to the Harpoon Licensed Patents and, except as provided herein, the Harpoon Disclosing Patents. In addition, as between the parties, Harpoon shall have the sole right to defend any challenges to the scope, validity or enforceability of any of the Harpoon Licensed Patents and, except as provided herein, the Harpoon Disclosing Patents. Werewolf shall have the initial right to (i) enforce or defend (as applicable) Harpoon Disclosing Patent Werewolf Infringements; and (ii) defend any challenges to the scope, validity or enforceability of any of the Harpoon Disclosing Patents impacting claims thereof covering Werewolf Subject Matter ("**Harpoon Disclosing Patent Werewolf Patent Actions**"); provided that Harpoon shall [***]. In the event that, within [***] days after first becoming aware thereof, Werewolf does not initiate action, or thereafter discontinues such action, to (a) enforce or defend (as applicable) any Harpoon Disclosing Patent Werewolf Subject Matter Infringement; or (b) respond to or defend any Harpoon Disclosing Patent Werewolf Patent Action, then (in either case (a) or (b)), Werewolf shall [***] and Harpoon shall [***]; provided that Werewolf shall [***].

3.3 Maintenance of Harpoon Assigned Patents and Werewolf Assigned Patents. To the extent allowed by applicable law, Werewolf and its Affiliates shall [***]. To the extent allowed by applicable law, Harpoon and its Affiliates shall [***].

3.4 Sequence Modifications. For the avoidance of doubt, Werewolf has the [***], and, as between the parties, [***].

3.5 Prosecution of Harpoon Disclosing Patents. As between the parties, Harpoon shall have the sole right to file for, prosecute and maintain the Harpoon Disclosing Patents, using patent counsel of its choice, and all decision-making authority with regard to such filing, prosecution and maintenance shall vest in Harpoon (including as to whether to maintain or abandon any patent, patent application or claim within the Harpoon Disclosing Patents), provided, however, that [***]. In such event, [***]. Upon [***], [***] will [***]. Except as provided above in this paragraph, both parties may [***]. [***]. In the event of any dispute regarding filing or prosecution of any Harpoon Disclosing Patent that claims Werewolf Subject Matter, the matter will be [***].

3.6 Disclosure of Patents in Werewolf Subject Matter. During the Period of Collaboration, [***] shall [***], and [***]. For clarity, this Section 3.6 will not apply with respect to [***].

4. Payments.

4.1 Upfront Fee. The parties agree and acknowledge that, within [***] after the Effective Date, Werewolf previously paid to Harpoon an upfront fee in the amount of [***]

pursuant to the Original Agreement. Such upfront fee shall be non-refundable, and shall not be creditable against any other amount due hereunder.

4.2 Legal Fees. Promptly (and in any event within [***]) following receipt of an invoice, Werewolf shall reimburse Harpoon for (or pay directly) Harpoon's reasonable legal costs incurred in connection with the negotiation and drafting of the Original Agreement, in an amount not to exceed [***]. Promptly (and in any event within [***]) following receipt of an invoice, Harpoon shall reimburse Werewolf for (or pay directly) Werewolf's legal costs incurred in connection with the negotiation and drafting of this Agreement, in an amount not to exceed [***].

4.3 Payment Methods. All payments due under this Agreement to Harpoon shall be made by bank wire transfer in immediately available funds to an account designated by Harpoon. All payments due under this Agreement shall be made in the legal currency of the United States of America, and all references to "$" or "Dollars" shall refer to United States dollars. For conversion of foreign currency to United States dollars, the conversion rate shall be the exchange rate quoted in The Wall Street Journal on the day that the payment is due.

4.4 Withholdings Taxes. Any withholding or other tax that is required by law to be withheld with respect to payments owed by Werewolf pursuant to this Agreement shall be deducted by Werewolf from such payment prior to remittance and paid to the applicable tax authority. Werewolf shall promptly furnish Harpoon evidence of any such taxes withheld and paid and reasonably assist Werewolf in obtaining applicable credits and refunds with respect thereto.

4.5 Royalties.

4.5.1 Royalty Payment. Werewolf shall pay to Harpoon a royalty of (a) [***] of Net Sales of Harpoon Licensed Patent Covered Products; and (b) [***] of Net Sales of Harpoon Disclosing Patent Covered Products, provided that [***] (collectively, the "**Earned Royalty**"). The Earned Royalty shall be due and payable within [***] after the end of the calendar quarter during which the corresponding Net Sales are made.

4.5.2 Minimum Annual Royalty. Beginning with the first commercial sale by Werewolf, or its Affiliate or licensee, of the first Harpoon Licensed Patent Covered Product (the "**First Commercial Sale**"), Werewolf shall pay to Harpoon minimum annual royalties of [***], which amount shall be pro-rated for any partial calendar year (the "**Minimum Annual Royalty**"). The Minimum Annual Royalty shall be due and payable within [***] after the end of each calendar year following the First Commercial Sale, and all Earned Royalty payments made with respect to a particular calendar year shall be offset against the Minimum Annual Royalty for such calendar year (provided that such Minimum Annual Royalty shall not be reduced to less than zero).

4.5.3 Royalty Term. The obligation to pay the Earned Royalty with respect to a Covered Product shall expire on [***]. The obligation to pay the Minimum Annual Royalty shall expire when no further Earned Royalty is due with respect to any Harpoon Licensed Patent Covered Products in accordance with the preceding sentence.

4.5.4 No Multiple Royalties. The obligation to pay the Earned Royalty is imposed only once with respect to Net Sales of the same unit of a Covered Product such that if the manufacture, use, sale or import of any Covered Product is Covered by more than one Valid Claim

of any Harpoon Licensed Patents or Harpoon Disclosing Patents, multiple royalties shall not be due.

4.5.5 Reports. Together with each payment under Sections 4.5.1 and 4.5.2, Werewolf shall deliver a written report to Harpoon stating in each such report the total Net Sales during the applicable reporting period; (ii) the calculation of royalties; and (iii) the total royalties so calculated and due to Harpoon.

4.5.6 Records; Audit. Werewolf shall, and shall cause its Affiliates and Sublicensees to, keep complete and accurate books and records setting forth gross sales of Covered Products, Net Sales of Covered Products, itemized deductions from gross sales taken to calculate Net Sales and amounts payable hereunder to Harpoon for each Covered Product. Upon reasonable prior notice from Harpoon, Werewolf shall permit an independent public accounting firm engaged by Harpoon to examine and audit such books and records, during Werewolf's regular business hours, to verify the amounts reported by Werewolf in accordance with Section 4.5.5 and the payment of royalties hereunder. The foregoing audit right may be exercised only once during each [***] period and shall be limited to the pertinent books and records for any calendar year ending not more than [***] before the date of the audit request. The opinion of said independent accountants regarding such reports and payments shall be binding on the parties other than in the case of clear error. Harpoon shall bear the cost of any such audit, provided that if the audit identifies an underpayment of royalties payable hereunder of more than [***] of the amount due for the applicable period, then Werewolf shall promptly reimburse Harpoon for all costs incurred in connection with such audit. Werewolf shall promptly pay to Harpoon the amount of any underpayment of royalties revealed by an audit, including any interest on such underpayment at the rate specified in Section 4.6 calculated from the date such payment was originally due. Any overpayment of royalties by Werewolf revealed by an audit shall be fully-creditable against future royalty payments under Section 4.5.1.

4.6 Late Payment. Any amounts due hereunder which are not paid when due shall bear interest at the rate of [***] or the maximum rate allowable by law, whichever is less. This Section 4.6 shall in no way limit any other remedies available to Harpoon.

5. Confidentiality.

5.1 Confidentiality; Exceptions. During and after the term of this Agreement, except to the extent expressly authorized by this Agreement or otherwise agreed by the parties in writing, the parties agree that the receiving party shall keep confidential and shall not publish or otherwise disclose or use for any purpose other than as provided for in this Agreement any confidential or proprietary information or materials furnished to it by the other party pursuant to this Agreement (collectively, "**Confidential Information**"). The terms and conditions of this Agreement shall be the Confidential Information of both parties and, for clarity, any data, information, or know-how provided by a party pursuant to Sections 3.5 and 3.6 shall be the Confidential Information of such party. Notwithstanding the foregoing, Confidential Information shall not be deemed to include information or materials to the extent that it can be established by written documentation by the receiving party that such information or material (a) was already known to or possessed by the receiving party without any obligation of confidentiality, at the time of its disclosure to the receiving party hereunder; (b) was generally available to the public or otherwise part of the public

domain at the time of its disclosure to the receiving party hereunder; (c) became generally available to the public or otherwise part of the public domain after its disclosure to the receiving party hereunder other than through any act or omission of the receiving party in breach of this Agreement; (d) was independently developed by the receiving party without use of or reference to the other party's Confidential Information as demonstrated by documented evidence prepared by the receiving party contemporaneously with such independent development; or (e) was disclosed to the receiving party, other than under an obligation of confidentiality, by a third party who had no obligation to the disclosing party not to disclose such information to others.

5.2 Authorized Use and Disclosure. Each party may use and disclose Confidential Information of the other party as follows: (a) under appropriate confidentiality and non-use provisions substantially equivalent to those in this Agreement in connection with the performance of its obligations or exercise of rights granted to such party in this Agreement; (b) to the extent such disclosure is reasonably necessary for prosecuting or defending litigation or complying with applicable laws or regulations, provided, however, that if a party is required by law or regulation to make any such disclosure of the other party's Confidential Information it shall, to the extent practicable, give reasonable advance notice to the other party of such disclosure requirement and, upon request, reasonably assist the other party to secure confidential treatment of such Confidential Information; (c) to the extent such disclosure is reasonably necessary for filing, prosecution and maintenance of the Harpoon Assigned Patents, Harpoon Disclosing Patents or the Werewolf Assigned Patents, as the case may be; and (d) to the extent mutually agreed to by the parties in writing. In addition, each party may disclose the terms and conditions of this Agreement to actual and potential investors, acquirers, licensees, collaborators, advisors and other business partners on a reasonable need-to-know basis under reasonable conditions of confidentiality.

6. Representations and Warranties; Limitation of Liability.

6.1 Representations and Warranties of both Parties. Each party represents and warrants to the other party that: (i) it is duly incorporated and validly existing under the laws of the jurisdiction of its incorporation, and has full corporate power and authority to enter into this Agreement and to carry out the provisions hereof; (ii) the terms of this Agreement do not conflict with any agreement, instrument or understanding, oral or written, to which it is a party or by which it may be bound, nor violate any material applicable law; and (iii) it is not aware of any action, suit, inquiry or investigation instituted by any third party which threatens the validity of this Agreement.

6.2 Additional Representations and Warranties of Harpoon. Harpoon further represents and warrants to Werewolf that, to its knowledge, Harpoon owns all right, title and interest in and to the Harpoon Licensed Patents and Harpoon Disclosing Patents and, as of immediately prior to the Effective Date, owned all right, title and interest in and to the Harpoon Assigned Patents. Additionally, Harpoon represents and warrants to Werewolf that, as of the Second Amendment Date, it has disclosed to Werewolf all (a) Harpoon patent applications claiming or disclosing Werewolf Subject Matter, (b) Harpoon patent applications required to be disclosed under Section 3.3 of the First Amended and Restated Agreement, and (c) all [***] Patents.

6.3 Additional Representations and Warranties of Werewolf. Werewolf further represents and warrants to Harpoon that, to its knowledge, as of immediately prior to the Effective Date, Werewolf owned all right, title and interest in and to the Werewolf Assigned Patents. Additionally, Werewolf represents and warrants to Harpoon that, as of the Second Amendment Date, it has disclosed to Harpoon all (a) Werewolf patent applications claiming or disclosing Werewolf Subject Matter, (b) Werewolf patent applications required to be disclosed under Section 3.3 of the First Amended and Restated Agreement, and (c) all [***] Patents.

6.4 No Other Warranty.

6.4.1 NOTHING CONTAINED HEREIN SHALL BE DEEMED TO BE A WARRANTY BY HARPOON THAT HARPOON CAN OR SHALL BE ABLE TO OBTAIN PATENTS ON PATENT APPLICATIONS INCLUDED IN THE HARPOON LICENSED PATENTS, THE HARPOON DISCLOSING PATENTS OR HARPOON'S [***] PATENTS OR THAT WEREWOLF CAN OR SHALL BE ABLE TO OBTAIN PATENTS ON PATENT APPLICATIONS INCLUDED IN THE HARPOON ASSIGNED PATENTS, OR THAT ANY OF THE HARPOON LICENSED PATENTS, THE HARPOON DISCLOSING PATENTS, HARPOON'S [***] PATENTS OR THE HARPOON ASSIGNED PATENTS SHALL AFFORD ADEQUATE OR COMMERCIALLY WORTHWHILE PROTECTION.

6.4.2 NOTHING CONTAINED HEREIN SHALL BE DEEMED TO BE A WARRANTY BY WEREWOLF THAT WEREWOLF CAN OR SHALL BE ABLE TO OBTAIN PATENTS ON PATENT APPLICATIONS INCLUDED IN WEREWOLF'S [***] PATENTS OR THAT HARPOON CAN OR SHALL BE ABLE TO OBTAIN PATENTS ON PATENT APPLICATIONS INCLUDED IN THE WEREWOLF ASSIGNED PATENTS, OR THAT ANY OF WEREWOLF'S [***] PATENTS OR THE WEREWOLF ASSIGNED PATENTS SHALL AFFORD ADEQUATE OR COMMERCIALLY WORTHWHILE PROTECTION.

6.4.3 EXCEPT AS EXPRESSLY PROVIDED IN THIS ARTICLE 6, NEITHER PARTY MAKES ANY REPRESENTATIONS, WARRANTIES OR CONDITIONS (EXPRESS, IMPLIED, STATUTORY OR OTHERWISE) WITH RESPECT TO THE HARPOON LICENSED PATENTS, THE HARPOON DISCLOSING PATENTS, THE [***] PATENTS, THE HARPOON ASSIGNED PATENTS, OR THE WEREWOLF ASSIGNED PATENTS, OR OTHERWISE WITH RESPECT TO THE SUBJECT MATTER OF THIS AGREEMENT, AND EACH PARTY SPECIFICALLY DISCLAIMS ANY AND ALL IMPLIED WARRANTIES, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, TITLE, VALIDITY OF ANY PATENTS AND NON-INFRINGEMENT OF THIRD PARTY INTELLECTUAL PROPERTY RIGHTS.

6.5 Limitation of Liability. EXCEPT WITH RESPECT TO EACH PARTY'S OBLIGATIONS UNDER ARTICLES 5 AND 7, NEITHER PARTY SHALL BE LIABLE TO THE OTHER WITH RESPECT TO ANY SUBJECT MATTER OF THIS AGREEMENT UNDER ANY CONTRACT, NEGLIGENCE, STRICT LIABILITY OR OTHER LEGAL OR EQUITABLE THEORY FOR (A) ANY INDIRECT, INCIDENTAL, CONSEQUENTIAL OR PUNITIVE DAMAGES OR LOST PROFITS OR (B) COST OF PROCUREMENT OF SUBSTITUTE GOODS, TECHNOLOGY OR SERVICES.

7. Indemnification and Insurance.

7.1 Indemnity.

7.1.1 Indemnification by Werewolf. Werewolf hereby agrees to indemnify, defend and hold harmless Harpoon and each of its Affiliates, and its and their respective agents, directors, officers, employees and independent contractors (collectively, the "**Harpoon Indemnitees**") from and against any liability or expense (including reasonable legal expenses and attorneys' fees) (collectively, "**Losses**") resulting from any suit(s), claim(s), action(s) and demand(s), in each case brought by a third party (each, a "**Third Party Claim**") arising out of (a) a material breach by Werewolf of this Agreement, (b) violation by Werewolf of applicable law in connection with this Agreement, (c) Werewolf's gross negligence or willful misconduct in connection with this Agreement, or (d) the making, using, offering for sale, selling, and/or importing any Covered Product or [***] Product by Werewolf or any of its Affiliates or licensees. Werewolf's obligation to indemnify the Harpoon Indemnitees pursuant to this Section 7.1.1 shall not apply to the extent that any such Losses arise from any matter for which Harpoon is obligated to indemnify Werewolf pursuant to Section 7.1.2.

7.1.2 Indemnification by Harpoon. Harpoon hereby agrees to indemnify, defend and hold harmless Werewolf and each of its Affiliates, and its and their respective agents, directors, officers, employees and independent contractors (collectively, the "**Werewolf Indemnitees**") from and against any Losses resulting from any Third Party Claim arising out of (a) a material breach by Harpoon of this Agreement, (b) violation by Harpoon of applicable law in connection with this Agreement, (c) Harpoon's gross negligence or willful misconduct in connection with this Agreement, or (d) the making, using, offering for sale, selling, and/or importing any [***] Product by Harpoon or any of its Affiliates or licensees. Harpoon's obligation to indemnify the Werewolf Indemnitees pursuant to this Section 7.1.2 shall not apply to the extent that any such Losses arise from any matter for which Werewolf is obligated to indemnify Harpoon pursuant to Section 7.1.1.

7.1.3 Procedure. A party seeking indemnification under Section 7.1 (the "**Indemnitee**") shall provide the other party (the "**Indemnitor**") with (a) prompt written notice of any Third Party Claim for which the Indemnitee wishes to obtain indemnification; (b) the ability to defend (with the reasonable cooperation of the Indemnitee) or settle any such Third Party Claim; and (c) reasonable assistance and full information with respect to such Third Party Claim at the Indemnitor's expense, provided, however, that the Indemnitor shall not enter into any settlement that admits fault or wrongdoing, or involves any other admission or for which the Indemnitee would be liable for damages, without the Indemnitee's written consent, such consent not to be unreasonably withheld or delayed. The Indemnitee shall have the right to participate, at its own expense and with counsel of its choice, in the defense of any Third Party Claim that has been assumed by the Indemnitor.

8. Term and Termination.

8.1 Term. The term of this Agreement shall commence on the Effective Date and, unless earlier terminated as provided in this Article 8, shall continue in full force and effect on a country-by-country basis until the expiration of the last to expire patent or patent application

included in the Harpoon Licensed Patents, Harpoon Disclosing Patents or [***] Patents within the applicable country.

8.2 Termination.

8.2.1 Termination without Cause. Werewolf may terminate this Agreement upon [***] prior written notice to Harpoon referencing this Section 8.2.1.

8.2.2 Termination for Breach. In the event that either party commits a material breach of its obligations under this Agreement and fails to cure that breach within [***] after receiving written notice thereof from the non-breaching party, the non-breaching party shall have the right to terminate this Agreement immediately upon written notice to the party in breach.

8.2.3 Bankruptcy. Harpoon may terminate Section 2.1.1 and 2.1.2 of this Agreement upon notice to Werewolf if Werewolf is declared insolvent, is adjudged bankrupt, applies for judicial or extra-judicial settlement with its creditors, makes an assignment for the benefit of its creditors, voluntarily files for bankruptcy or has a receiver or trustee (or the like) in bankruptcy appointed by reason of its insolvency, or in the event an involuntary bankruptcy action is filed against Werewolf and not dismissed within [***] days, or if Werewolf becomes the subject of liquidation or dissolution proceedings or otherwise discontinues business.

8.3 Effect of Termination or Expiration.

8.3.1 Termination of Rights. Upon termination of this Agreement by either party pursuant to any of the provisions of Section 8.2, the rights and licenses granted to Werewolf under Section 2.1.1 and 2.1.2 shall immediately terminate, all rights in and to and under the Harpoon Licensed Patents and Harpoon Disclosing Patents shall revert to Harpoon and Werewolf shall make no further use or exploitation of any of the Harpoon Licensed Patents or Harpoon Disclosing Patents.

8.3.2 Accruing Obligations. Termination or expiration of this Agreement shall not relieve the parties of obligations accruing prior to, or which are attributable to a period prior to, any termination or expiration of this Agreement.

8.4 Survival. Articles 1, 5, 7, 9 and 10 and Sections 2.2.1, 2.3, 2.4, 4.3, 4.6, 6.5, 8.3 and 8.4 shall survive the expiration or any termination of this Agreement. Except as otherwise provided in this Section 8.4, all other provisions of this Agreement shall terminate upon the expiration or termination of this Agreement.

9. Other Matters.

9.1 Mutual Agreement. In exchange for the mutual promises contained herein and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, each party, on behalf of itself and its respective successors and assigns (the "**Releasing Party**"), hereby fully and forever releases the other party and its current and former officers, directors, employees, agents and their successors and assigns from and agrees not to sue or otherwise institute or cause to be instituted any legal or administrative proceedings concerning [***].

9.2 Scope. Each Releasing Party agrees that the release set forth in this Section 9 shall be and remain in effect in all respects as a complete general release as to the matters released. Each Releasing Party shall be responsible to the other party for all costs, attorneys' fees and damages incurred by such other party in defending against a claim, suit or proceeding brought or pursued by such Releasing Party in violation of this Section 9. Notwithstanding anything to the contrary in this Agreement, each party reserves all rights and remedies against the other party in the event of such other party's failure to perform any obligations under this Agreement.

10. Miscellaneous.

10.1 Entire Agreement. This Agreement is the sole agreement between the parties with respect to the subject matter hereof and, except as expressly set forth herein, supersedes all other agreements and understandings between the parties with respect to such subject matter, including the Original Agreement and the First Amended and Restated Agreement. For clarity, the parties agree and acknowledge that the Common Interest Agreement dated March 19, 2018 between Werewolf and Harpoon remains in effect in accordance with its terms.

10.2 Notices. Unless otherwise specifically provided, all notices required or permitted by this Agreement shall be in writing and may be delivered personally, or may be sent by facsimile, overnight courier or certified mail, return receipt requested, to the following addresses, unless the parties are subsequently notified of any change of address in accordance with this Section 10.2:

If to Werewolf: Werewolf Therapeutics, Inc.
1030 Massachusetts Avenue, 2nd Floor
Cambridge, MA 02138
Attention: Chief Executive Officer

If to Harpoon: Harpoon Therapeutics, Inc.
131 Oyster Point Boulevard, Suite 300
South San Francisco, CA 94080
Attention: Chief Executive Officer

Any notice shall be deemed to have been received as follows: (a) by personal delivery or expedited delivery, upon receipt; (b) by facsimile, one business day after transmission; or (c) by certified mail, as evidenced by the return receipt. If notice is sent by facsimile, a confirming copy of the same shall be sent by mail.

10.3 Binding Effect. This Agreement shall be binding upon and inure to the benefit of the parties and their respective legal representatives, successors and permitted assigns.

10.4 Amendment; Waiver. This Agreement may be amended, modified, superseded or canceled, and any of the terms may be waived, only by a written instrument executed by each party or, in the case of waiver, by the party waiving compliance. The delay or failure of either party at any time or times to require performance of any provisions hereof shall in no manner affect the rights at a later time to enforce the same. No waiver by either party of any condition or of the breach of any term contained in this Agreement, whether by conduct, or otherwise, in anyone or more instances, shall be deemed to be, or considered as, a further or continuing waiver of any such condition or of the breach of such term or any other term of this Agreement.

10.5 Independent Contractors. The parties agree that the relationship of Harpoon and Werewolf established by this Agreement is that of independent contractors, and this Agreement does not establish an employment, agency or any other relationship between the parties. Except as may be specifically provided herein, neither party shall have any right, power or authority, nor shall they represent themselves as having any authority, to assume, create or incur any expense, liability or obligation, express or implied, on behalf of the other party, or otherwise act as an agent for the other party for any purpose.

10.6 Assignment. Neither party may assign this Agreement or any of such party's rights and obligations hereunder without the prior written consent of the other party, except that this Agreement may be assigned by a party without the other party's consent (i) to an Affiliate of such party or (ii) to its successor in connection with such party's sale of all or substantially all of such party's business or assets to which this Agreement relates (whether by merger, consolidation, stock purchase, asset purchase or otherwise). Any assignment purported or attempted to be made in violation of the terms of this Section 10.6 shall be null and void and of no legal effect.

10.7 Interpretation. Section and subsection headings are inserted for convenience of reference only and do not form a part of this Agreement. Each party acknowledges and agrees that: (a) it and/or its counsel reviewed and negotiated the terms and provisions of this Agreement and has contributed to its revision; and (b) the rule of construction to the effect that any ambiguities are resolved against the drafting party shall not be applied in the interpretation of this Agreement. The definitions of terms herein shall apply equally to the singular and plural forms of the terms defined. Except where otherwise indicated, (i) any definition of or reference to any agreement, instrument or other document herein shall be construed as referring to the agreement, instrument or other document as from time to time amended, supplemented or otherwise modified (subject to any restriction on the amendments, supplements or modifications set forth herein), (ii) any reference herein to any person or entity shall be construed to include, without limitation. the person or entity's successors and assigns, (iii) the words "herein," "hereof," "hereby" and "hereunder," and words of similar import, shall be construed to refer to this Agreement in its entirety and not to any particular provision hereof, (iv) all references herein to Articles, Sections and Exhibits shall be construed to refer to Articles of, Sections of, and Exhibits to this Agreement, each of which Exhibits is incorporated herein by reference, and (v) the words "include", "includes" and "including" shall be deemed to be followed by the phrase "without limitation".

10.8 Severability. If any provision of this Agreement is or becomes in valid or is ruled invalid by any court of competent jurisdiction or is deemed unenforceable, it is the intention of the parties that the remainder of this Agreement shall not be affected.

10.9 Counterparts. The parties may execute this Agreement in multiple counterparts, all of which together shall constitute one and the same instrument. Executed counterparts of this Agreement delivered via facsimile or electronic mail in PDF or similar electronic format shall be deemed binding as originals.

10.10 Governing Law. This Agreement and any dispute arising from the performance or breach hereof will be governed by and construed and enforced in accordance with the laws of the State of California, without reference to the conflicts of laws principles of any jurisdiction.

(*The remainder of this page is intentionally left blank. The signature page follows*.)

The parties have caused this Agreement to be executed by their duly authorized representatives as of the Second Amendment Date.

WEREWOLF THERAPEUTICS, INC.	**HARPOON THERAPEUTICS, INC.**
By: /s/ Daniel J. Hicklin	By: /s/ Gerald McMahon
Name: Daniel J. Hicklin	Name: Gerald McMahon
Title: President & CEO	Title: President and CEO

Exhibit 1.5

[***] Patents

[***] Patents:

[***]

[***] Patents:

[***]		

Exhibit 1.7

Harpoon Assigned Patents

Case	Country	Title	Serial Number	Filing Date	Patent Number
[***]	[***]	[***]	[***]	[***]	[***]
[***]	[***]	[***]	[***]	[***]	[***]
[***]	[***]	[***]	[***]	[***]	[***]
[***]	[***]	[***]	[***]	[***]	[***]
[***]	[***]	[***]	[***]	[***]	[***]
[***]	[***]	[***]	[***]	[***]	[***]
[***]	[***]	[***]	[***]	[***]	[***]
[***]	[***]	[***]	[***]	[***]	[***]
[***]	[***]	[***]	[***]	[***]	[***]
[***]	[***]	[***]	[***]	[***]	[***]
[***]	[***]	[***]	[***]	[***]	[***]

Exhibit 1.8

Harpoon Disclosing Patents

Case	Country	Title	Serial Number	Filing Date	Patent Number
[***]	[***]	[***]	[***]	[***]	[***]
[***]	[***]	[***]	[***]	[***]	[***]
[***]	[***]	[***]	[***]	[***]	[***]
[***]	[***]	[***]	[***]	[***]	[***]
[***]	[***]	[***]	[***]	[***]	[***]
[***]	[***]	[***]	[***]	[***]	[***]
[***]	[***]	[***]	[***]	[***]	[***]
[***]	[***]	[***]	[***]	[***]	[***]
[***]	[***]	[***]	[***]	[***]	[***]
[***]	[***]	[***]	[***]	[***]	[***]
[***]	[***]	[***]	[***]	[***]	[***]
[***]	[***]	[***]	[***]	[***]	[***]
[***]	[***]	[***]	[***]	[***]	[***]
[***]	[***]	[***]	[***]	[***]	[***]

Exhibit 1.9

Harpoon Licensed Patents

Case	Country	Title	Serial Number	Filing Date	Patent Number
[***]	[***]	[***]	[***]	[***]	[***]
[***]	[***]	[***]	[***]	[***]	[***]
[***]	[***]	[***]	[***]	[***]	[***]
[***]	[***]	[***]	[***]	[***]	[***]
[***]	[***]	[***]	[***]	[***]	[***]
[***]	[***]	[***]	[***]	[***]	[***]
[***]	[***]	[***]	[***]	[***]	[***]
[***]	[***]	[***]	[***]	[***]	[***]
[***]	[***]	[***]	[***]	[***]	[***]
[***]	[***]	[***]	[***]	[***]	[***]
[***]	[***]	[***]	[***]	[***]	[***]
[***]	[***]	[***]	[***]	[***]	[***]
[***]	[***]	[***]	[***]	[***]	[***]
[***]	[***]	[***]	[***]	[***]	[***]
[***]	[***]	[***]	[***]	[***]	[***]
[***]	[***]	[***]	[***]	[***]	[***]
[***]	[***]	[***]	[***]	[***]	[***]

Exhibit 1.19

Werewolf Assigned Patents

Case	Country	Title	Serial Number	Filing Date	Patent Number
[***]	[***]	[***]	[***]	[***]	[***]
[***]	[***]	[***]	[***]	[***]	[***]
[***]	[***]	[***]	[***]	[***]	[***]
[***]	[***]	[***]	[***]	[***]	[***]
[***]	[***]	[***]	[***]	[***]	[***]
[***]	[***]	[***]	[***]	[***]	[***]
[***]	[***]	[***]	[***]	[***]	[***]
[***]	[***]	[***]	[***]	[***]	[***]
[***]	[***]	[***]	[***]	[***]	[***]
[***]	[***]	[***]	[***]	[***]	[***]
[***]	[***]	[***]	[***]	[***]	[***]

Exhibit 10.20

HARPOON THERAPEUTICS, INC.

FIFTH AMENDED AND RESTATED CONSULTING AGREEMENT

THIS FIFTH AMENDED AND RESTATED CONSULTING AGREEMENT (this "Agreement") dated as of March 3, 2020 is entered into between Harpoon Therapeutics, Inc., a Delaware corporation (the "Company"), and Patrick Baeuerle (the "Consultant") and amends and restates the Third Amended and Restated Consulting Agreement dated February 1, 2017 between the Company and the Consultant, as amended by the Fourth Amended and Restated Consulting Agreement dated March 5, 2018 between the Company and the Consultant.

INTRODUCTION

The Company desires to retain the services of the Consultant and the Consultant desires to perform certain services for the Company. In consideration of the mutual covenants and promises contained herein and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged by the parties hereto, the parties agree as follows:

1. Services.

1.1 During the Consultation Period (as defined herein), the Consultant agrees to perform, as a Senior Advisor to Company, such consulting, advisory and related services to and for the Company in the Harpoon Consulting Field (as defined herein) as may be reasonably requested from time to time by the Company (the "Services"). Consultant agrees that the Company may, at its discretion, publicize the fact that Consultant is providing Services to the Company by featuring his biography on the Company's website (if any) and in marketing material relating to the Company and/or its affiliates. During the time Consultant is providing Services, he and the Company shall refer to his position as "Senior Advisor". For purposes of this Agreement, "Harpoon Consulting Field" means molecules that bind to an antigen on a T-cell, where "antigen" means any molecule, whether or not foreign to the body.

1.2 The Company acknowledges that the Consultant is concurrently providing consulting services for MPM Asset Management LLC ("MPM"), MPM Oncology Impact Management LP ("OIM") and other portfolio companies affiliated with MPM and OIM (including, without limitation, TCR2 Therapeutics Inc. and Werewolf Therapeutics, Inc.), separate and apart from his Services to the Company. It is understood and agreed that Consultant's Services under this Agreement will be consistent with Consultant's obligations to MPM, OIM and such other MPM and OIM-affiliated portfolio companies; provided, however, that Consultant shall use his reasonable best efforts and all due diligence in performing the Services.

2. Compensation.

2.1 Consulting Fees. The consideration described below in this Section 2.1 constitutes the full consideration for the consulting services to be provided by the Consultant to the Company. Consultant's compensation from Company shall be reviewed on an annual basis.

(a) The Company shall pay to the Consultant consulting fees of Euro 8,333 per month, which shall be payable monthly on the last day of each month in Euros using the conversion rate of USD to Euros at the time of such payment. Consultant shall not be eligible for an annual bonus paid by Company.

2.2 Reimbursement of Expenses. The Company shall reimburse the Consultant for all reasonable and necessary expenses incurred or paid by the Consultant in connection with, or related to, the performance of his services under this Agreement. The Consultant shall submit to the Company itemized monthly statements, in a form satisfactory to the Company, of such expenses incurred in the previous month. The Company shall pay to the Consultant amounts shown on each such statement within 30 days after receipt thereof. Notwithstanding the foregoing, the Consultant shall not incur total expenses in excess of US$1,000 per month without the prior written approval of the Company.

2.3 Benefits. The Consultant shall not be entitled to any benefits, coverages or privileges, including, without limitation, social security, unemployment, medical or pension payments, made available to employees of the Company.

3. Term and Termination.

3.1 This Agreement shall commence upon the date hereof (the "Effective Date") and shall continue until the first anniversary of the Effective Date, after which it shall automatically extend for additional one-year periods (such period, as it may be extended, being referred to as the "Consultation Period"), and unless sooner terminated by either Party in accordance with the provisions of Section 3.2.

3.2 Without limiting any rights which either party to this Agreement may have by reason of any default by the other party as well as any other remedies that may be available at law or in equity), each party reserves the right to terminate this Agreement at its convenience by written notice given to the other party. Such termination shall be effective upon the date not earlier than 30 days following the date of such notice as shall be specified in said notice.

3.3 Sections 3 through 15 hereof shall survive termination or expiration of this Agreement, unless otherwise explicitly provided herein. In addition, termination of this Agreement shall not affect the Company's obligation to pay for services previously performed by the Consultant or expenses reasonably incurred by the Consultant for which the Consultant is entitled to reimbursement under Section 2.2, above.

4. Cooperation. The Consultant shall use his best efforts in the performance of his obligations under this Agreement. The Company shall provide such access to its information and property related to the Harpoon Consulting Field as may be reasonably required in order to permit

the Consultant to perform his obligations hereunder. The Consultant shall cooperate with the Company's personnel, shall not interfere with the conduct of the Company's business and shall observe all rules, regulations and security requirements of the Company concerning the safety of persons and property.

5. Non-Competition. During the Consultation Period, the Consultant shall not, either alone or in association with others, directly or indirectly provide services for other commercial entities that are not affiliated with MPM or provide services for any third party (including MPM and any entities affiliated with MPM) in the Harpoon Consulting Field. Further, the Consultant represents that his consulting arrangement with Maverick Therapeutics, Inc. terminated on May 2019.

6. Inventions and Proprietary Information.

6.1 Inventions. Except for Excluded Inventions and Excluded Joint Patents (each, as defined in Exhibit A), all inventions, discoveries, computer programs, data, technology, designs, innovations and improvements (whether or not patentable and whether or not copyrightable) which are made, conceived, reduced to practice, created, written, designed or developed by the Consultant, solely or jointly with others and whether during normal business hours or otherwise, during the Consultation Period if related to the Harpoon Consulting Field (collectively, "Inventions"), shall be the sole property of the Company. Without limiting the generality of the foregoing, it is understood and agreed that "Inventions" shall include any of the foregoing inventions, discoveries, computer programs, data, technology, designs, innovations and improvements that arise from the Consultant's performance of services for the Company or from the use of the Company's Proprietary Information, but in any event shall not include any Excluded Inventions or Excluded Joint Patents. The Consultant hereby assigns and agrees to assign to the Company all Inventions and any and all related patents, copyrights, trademarks, trade names, and other industrial and intellectual property rights and applications therefor, in the United States and elsewhere and appoints any officer of the Company as his duly authorized attorney to execute, file, prosecute and protect the same before any government agency, court or authority. Upon the request of the Company and at the Company's expense, the Consultant shall execute such further assignments, documents and other instruments as may be necessary or desirable to fully and completely assign all Inventions to the Company and to assist the Company in applying for, obtaining and enforcing patents or copyrights or other rights in the United States and in any foreign country with respect to any Invention. The Consultant also hereby waives all claims to moral rights in any Inventions.

6.2 Proprietary Information.

(a) The Consultant acknowledges that his relationship with the Company is one of high trust and confidence and that in the course of his service to the Company he will have access to and contact with Proprietary Information. The Consultant agrees that he will not, during the Consultation Period or at any time thereafter, disclose to others, or use for his benefit or the benefit of others, any Proprietary Information or Invention.

(b) For purposes of this Agreement, "Proprietary Information" shall mean, by way of illustration and not limitation, all information (whether or not patentable and whether or not copyrightable) owned, possessed or used by the Company, including, without limitation, any Invention, formula, vendor information, customer information, apparatus, equipment, trade secret, process, research, report, technical data, know-how, computer program, software, software documentation, hardware design, technology, marketing or business plan, forecast, unpublished financial statement, budget, license, price, cost and employee list that is communicated to, learned of, developed or otherwise acquired by the Consultant in the course of his service as a consultant to the Company under this Agreement or any prior agreement between the parties.

(c) The Consultant's obligations under this Section 6.2 shall not apply to any information that (i) is or becomes known to the general public under circumstances involving no breach by the Consultant or others of the terms of this Section 6.2, (ii) is generally disclosed to third parties by the Company without restriction on such third parties, or (iii) is approved for release by written authorization of the Board of Directors of the Company.

(d) Upon termination of this Agreement or at any other time upon request by the Company, the Consultant shall promptly deliver to the Company all records, files, memoranda, notes, designs, data, reports, price lists, customer lists, drawings, plans, computer programs, software, software documentation, sketches, laboratory and research notebooks and other documents (and all copies or reproductions of such materials) relating to the business of the Company (except for any such items within the scope of Excluded Inventions and Excluded Joint Patents).

(e) The Consultant represents that his retention as a consultant with the Company and his performance under this Agreement does not, and shall not, breach any agreement that obligates him to keep in confidence any trade secrets or confidential or proprietary information of his or of any other party or to refrain from competing, directly or indirectly, with the business of any other party. The Consultant shall not disclose to the Company any trade secrets or confidential or proprietary information of any other party.

(f) For purposes of this Section 6.2, the term Invention shall be deemed to include any invention or other intellectual property right assigned by the Consultant to the Company under any prior agreement between the parties.

6.3 Remedies. The Consultant acknowledges that any breach of the provisions of this Section 6 shall result in serious and irreparable injury to the Company for which the Company cannot be adequately compensated by monetary damages alone. The Consultant agrees, therefore, that, in addition to any other remedy it may have, the Company shall be entitled to enforce the specific performance of this Agreement by the Consultant and to seek both temporary and permanent injunctive relief (to the extent permitted by law) without the necessity of proving actual damages.

6.4 Segregation. Consultant agrees to use his best efforts: (A) to segregate the Services performed under this Agreement from Consultant's work done for any third party so as to minimize any questions of disclosure of, or rights under, any inventions; (B) to notify the Chief

Executive Officer or the Board of Directors of Company in writing if at any time Consultant believes that such questions may result from his performance under this Agreement; and (C) to assist Company in fairly resolving any questions in this regard which may arise. The Services performed hereunder will not be conducted on time that is required to be devoted to any other third party. Consultant shall not use the funding, resources and facilities of any other third party, without the prior written consent of Company, to perform Services hereunder and shall not perform the Services hereunder in any manner that would give any third party rights or access to any work product of such Services.

6.5 No License. Nothing in this Agreement is intended to grant any rights to Consultant under any patent or copyright of Company, nor shall this Agreement grant Consultant any rights in or to Proprietary Information except as expressly set forth in this Agreement.

7. Defense and Indemnification. The Company agrees, at its sole expense, to defend Consultant against, and to indemnify and hold Consultant harmless from, any liability, claim, judgment, cost, expense, damage, deficiency, loss, or obligation, of any kind or nature (including without limitation reasonable attorneys' fees and other costs and expenses of defense) relating to a claim or suit by a third party against Consultant, either arising from this Agreement, the Consultant's performance of services for the Company under this Agreement, or any Company products or services which result from the Consultant's performance of services under this Agreement.

8. Independent Contractor Status. The Consultant shall perform all services under this Agreement as an "independent contractor" and not as an employee or agent of the Company. Consultant is free to determine the time and place of the Services to be provided under this Agreement. Consultant warrants to perform his obligations under this Agreement with the usual standard of diligence but does not guarantee the achievement of any specific commercial objectives. The Consultant is not authorized to assume or create any obligation or responsibility, express or implied, on behalf of, or in the name of, the Company or to bind the Company in any manner.

9. Notices. All notices required or permitted under this Agreement shall be in writing and shall be deemed effective upon personal delivery or upon deposit in the United States Post Office, by registered or certified mail, postage prepaid, addressed to the other party at the address shown above, or at such other address or addresses as either party shall designate to the other in accordance with this Section 9.

10. Pronouns. Whenever the context may require, any pronouns used in this Agreement shall include the corresponding masculine, feminine or neuter forms, and the singular forms of nouns and pronouns shall include the plural, and vice versa.

11. Entire Agreement. This Agreement constitutes the entire agreement between the parties and supersedes all prior agreements and understandings, whether written or oral, relating to the subject matter of this Agreement. For clarity, however, the parties agree and acknowledge that this Agreement does not terminate any assignment by the Consultant to the Company of any invention or other intellectual property right made prior to the Effective Date pursuant to any prior agreement between the parties.

12. Amendment. This Agreement may be amended or modified only by a written instrument executed by both the Company and the Consultant.

13. Governing Law. This Agreement shall be construed, interpreted and enforced in accordance with the laws of the Commonwealth of Massachusetts.

14. Successors and Assigns. This Agreement shall be binding upon, and inure to the benefit of, both parties and their respective successors and assigns, including any corporation with which, or into which, the Company may be merged or which may succeed to its assets or business, provided, however, that the obligations of the Consultant are personal and shall not be assigned by him.

15. Miscellaneous.

15.1 No delay or omission by the Company in exercising any right under this Agreement shall operate as a waiver of that or any other right. A waiver or consent given by the Company on any one occasion shall be effective only in that instance and shall not be construed as a bar or waiver of any right on any other occasion.

15.2 The captions of the sections of this Agreement are for convenience of reference only and in no way define, limit or affect the scope or substance of any section of this Agreement.

15.3 In the event that any provision of this Agreement shall be invalid, illegal or otherwise unenforceable, the validity, legality and enforceability of the remaining provisions shall in no way be affected or impaired thereby.

(signature page follows)

IN WITNESS WHEREOF, the parties hereto have executed this Agreement as of the day and year set forth above,

HARPOON THERAPEUTICS, INC.

By: /s/ Gerald McMahon

Gerald McMahon, PhD

Title: CEO & President

CONSULTANT

By: /s/ Patrick Baeuerle

Patrick Baeuerle, PhD

Exhibit A

Excluded Inventions and Excluded Joint Patents

“Excluded Inventions” means any information (including, without limitation, business plans and/or business information), technology, know-how, materials, notes, records, designs, ideas, inventions, improvements, devices, developments, discoveries, compositions, trade secrets, processes, methods and/or techniques, whether or not patentable or copyrightable, that are made by Consultant alone or jointly with others in the course of performing services for an Excluded Company, in each case to the extent, and only to the extent, such item is applicable within an Excluded Field and assigned to an Excluded Company pursuant to a written consulting agreement in place prior to and as of the time such invention or other item is first made. To the extent any such invention or other item is applicable or useful outside any Excluded Field, then to that extent, it shall not be deemed an Excluded Invention. It is understood, however, that Excluded Joint Patents (defined below) are not so limited to an Excluded Field.

“Excluded Joint Patents” means any patent rights to which Consultant becomes a joint inventor with respect to a patentable invention conceived jointly by Consultant with one or more employees of an Excluded Company directly in the course of performing services for such Excluded Company, to the extent that: (a) the inventive contribution of the Excluded Company employee(s) is not separable from that of Consultant and (b) the same is assigned to such Excluded Company pursuant to a written consulting agreement in place prior to and as of the time such invention is first conceived.

For purposes of the foregoing:

- “Antigen” means any molecule, whether or not foreign to the body.
- “Excluded Company” means each of TCR2 Therapeutics Inc. and Werewolf Therapeutics, Inc.
- “Excluded Field” means each of the TCR2 Field and the Werewolf Field.
- “Cytokine” means any chemokine, interferon, interleukin, lymphokine or growth factor.
- “TCR2 Field” means T-cells comprising a complete T-cell receptor (TCR) complex, in which at least one of the six subunits of the TCR is fused to a tumor Antigen binder that binds to the tumor Antigen in an HLA-independent fashion.
- “Werewolf Field” means molecules comprising a Cytokine, and such molecules may include one or more other elements that is (a) an antibody, (b) an immunoglobulin, (c) part of the immunoglobulin superfamily, or (d) a fragment of (a) through (c). For clarity, the Werewolf Field excludes molecules that do not comprise a Cytokine, but which do comprise an immunoglobulin-based Cytokine binding domain.

Exhibit 23.1

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in the Registration Statement (Form S-8 No. 333-229592) pertaining to the 2015 Equity Incentive Plan, the 2019 Equity Incentive Plan and the 2019 Employee Stock Purchase Plan of Harpoon Therapeutics, Inc. of our report dated March 12, 2020 with respect to the financial statements of Harpoon Therapeutics, Inc., included in this Annual Report (Form 10-K) for the year ended December 31, 2019.

/s/ Ernst & Young LLP

Redwood City, California
March 12, 2020

Exhibit 31.1

CERTIFICATION PURSUANT TO
RULES 13a-14(a) AND 15d-14(a) UNDER THE SECURITIES EXCHANGE ACT OF 1934,
AS ADOPTED PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Gerald McMahon, certify that:

1. I have reviewed this annual report on Form 10-K of Harpoon 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: March 12, 2020

By: /s/ Gerald McMahon, Ph.D.

Gerald McMahon, Ph.D.
President and Chief Executive Officer
(Principal Executive Officer)

Exhibit 31.2

CERTIFICATION PURSUANT TO
RULES 13a-14(a) AND 15d-14(a) UNDER THE SECURITIES EXCHANGE ACT OF 1934,
AS ADOPTED PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Georgia Erbez, certify that:

1. I have reviewed this annual report on Form 10-K of Harpoon 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: March 12, 2020

By: /s/ Georgia Erbez

Georgia Erbez
Chief Financial Officer
(Principal Financial Officer)

Exhibit 32.1

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

Pursuant to the requirement set forth in Rule 13a-14(b) of the Securities Exchange Act of 1934, as amended, (the "Exchange Act") and Section 1350 of Chapter 63 of Title 18 of the United States Code (18 U.S.C. §1350), Gerald McMahon, President and Chief Executive Officer of Harpoon Therapeutics, Inc. (the "Company"), and Georgia Erbez, Chief Financial Officer of the Company, each hereby certifies that, to the best of his or her knowledge:

1. The Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2019, to which this Certification is attached as Exhibit 32.1 (the "Annual Report"), fully complies with the requirements of Section 13(a) or Section 15(d) of the Exchange Act; and

2. The information contained in the Annual Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Dated: March 12, 2020

IN WITNESS WHEREOF, the undersigned have set their hands hereto as of the 12th day of March, 2020.

Date: March 12, 2020 By: /s/ Gerald McMahon, Ph.D.
Gerald McMahon, Ph.D.
President and Chief Executive Officer

Date: March 12, 2020 By: /s/ Georgia Erbez
Georgia Erbez
Chief Financial Officer