

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, 2014

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

For the transition period from _____ to _____

Commission file number: 001-34207

Dynavax Technologies Corporation

(Exact name of registrant as specified in its charter)

Delaware

(State or other jurisdiction of
incorporation or organization)

33-0728374

(IRS Employer
Identification No.)

2929 Seventh Street, Suite 100

Berkeley, CA 94710-2753

(510) 848-5100

(Address, including Zip Code, and telephone number, including area code, of the registrant's principal executive offices)

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

Title of Each Class:

Common Stock, \$0.001 Par Value
Preferred Shares Purchase Rights

Name of Each Exchange on Which Registered:

The NASDAQ Stock Market LLC

Securities Registered Pursuant to Section 12(g) of the Act:

None

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

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

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

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registration was required to submit and post such files). Yes No

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

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

Large accelerated filer

Accelerated filer

Non-accelerated filer

Smaller reporting company

(Do not check if a smaller reporting company)

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

The aggregate market value of the voting and non-voting stock held by non-affiliates of the registrant, based upon the closing sale price of the common stock on June 30, 2014 as reported on the NASDAQ Capital Market, was approximately \$267,344,912. Shares of common stock held by each officer and director and by each person known to the Company who owns 5% or more of the outstanding common stock have been excluded in that such persons may be deemed to be affiliates. This determination of affiliate status is not necessarily a conclusive determination for other purposes.

As of March 3, 2015, the registrant had outstanding 28,914,954 shares of common stock.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the Definitive Proxy Statement for the registrant's 2015 Annual Meeting of Stockholders are incorporated by reference into Part III, Items 10-14 of this Form 10-K. The Definitive Proxy Statement will be filed no later than 120 days after the close of the registrant's fiscal year ended December 31, 2014.

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FORWARD-LOOKING STATEMENTS

This Annual Report on Form 10-K contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934 which are subject to a number of risks and uncertainties. All statements that are not historical facts are forward-looking statements, including statements about our ability to successfully develop and achieve regulatory approval for HEPLISAV-B™, our business and collaboration strategy, our intellectual property position, our product development efforts, our ability to commercialize our product candidates, our ability to manufacture commercial supply and meet regulatory requirements, the timing of the introduction of our products, uncertainty regarding our capital needs and future operating results and profitability, anticipated sources of funds as well as our plans, objectives, expectations and intentions. These statements appear throughout our document and can be identified by the use of forward-looking language such as “may,” “will,” “should,” “expect,” “plan,” “anticipate,” “believe,” “estimate,” “predict,” “future,” or “intend,” or the negative of these terms or other variations or comparable terminology.

Actual results may vary materially from those in our forward-looking statements as a result of various factors that are identified in “Item 1A—Risk Factors” and “Item 7—Management’s Discussion and Analysis of Financial Condition and Results of Operations” and elsewhere in this document. No assurance can be given that the risk factors described in this Annual Report on Form 10-K are all of the factors that could cause actual results to vary materially from the forward-looking statements. All forward-looking statements speak only as of the date of this Annual Report on Form 10-K. Readers should not place undue reliance on these forward-looking statements and are cautioned that any such forward-looking statements are not guarantees of future performance. We assume no obligation to update any forward-looking statements.

This Annual Report on Form 10-K includes trademarks and registered trademarks of Dynavax Technologies Corporation. Products or service names of other companies mentioned in this Annual Report on Form 10-K may be trademarks or registered trademarks of their respective owners.

PART I

ITEM 1. BUSINESS

OVERVIEW

Dynavax Technologies Corporation (“we,” “our,” “us,” “Dynavax” or the “Company”), is a clinical-stage biopharmaceutical company that uses toll-like receptor (“TLR”) biology to discover and develop novel vaccines and therapeutics. Our development programs are organized under our three areas of focus: vaccine adjuvants, cancer immunotherapy, and autoimmune and inflammatory diseases.

THE COMPANY AND BACKGROUND

We were incorporated in California in August 1996 under the name Double Helix Corporation, and we changed our name to Dynavax Technologies Corporation in September 1996. We reincorporated in Delaware in 2000. Dynavax Technologies Corporation is listed on the NASDAQ Capital Market under the ticker symbol “DVAX.”

Our principal executive offices are located at 2929 Seventh Street, Suite 100, Berkeley, California, 94710-2753. Our telephone number is (510) 848-5100. We make available, free of charge on our website located at www.dynavax.com, our annual report on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, and any amendments to those reports, as soon as reasonably practicable after filing such reports with the Securities and Exchange Commission. Our code of conduct, audit committee charter, nominating and corporate governance committee charter, compensation committee charter and audit committee complaint procedures are also posted on our website and are each available in print to any stockholder upon request by writing to: 2929 Seventh Street, Suite 100, Berkeley, California 94710-2753. The contents of our website are not incorporated by reference into this report.

OUR TECHNOLOGY

Toll-like Receptor Immune Modulation Platform

TLRs are a family of transmembrane proteins that play a vital role in innate immunity and subsequent adaptive immunity. These receptors are activated by the binding of certain pathogens and other ligands and their activity is essential to generation of innate immunity. Dynavax research is focused primarily on modulation of endosomal TLRs.

There are several key features of endosomal TLRs that make them promising targets for prophylactic and therapeutic use. They are located within well-defined subsets of immune cells, including dendritic cells and B cells. Such targeting may limit the broader immune system stimulation that accompanies many other immunostimulatory agents.

The output of our technology platform to date comprises synthetic oligonucleotides (short segments of DNA) and small molecule agonists and inhibitors of TLRs 7, 8 and 9. The individual sequences and molecules are selected for distinct therapeutic uses based on several factors. Individual molecules are capable of targeting and thereby inhibiting or stimulating an individual TLR or combinations of them and the intensity of stimulation or inhibition can vary greatly. Different molecules that stimulate the same TLR can activate different signaling pathways producing distinct biological responses.

The presence of antigens during TLR stimulation is central to the development of long-term, pathogen-specific adaptive immune responses. Depending on the application, requisite antigens may be co-administered with an agonist or may already be present in the body.

Development Programs

Our pipeline of product candidates includes the following. Each clinical stage program is discussed in further detail below.

<u>Product Candidate</u>	<u>Clinical Indication(s)</u>	<u>Phase</u>
HEPLISAV-B	Hepatitis B prevention	Phase 3
SD-101	Cancer immunotherapy	Phase 1/2
AZD1419	Asthma Disease Modification	Phase 2 Planning
DV1179	Autoimmune Disease	Phase 1
DV230-Nanoparticle	Second Generation Adjuvant	Preclinical

(1) Vaccine Adjuvants

Our vaccine research has focused on the use of TLR9 agonists as novel adjuvants. Different TLR9 agonist molecules are taken up within different endosomes within target cells, stimulating different signaling pathways. CpG B-Class TLR9 agonists, such as our 1018 vaccine adjuvant, are selectively taken up by late endosomes (more mature endosomes also known as multivesicular bodies), resulting in signaling that leads to release of cytokines necessary for T cell activation and establishing long-term immunity but with modest induction of interferon alpha. TLR9 stimulation also helps generate memory T Helper 1 (“Th1”) cells that can stimulate the immune system to induce long-lasting effects. As a result, TLR9 adjuvanted vaccines induce a specific Th1 immune response and durable levels of protective antibodies.

HEPLISAV-B

Our lead vaccine product candidate is HEPLISAV-B™ (previously known as “HEPLISAV”), an investigational adult hepatitis B vaccine in Phase 3 clinical development. HEPLISAV-B combines 1018, a proprietary TLR9 agonist adjuvant, and recombinant hepatitis B surface antigen (“rHBsAg” or “HBsAg”) manufactured at our wholly-owned subsidiary in Düsseldorf, Germany (“Rhein” or “Dynavax Europe”). In Phase 3 trials, HEPLISAV-B demonstrated earlier protection with fewer doses than currently-licensed vaccines and an adverse event profile similar to a licensed hepatitis B vaccine. Based on those data, we submitted a Biologics License Application (“BLA”) to the U.S. Food and Drug Administration (“FDA”) in 2012. In 2013 the FDA issued a Complete Response Letter (“CRL”) indicating that it would not approve the BLA primarily because hypothetical risks of the novel adjuvant warranted a larger safety database to assess the possibility of rare autoimmune side effects.

In April, 2014 we initiated HBV-23, a clinical trial that will add more than 5,500 additional subjects to the HEPLISAV-B safety database. HBV-23 is a Phase 3, observer-blinded, randomized, active-controlled, multicenter trial of the safety and immunogenicity of HEPLISAV-B compared with Engerix-B in adults 18 to 70 years of age. HEPLISAV-B subjects receive two doses at 0 and 1 month and Engerix-B subjects receive three doses at 0, 1 and 6 months.

The primary objectives of HBV-23 are: (1) to evaluate the overall safety of HEPLISAV-B with respect to clinically significant adverse events; and (2) to demonstrate the noninferiority of the peak seroprotection rate ("SPR") induced by HEPLISAV-B compared to GlaxoSmithKline's ("GSK") Engerix-B in subjects with type 2 diabetes mellitus. HEPLISAV-B subjects will be evaluated for safety for one year following the second dose, all potential autoimmune events will be adjudicated by a Safety Evaluation and Adjudication Committee and safety will be monitored by a Data and Safety Monitoring Board ("DSMB").

HBV-23 was fully enrolled in September 2014, with more than 8,250 subjects (more than 5,500 with HEPLISAV-B and more than 2,750 with active control), including more than 1,100 with type 2 diabetes mellitus. The first and second of three prespecified independent DSMB meetings occurred in October 2014 and February 2015. Following both meetings, the DSMB recommended that the study continue unchanged. We expect follow-up for the last patients to be complete in approximately October 2015.

In the first quarter of 2016, we intend to submit to FDA our revised BLA with answers to all questions raised in the CRL and that submission is expected to be assigned a 6-month Prescription Drug User Fee Act (PDUFA) review period. If this timing is correct and HEPLISAV-B is approved, we expect to launch the product in the fourth quarter of 2016.

HEPLISAV-B Commercial Opportunity

Dynavax has worldwide commercial rights to HEPLISAV-B. We estimate the total worldwide market for adult hepatitis B vaccines is approximately \$680 million annually. This market primarily comprises GSK's Engerix-B and Twinrix® as well as Merck & Co.'s ("Merck") Recombivax-HB®. Key market segments consisting of persons considered to be at high risk for hepatitis B virus ("HBV") infection include people with multiple sexual partners or injection drug use, healthcare workers and first responders, international travelers, chronic liver disease patients and, in the U.S., people with diabetes mellitus (type 1 and type 2).

We intend to focus our initial commercialization efforts on the U.S. market. Currently, the U.S. market for adult hepatitis B vaccines is approximately \$270 million annually. In late 2012 the Advisory Committee on Immunization Practices ("ACIP") expanded its recommendation for adults who should be vaccinated against hepatitis B to include people with diabetes mellitus (type 1 and type 2). According to the Centers for Disease Control and Prevention ("CDC") there are 20 million adults diagnosed with diabetes and another 1.5 million new cases diagnosed each year. This population represents a significant increase in the number of adults recommended for vaccination against hepatitis B in the U.S.

Because adult vaccination in the U.S. is largely restricted to specific settings such as occupational health, travel, military, and correctional facilities, we intend to commercialize independently in this market with a limited, specialized commercial team.

(2) Cancer Immunotherapy

Through our expertise in TLR biology we have designed compounds that stimulate multiple innate mechanisms of tumor killing along with developing immune memory associated with antigens found in tumors. Our TLR agonists were specifically designed to stimulate multiple pathways of tumor killing through type 1 interferon induction and highly efficient stimulation of antigen presenting functions of plasmacytoid dendritic cells ("PDC").

Our lead cancer immunotherapy candidate is SD-101, a C Class CpG TLR9 agonist that was selected for characteristics optimal for treatment of cancer, including high interferon induction. Directly injecting SD-101 into a tumor site optimizes its effect by ensuring proximity to tumor-specific antigens. In animal models, SD-101 demonstrated significant anti-tumor effects at both the injected site and at distant sites. Two Phase 1 clinical studies of SD-101 have been completed, establishing that it is safe and well-tolerated at a range of doses far exceeding the expected therapeutic level for oncology uses.

As a result, we have begun a clinical program intended to assess preliminary efficacy of SD-101 in a range of tumors and in combination with a range of treatments. In October 2014, we initiated a Phase 1/2 clinical trial to assess the safety and preliminary efficacy of SD-101 in adults with untreated low-grade B-cell lymphoma. In this multicenter study (known as LYM-01), SD-101 is administered intratumorally in combination with localized low-dose radiation. The open-label, dose escalation and expansion design of LYM-01 is intended to accelerate dose optimization while simultaneously assessing the safety, tolerability and initial local and distant antitumor activity of SD-101.

(3) Autoimmune and Inflammatory Diseases

We also have several clinical and preclinical programs focused on therapeutics for autoimmune and inflammatory diseases.

AZD1419 for Asthma

Our most advanced inflammatory disease candidate is AZD1419, which is partnered with AstraZeneca AB (“AstraZeneca”). AZD1419 is designed to change the basic immune response to environmental allergens, such as house dust and pollens, leading to prolonged reduction in asthma symptoms by converting the response from one primarily mediated by type-2 helper T cells (“Th2”) to type-1 helper T cells (“Th1”).

A Phase 1a study of AZD1419 demonstrated its safety and tolerability in healthy subjects. It also produced dose-dependent induction of genes by endogenous interferon, as measured in sputum, indicating presence of the drug at the target site and expected activity. On the basis of those results, the decision was made to bypass a planned Phase 1b trial and proceed directly to Phase 2. We are currently working with AstraZeneca to design the new trial, which AstraZeneca will fully fund and we will conduct, beginning in the second half of 2015.

Under our September 2006 Research Collaboration and License Agreement with AstraZeneca, a milestone payment is payable to us on initiation of the Phase 2 trial. Remaining potential milestone payments to us total approximately \$100 million. In addition, we will receive royalties on worldwide sales of any approved products resulting from the collaboration and will have the opportunity to co-promote in the United States.

TLR Inhibitors

There is also strong rationale for the use of TLR inhibitors to treat autoimmune disease. These conditions arise from dysfunction in the innate immune system resulting in the body seeing its own cells and tissues as pathogens and attacking them. Various autoimmune diseases are characterized by over-stimulation of endosomal TLRs.

Promising programs based on this science include DV1179, our TLR7/9 inhibitor for autoimmune or inflammatory conditions. In three Phase 1 clinical studies in both healthy subjects and patients with an autoimmune disease, DV1179 was safe and well tolerated at a range of doses with up to 8 weekly injections. In a Phase 2 study in systemic lupus, DV1179 did not meet prespecified pharmacodynamic endpoints related to reduction in interferon alpha-regulated genes. Following conclusion of the study, our collaborator on this program, GSK, declined its option to license DV1179. Data from the lupus trial and our preclinical work suggest that DV1179 was active but did not achieve systemic bioavailability at the levels necessary to reach all of the diverse body systems impacted by lupus. Therefore, we believe that DV1179 remains an important therapeutic candidate in autoimmune and inflammatory indications that do not require systemic bioavailability. Potential applications include autoimmune pancreatitis, nonalcoholic steatohepatitis (“NASH”) and autoimmune skin diseases such as scleroderma and dermatomyositis. We are currently assessing plans for potential next steps for DV1179 as our product candidate.

INTELLECTUAL PROPERTY

Our commercial success depends in part on our ability to obtain and maintain proprietary protection for our drug candidates, technology and know-how, to operate without infringing the proprietary rights of others and to prevent others from infringing our proprietary rights. In addition to seeking patent protection in the U.S., we generally file patent applications in Australia, Canada, Japan, Western European countries and additional foreign countries on a selective basis to further protect the inventions that we or our partners consider important to the development of our business. We also rely on trade secrets and contracts to protect our proprietary information.

As of December 31, 2014, our intellectual property portfolio included over 30 issued U.S. patents, over 250 issued or granted foreign patents and over 50 additional pending U.S. and foreign patent applications claiming compositions and formulations of TLR agonist and inhibitors, their methods of use or processes for their manufacture. We also have exclusive licenses under two agreements to several patents and applications owned by the Regents of the University of California.

We have an issued U.S. patent covering the TLR agonist contained in our HEPLISAV-B investigational vaccine that will expire in 2018, and have corresponding issued patents in several major European and other countries. We own or have an exclusive license to U.S. and foreign patents and patent applications pending for each of our other product candidates and/or their uses. At present, it is not known or determinable whether patents will issue from any of these applications or what the specific expiration dates would be for any patents that do issue.

Individual patents extend for varying periods depending on the date of filing of the patent application or the date of patent issuance and the legal term of patents in the countries in which they are obtained. Generally, patents issued in the U.S. are effective for:

- the longer of 17 years from the issue date or 20 years from the earliest effective filing date, if the patent application was filed prior to June 8, 1995; and
- 20 years from the earliest effective filing date, if the patent application was filed on or after June 8, 1995.

In addition, in certain instances, a patent term can be extended to recapture a portion of the term effectively lost as a result of the FDA regulatory review period. The duration of foreign patents varies in accordance with provisions of applicable local law, but typically is 20 years from the earliest effective filing date. Our patent estate, based on patents existing now and expected by us to issue based on pending applications, will expire on dates ranging from 2017 to 2033.

The actual protection afforded by a patent varies on a product-by-product basis, from country-to-country and depends upon many factors, including the type of patent, the scope of its coverage, the availability of regulatory related extensions, the availability of legal remedies in a particular country and the validity and enforceability of the patents.

Because patent applications in the U.S. and many foreign jurisdictions typically are not published until 18 months after filing and publications of discoveries in the scientific literature often lag behind actual discoveries, we cannot be certain that we were the first to make the inventions claimed in each of our issued patents or pending patent applications or that we were the first to invent and/or the first to file for protection of the inventions set forth in these patent applications. The U.S. Patent and Trademark Office ("PTO") may declare interference proceedings to determine the priority of inventions with respect to our patent applications and those of other parties or reexamination or reissue proceedings to determine if the scope of a patent should be narrowed.

Our commercial success depends significantly on our ability to operate without infringing patents and proprietary rights of third parties. A number of pharmaceutical companies and biotechnology companies, including Pfizer, Inc. ("Pfizer"), as well as universities and research institutions, may have filed patent applications or may have been granted patents that cover inventions similar to the inventions owned or licensed to us. We cannot determine with certainty whether patents or patent applications of other parties may materially affect our ability to make, use or sell any products. If another party controls patents or patent applications covering our products, we may not be able to obtain the rights we need to those patents or patent applications in order to commercialize our products. Two of our potential competitors, Merck and GSK, are exclusive licensees of broad patents covering recombinant HBsAg, a component of HEPLISAV-B. In addition, the Institut Pasteur owns or has exclusive licenses to patents covering HBsAg. While some of these patents have expired or will soon expire outside the U.S., they remain in force in the U.S. To the extent we are able to commercialize HEPLISAV-B in the U.S. while these patents remain in force, Merck, GSK, their licensors or the Institut Pasteur may bring claims against us.

Litigation may be necessary to enforce patents issued or licensed to us or to determine the scope or validity of another party's proprietary rights. The existence of third-party patent applications and patents could significantly reduce the coverage of the patents owned by or licensed to us and limit our ability to obtain meaningful patent protection. For example, Pfizer has issued U.S. and foreign patent claims as well as patent claims pending with the PTO and foreign patent offices that, if held to be valid, could require us to obtain a license in order to commercialize one or more of our formulations of TLR agonist other than with respect to HEPLISAV-B, for which we have a license. Litigation or any other proceedings, such as patent interferences, could result in substantial costs to and diversion of effort by us, and an adverse outcome in a court or patent office could subject us to significant liabilities, require disputed rights to be licensed from other parties, or require us to cease using some of our technology. We may not prevail in these actions or proceedings, if any.

In addition, other parties may duplicate, design around or independently develop similar or alternative technologies to ours or our licensors.

We may rely, in some circumstances, on trade secrets and confidentiality agreements to protect our technology. Although trade secrets are difficult to protect, wherever possible, we use confidential disclosure agreements to protect the proprietary nature of our technology. Our policy is to require each of our commercial partners, employees, consultants and advisors to enter into an agreement before beginning their employment, consulting or advisory relationship with us that in general provides that the individuals must keep confidential and not disclose to other parties any of our confidential information developed or learned by the individuals during the course of their relationship with us except in limited circumstances. These agreements also generally provide that we own all inventions conceived by the individuals in the course of rendering their employment or services to us. However, there can be no assurance that these agreements will not be breached, that we will have adequate remedies for any breach, or that our trade secrets and/or proprietary information will not otherwise become known or be independently discovered by competitors. To the extent that our employees, consultants or contractors use intellectual property owned by others in their work for us, disputes may also arise as to the rights in related or resulting know-how and inventions.

Under the terms of our license agreements with the Regents of the University of California, we are required to pay license fees, make milestone payments, share a portion of fees from third party partnerships up to a specified amount and pay low single-digit royalties on net sales resulting from successful products originating from the licensed technologies. To date, we have paid the University of California a total of \$2.0 million in license fees and shared third party partnership fees and milestone payments under these agreements. We estimate the total potential milestone payments payable for each such product will total approximately \$3.1 million, not including royalties. We may terminate these agreements in whole or in part on 60 days advance notice. The Regents of the University of California may terminate these agreements if we are in breach for failure to make payments, meet diligence requirements, produce required reports or fund internal research and we do not cure such breach within 60 days after being notified of

the breach. Otherwise, the agreements generally continue in effect until the last patent claiming a product licensed under the agreement or its manufacture or use expires, or in the absence of patents, until the date the last patent application claiming a licensed product is abandoned.

COMPETITION

The biotechnology and pharmaceutical industries are characterized by rapidly advancing technologies, intense competition and a strong emphasis on proprietary products. Our products and development programs target a number of areas, including vaccine adjuvants, cancer immunotherapy and autoimmune and inflammatory diseases. There are many commercially available products for the prevention and treatment of these diseases. Many companies and institutions are making substantial investments in developing additional products to treat these diseases that could compete directly or indirectly with our products under development.

HEPLISAV-B, a two-dose hepatitis B vaccine, if approved and commercialized, will compete directly with conventional three-dose marketed vaccines produced by GSK and Merck, among others. There are also modified schedules of conventional hepatitis B vaccines for limited age ranges that are approved in the European Union and U.S. In addition, HEPLISAV-B will compete against a multivalent vaccine produced by GSK that simultaneously protect against hepatitis B and hepatitis A.

Our cancer immunotherapy, SD-101, if developed, approved and commercialized will compete with a range of therapies being used or studied to treat blood cancers and solid tumor malignancies, including:

- Chemotherapeutic agents;
- Immuno-oncology agents, including immune checkpoint inhibitors such as anti-CTLA4 and anti-PD1 antibodies; and
- Targeted therapies, such as BRAF inhibitors and MEK inhibitors.

Approved and late-stage investigational cancer immunotherapeutics are marketed or being developed by numerous companies, including AstraZeneca/MedImmune, Bristol-Myers Squibb, Celgene, Gilead, Roche/Genentech, and Merck.

Our asthma therapy, AZD1419, if developed, approved and commercialized, will compete indirectly with existing asthma therapies, such as inhaled beta-agonists, corticosteroids, leukotriene inhibitors and IgE monoclonal antibodies, including those marketed by Merck, Roche/Genentech, Novartis International AG, AstraZeneca and GSK. In addition, directly competing products may be in development by Sanofi-Aventis and Idera Pharmaceuticals.

Many of the entities developing and marketing these competing products have significantly greater financial resources and expertise in research and development, manufacturing, preclinical testing, conducting clinical trials, obtaining regulatory approvals and marketing than we do. Smaller or early-stage companies may also prove to be significant competitors, particularly through collaborative agreements with large, established companies with access to capital. These entities may also compete with us in recruiting and retaining qualified scientific and management personnel, as well as in acquiring technologies complementary to or necessary for our programs.

REGULATORY CONSIDERATIONS

In the U.S., pharmaceutical and biological products are subject to rigorous review and approval by the FDA under the Federal Food, Drug, and Cosmetic Act, the Public Health Service Act and other federal statutes and regulations. In Europe, under the centralized procedure, a company submits a single application to the European Medicines Agency ("EMA"). The steps ordinarily required by the regulatory authorities before a new drug or biological product may be marketed in the U.S. and in most other countries include but are not limited to the following:

- completion of preclinical laboratory tests, preclinical studies and formulation studies;
- submission to the regulatory authority of a clinical application for a new drug or biologic which must become effective before clinical trials may begin;
- performance of adequate and well-controlled human clinical trials to establish the safety and efficacy of the drug or biologic for each proposed indication;
- demonstration of the consistent manufacturing of drug substance and drug product;
- the submission of a new drug application to the regulatory authority; and
- regulatory review and approval of the application before any commercial marketing, sale or shipment of the drug or biologic.

If applicable requirements are not met, regulatory authorities may issue fines, require that a company recall its products, seize products, require that a company totally or partially suspend the production of its products, refuse to approve a marketing application, pursue criminal prosecution and/or revoke previously granted marketing authorizations.

To secure regulatory authority approval, we must submit extensive non-clinical and clinical data, adequate evidence of a product manufactured by a well-controlled process that is safe and effective for its intended use, and other supporting information to the regulatory authority. The number of preclinical studies and clinical trials that will be required for FDA and foreign regulatory agency approvals varies depending on the product candidate, the disease or condition for which the product candidate is in development and regulations applicable to any particular drug candidate. Data obtained from preclinical and clinical activities are susceptible to varying interpretations, which could delay, limit or prevent regulatory approval or clearance. Further, the results from preclinical testing and early clinical trials may not be predictive of results obtained in later clinical trials. In addition, the development of the drug substance and drug product may require manufacturing modifications to ensure future regulatory acceptance. The approval process takes many years, requires the expenditures of substantial resources, and involves post-marketing surveillance.

Delays experienced during the approval process may materially reduce the period during which we will have exclusive rights to exploit patented products or technologies. Delays can occur at any stage of drug development and as a result of many factors, certain of which are not under our control, including but not limited to the following:

- lack of efficacy, or incomplete or inconclusive results from clinical trials;
- unforeseen safety issues;
- failure by investigators to adhere to protocol requirements, including patient enrollment criteria;
- slower than expected rate of patient recruitment;
- failure by subjects to comply with trial protocol requirements;
- inability to follow patients adequately after treatment;
- inability to qualify and enter into arrangements with third parties to manufacture sufficient quality and quantities of materials for use in clinical trials;
- failure by a contract research organization to fulfill contractual obligations; and
- adverse changes in regulatory policy during the period of product development or the period of review of any application for regulatory approval or clearance.

The FDA or foreign regulatory agency may also require post-marketing testing and surveillance to monitor the effects of approved products or place conditions on any approvals that could restrict the commercial applications of these products. Following approval, we may be required to conduct additional post-marketing studies. The regulatory authority may withdraw product approvals if we do not continue to comply with regulatory standards or if problems occur following initial marketing.

Non-clinical studies involve laboratory evaluation of product characteristics or animal studies to assess the initial efficacy and safety of the product. The FDA or other foreign regulatory agency, under its good laboratory practices regulations, regulates certain non-clinical studies. Research and preclinical studies do not involve the introduction of a product candidate in human subjects. These activities involve identification of potential product candidates, modification of promising candidates to optimize their biological activity, as well as preclinical studies to assess safety and effectiveness in animals. In clinical trials, the product candidate is administered to humans. Violations of these regulations can, in some cases, lead to invalidation of those studies, requiring these studies to be repeated. The results of these tests, together with manufacturing information and analytical data, are submitted to the regulatory authority as part of a clinical application, which must be approved by the regulatory authority before we can commence clinical investigations in humans.

Clinical trials involve the administration of the investigational product to humans under the supervision of a qualified principal investigator. We must conduct our clinical trials in accordance with current Good Clinical Practices (“GCP”) regulations under protocols submitted to applicable regulatory authorities as part of the clinical application. GCP regulations mandate comprehensive documentation for the clinical protocol, record keeping, training, and facilities including computers. Quality assurance and inspections are designed to ensure that these GCP standards are achieved. Additionally, each clinical trial must be approved and conducted under the auspices of an Institutional Review Board (“IRB”) or Independent Ethics Committee and with patient informed consent. The IRB will consider, among other matters, ethical factors, the safety of human subjects and the possibility of liability of the institution conducting the trial.

The stages of the regulatory process include clinical trials in three sequential phases that may overlap. Phase 1 clinical trials typically involve the administration of a product candidate into a small group of healthy human subjects. These trials are the first attempt to evaluate a drug’s safety, determine a safe dose range and identify side effects. During Phase 2 trials, the product candidate

is introduced into patients who suffer from the medical condition that the product candidate is intended to treat. Phase 2 studies are designed to evaluate whether a product candidate shows evidence of effectiveness, to further evaluate dosage, and to identify possible adverse effects and safety risks. When Phase 2 evaluations demonstrate that a product candidate appears to be both safe and effective, Phase 3 trials are undertaken to confirm a product candidate's effectiveness and to test for safety in an expanded patient population. If the results of Phase 3 trials appear to confirm effectiveness and safety, the data gathered in all phases of clinical trials form the basis for an application for regulatory approval of the product candidate.

We and all of our contract manufacturers are required to comply with the applicable FDA or foreign regulatory agency current Good Manufacturing Practices ("GMP") regulations. Manufacturers of biologics also must comply with a regulatory authority's general biological product standards. Failure to comply with the statutory and regulatory requirements subjects the manufacturer to possible legal or regulatory action, such as suspension of manufacturing, seizure of product or voluntary recall of a product. Good manufacturing practice regulations require quality control and quality assurance as well as the corresponding maintenance of records and documentation. Before granting product approval, the regulatory authority must determine that our or our third party contractor's manufacturing facilities meet GMP requirements before we can use them in the commercial manufacture of our products. In addition, our facilities are subject to periodic inspections by the regulatory authority for continued compliance with GMP requirements during clinical development as well as following product approval. Adverse experiences with the product must be reported to the FDA or foreign regulatory agency and could result in the imposition of market restriction through labeling changes or in product removal.

If our products are approved for sale, we will be subject to further regulatory requirements under federal and state provisions such as federal "sunshine" laws, anti-kickback laws, false claims laws and state law equivalents of those and other regulations. We are also subject to various federal, state, local and foreign laws, regulations and recommendations relating to safe working conditions, laboratory and manufacturing practices, the experimental use of animals and the use and disposal of hazardous or potentially hazardous substances, including radioactive compounds and infectious disease agents, used in connection with our research. We cannot accurately predict the extent of government regulation that might result from any future legislation or administrative action.

MANUFACTURING

We rely on our facility in Düsseldorf, Germany and third parties to perform the multiple processes involved in manufacturing our product candidates, including the manufacturing of TLR agonists and inhibitors, antigens, combinations of these components, and the formulation, fill and finish of the resultant products. The process for manufacturing oligonucleotides is well-established and uses commercially available equipment and raw materials. We have relied on a limited number of suppliers to produce products for clinical trials and a single supplier to produce our 1018 for HEPLISAV-B. To date, we have manufactured only small quantities of TLR agonists and inhibitors ourselves for development purposes. We currently manufacture the HBsAg for HEPLISAV-B at the Rhein facility.

RESEARCH AND DEVELOPMENT

Conducting a significant amount of research and development has been central to our business model. Our research and development expenses were \$84.6 million, \$50.9 million and \$49.1 million for the years ended December 31, 2014, 2013 and 2012, respectively.

ENVIRONMENT

We have made, and will continue to make, expenditures for environmental compliance and protection. We do not expect that expenditures for compliance with environmental laws will have a material effect on our capital expenditures or results of operations in the future.

EMPLOYEES

As of December 31, 2014, we had 197 full-time employees, including 107 employees in our office in Berkeley, California and 90 employees in our office in Düsseldorf, Germany.

ITEM 1A. RISK FACTORS

This Annual Report on Form 10-K contains forward-looking statements concerning our future products, product candidates, timing of development activities, regulatory strategies, intellectual property position, expenses, revenues, liquidity and cash needs, as well as our plans and strategies. These forward-looking statements are based on current expectations and we assume no obligation to update this information. Numerous factors could cause our actual results to differ significantly from the results described in these forward-looking statements, including the following risk factors.

Risks Related to our Business

The success of our product candidates, in particular HEPLISAV-B, depends on regulatory approval. The FDA or foreign regulatory agencies may determine our clinical trials or other data regarding safety, efficacy, consistency of manufacture or compliance with GMP regulations are insufficient for regulatory approval. Failure to obtain regulatory approvals could require us to discontinue operations.

None of our product candidates has been approved for sale by any regulatory agency. Any product candidate we develop is subject to extensive regulation by federal, state and local governmental authorities in the U.S., including the FDA, and foreign regulatory agencies. Our success is primarily dependent on our ability to obtain regulatory approvals for our most advanced product candidates. Approval processes in the U.S. and in other countries are uncertain, can take many years and require the expenditure of substantial resources and we are unable to predict the timing of when regulatory approval may be received, if ever, in any jurisdiction.

For our lead product, HEPLISAV-B, our BLA must be approved by the FDA and corresponding applications to foreign regulatory agencies must be approved by those agencies before we may sell the product in their respective geographic area. Obtaining approval of a BLA and corresponding foreign applications is highly uncertain and we may fail to obtain approval. The BLA review process is extensive, lengthy, expensive and uncertain, and the FDA or foreign regulatory agencies may delay, limit or deny approval of our application for many reasons, including: whether the data from our clinical trials, including the Phase 3 results, or the development program is satisfactory to the FDA or foreign regulatory agency; disagreement with the number, design, size, conduct or implementation of our clinical trials or a conclusion that the data fails to meet statistical or clinical significance; acceptability of data generated at our clinical trial sites that are monitored by third party contract research organizations (“CROs”); the results of an FDA or other advisory committee that may recommend against approval of our BLA or may recommend that the FDA or other agencies require, as a condition for approval, additional preclinical studies or clinical trials; and deficiencies in our manufacturing processes or facilities or those of our third party contract manufacturers and suppliers, if any. For example, in our 2013 CRL, HEPLISAV-B was not approvable for the proposed indication based on insufficient patient safety data for an indication in adults 18-70 years of age without further evaluation of safety. While we are undertaking a study intended to obtain additional safety data information that we can submit to the FDA, there can be no assurance that this additional clinical study will support approval, or that the data will provide acceptable immunogenicity data for patients with diabetes. The FDA also requested additional data from our manufacturing process validation program as well as clarifying information on the manufacturing controls and facilities in our Düsseldorf manufacturing facility with respect to quality assurance of commercial product. There can be no assurance that we can successfully produce the requisite data in a timely manner or that the data will be sufficient for approval in the U.S.

In February 2014, we announced our withdrawal of our Marketing Authorization Application (“MAA”) for approval to the European Medicines Agency (“EMA”). The Day 180 List of Outstanding Issues (“LOI”) provided by the EMA indicated that, based primarily on the GCP inspection findings, Study HBV-17 was not acceptable without additional assurances regarding the study results and because some of the findings were related to our overall GCP compliance systems, the other pivotal HEPLISAV-B studies (HBV-10 and HBV-16) were questioned by the EMA. The LOI also noted that the HEPLISAV-B safety database was considered to be too small to rule out a risk of less common serious adverse events, particularly in light of the GCP concerns. We withdrew the application, in part, because the required time frame for response under the MAA procedure was not long enough to permit the collection of the necessary clinical data.

In addition, we obtain guidance from regulatory authorities on certain aspects of our clinical development activities and seek to comply with written guidelines provided by the authorities. These discussions and written guidelines are not binding obligations on the part of the regulatory authorities and the regulatory authorities may require additional patient data or studies to be conducted. Regulatory authorities may revise or retract previous guidance during the course of a clinical trial or after completion of the trial. The authorities may also disqualify a clinical trial from consideration in support of approval of a potential product if they deem the guidelines have not been met. The FDA or foreign regulatory agencies may determine our clinical trials or other data regarding safety, efficacy or consistency of manufacture or compliance with GMP regulations are insufficient for regulatory approval.

Failure to receive approval or significant delay in being able to provide the safety and manufacturing information required for approval of our BLA for HEPLISAV-B would have a material adverse effect on our business and results of operations. Even if approved, the labeling approved by the relevant regulatory authority for a product may restrict to whom we and our potential partners, if any, may market the product or the manner in which our product may be administered and sold, which could significantly limit the commercial opportunity for such product.

Before granting product approval, the FDA must determine that our or our third party contractor’s manufacturing facilities meet GMP requirements before we can use them in the commercial manufacture of our products. We and all of our contract manufacturers are required to comply with the applicable GMP regulations. Manufacturers of biological products must also comply with the FDA’s general biological product standards. In addition, GMP regulations require quality control and quality assurance as well as the corresponding maintenance of records and documentation sufficient to ensure the quality of the approved product. Failure to comply with the statutory and regulatory requirements subjects the manufacturer to possible legal or regulatory action, such as delay of approval, suspension of manufacturing, seizure of product or voluntary recall of a product.

The FDA may require more clinical trials for our product candidates than we currently expect or are conducting before granting regulatory approval, if regulatory approval is granted at all. Our clinical trials may be extended which may lead to substantial delays in the regulatory approval process for our product candidates, which will impair our ability to generate revenues.

Our registration and commercial timelines depend on further discussions with the FDA and corresponding foreign regulatory agencies and requirements and requests they may make for additional data or completion of additional clinical trials. Any such requirements or requests could:

- adversely affect our ability to timely and successfully commercialize or market these product candidates;
- result in significant additional costs;
- potentially diminish any competitive advantages for those products;
- potentially limit the markets for those products;
- adversely affect our ability to enter into collaborations or receive milestone payments or royalties from potential collaborators;
- cause us to abandon the development of the affected product candidate; or
- limit our ability to obtain additional financing on acceptable terms, if at all.

Clinical trials for our product candidates are expensive and time consuming, may take longer than we expect or may not be completed at all, and their outcomes are uncertain.

We are currently undertaking clinical trials of HEPLISAV-B and SD-101 and expect to commence clinical trials for our other product candidates in the future. Each of our clinical trials requires the investment of substantial planning, expense and time and the timing of the commencement, continuation and completion of these clinical trials may be subject to significant delays relating to various causes, including scheduling conflicts with participating clinicians and clinical institutions, difficulties in identifying and enrolling participants who meet trial eligibility criteria, failure of participants to complete the clinical trial, delay or failure to obtain IRB or regulatory approval to conduct a clinical trial at a prospective site, unexpected adverse events and shortages of available drug supply. Participant enrollment is a function of many factors, including the size of the relevant population, the proximity of participants to clinical sites, the eligibility criteria for the trial, the existence of competing clinical trials and the availability of alternative or new treatments.

Failure by us or our CROs to conduct a clinical study in accordance with GCP standards and other applicable regulatory requirements could result in disqualification of the clinical trial from consideration in support of approval of a potential product.

We are responsible for conducting our clinical trials consistent with GCP standards and for oversight of our vendors to ensure that they comply with such standards. We depend on medical institutions and CROs to conduct our clinical trials in compliance with GCP. To the extent that they fail to comply with GCP standards, fail to enroll participants for our clinical trials, or are delayed for a significant time in the execution of our trials, including achieving full enrollment, we may be affected by increased costs, program delays or both, which may harm our business.

Clinical trials must be conducted in accordance with FDA or other applicable foreign government guidelines and are subject to oversight by the FDA, other foreign governmental agencies and 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 GMP and other requirements in foreign countries, and may require large numbers of participants.

The FDA or other foreign governmental agencies or we ourselves could delay, suspend or halt our clinical trials of a product candidate for numerous reasons, including:

- deficiencies in the trial design;
- deficiencies in the conduct of the clinical trial including failure to conduct the clinical trial in accordance with regulatory requirements or clinical protocols;
- deficiencies in the clinical trial operations or trial sites resulting in the imposition of a clinical hold;
- the product candidate may have unforeseen adverse side effects, including fatalities, or a determination may be made that a clinical trial presents unacceptable health risks;
- the time required to determine whether the product candidate is effective may be longer than expected;
- fatalities or other adverse events arising during a clinical trial that may not be related to clinical trial treatments;

- the product candidate may appear to be no more effective than current therapies;
- the quality or stability of the product candidate may fail to conform to acceptable standards;
- our inability to produce or obtain sufficient quantities of the product candidate to complete the trials;
- our inability to reach agreement on acceptable terms with prospective CROs and trial sites, the terms of which can be subject to extensive negotiation and may vary significantly among different CROs and trial sites;
- our inability to obtain IRB approval to conduct a clinical trial at a prospective site;
- our inability to obtain regulatory approval to conduct a clinical trial;
- lack of adequate funding to continue the clinical trial, including the occurrence of unforeseen costs due to enrollment delays, requirements to conduct additional trials and studies and increased expenses associated with the services of our CROs and other third parties;
- our inability to recruit and enroll individuals to participate in clinical trials for reasons including competition from other clinical trial programs for the same or similar indications; or
- our inability to retain participants who have initiated a clinical trial but may be prone to withdraw due to side effects from the therapy, lack of efficacy or personal issues, or who are lost to further follow-up.

In addition, we may experience significant setbacks in advanced clinical trials, even after promising results in earlier trials, such as unexpected adverse events that occur when our product candidates are combined with other therapies and drugs or given to larger populations, which often occur in later-stage clinical trials. In addition, clinical results are frequently susceptible to varying interpretations that may delay, limit or prevent regulatory approvals. Also, patient advocacy groups and parents of trial participants may demand additional clinical trials or continued access to drug even if our interpretation of clinical results received thus far leads us to determine that additional clinical trials or continued access are unwarranted. Any disagreement with patient advocacy groups or parents of trial participants may require management's time and attention and may result in legal proceedings being instituted against us, which could be expensive, time-consuming and distracting, and may result in delay of the program. Negative or inconclusive results or adverse medical events, including participant fatalities that may be attributable to our product candidates, during a clinical trial may necessitate that it be redesigned, repeated or terminated. Further, some of our clinical trials may be overseen by an independent DSMB, and the DSMB may determine to delay or suspend one or more of these trials due to safety or futility findings based on events occurring during a clinical trial. Any such delay, suspension, termination or request to repeat or redesign a trial could increase our costs and prevent or significantly delay our ability to commercialize our product candidates.

HEPLISAV-B and most of our earlier stage programs rely on oligonucleotide TLR agonists. Serious adverse event data relating to either 1018 or other TLR agonists may require us to reduce the scope of or discontinue our operations.

HEPLISAV-B incorporates 1018, a TLR9 agonist CPG oligonucleotide, and most of our research and development programs use similar oligonucleotides. If any of our product candidates in clinical trials produce serious adverse event data, we may be required to delay, discontinue or modify our clinical trials or our clinical trial strategy. Most of our clinical product candidates contain oligonucleotides, and if a common safety risk across therapeutic areas were identified, it may hinder our ability to enter into potential collaboration arrangements or commercialize our product candidates. If adverse event data are found to apply to our TLR agonist and/or inhibitor technology as a whole, we may be required to significantly reduce or discontinue our operations.

We have no commercialization experience, and the time and resources to develop sales, marketing and distribution capabilities for HEPLISAV-B are significant. If we fail to achieve and sustain commercial success for HEPLISAV-B, either directly or with a partner, our business would be harmed.

Our lead product candidate, HEPLISAV-B, if approved, would require us to establish sales, marketing and distribution capabilities, or make arrangements with third parties to perform these services. These efforts will require resources and time and we may not be able to enter into these arrangements on acceptable terms. In particular, significant resources may be necessary to successfully market, sell and distribute HEPLISAV-B to patients with diabetes, a group recently recommended by the CDC and ACIP to receive hepatitis B vaccination. Moreover, our pricing and reimbursement strategies with respect to our initial approval plans for HEPLISAV-B may significantly impact our ability to achieve commercial success in this potential patient population.

If we, or our partners, if any, are not successful in setting our marketing, pricing and reimbursement strategy, recruiting sales and marketing personnel or in building a sales and marketing infrastructure, we will have difficulty commercializing HEPLISAV-B, which would adversely affect our business and financial condition. To the extent we rely on other pharmaceutical or biotechnology companies with established sales, marketing and distribution systems to market HEPLISAV-B, we will need to establish and maintain partnership arrangements, and we may not be able to enter into these arrangements on acceptable terms or at all. To the extent that we

enter into co-promotion or other arrangements, certain revenues we receive will depend upon the efforts of third parties, which may not be successful and are only partially in our control.

We rely on our facility in Düsseldorf, Germany and third parties to supply materials or perform processes necessary to manufacture our product candidates. We rely on a limited number of suppliers to produce the oligonucleotide we will require for commercialization. Additionally, we have limited experience in manufacturing our product candidates in commercial quantities.

We rely on our facility in Düsseldorf and third parties to perform the multiple processes involved in manufacturing our product candidates, including 1018, certain antigens, the combination of the oligonucleotide and the antigens, and the formulation, fill and finish. Termination or interruption of these relationships may occur due to circumstances that are outside of our control, resulting in higher cost or delays in our product development or commercialization efforts.

We have relied on a limited number of suppliers to produce oligonucleotides for clinical trials and a single supplier to produce our 1018 for HEPLISAV-B. To date, we have manufactured only small quantities of oligonucleotides ourselves for development purposes. If we were unable to maintain our existing supplier for 1018, we would have to establish an alternate qualified manufacturing capability, which would result in significant additional operating costs and delays in developing and commercializing our product candidates, particularly HEPLISAV-B. We or other third parties may not be able to produce 1018 at a cost, quantity and quality that are available from our current third-party supplier.

We currently utilize our facility in Düsseldorf to manufacture the recombinant hepatitis B surface antigen (“rHBsAg” or “HBsAg”) for HEPLISAV-B. The commercial manufacturing of biological products is a time-consuming and complex process, which must be performed in compliance with GMP regulations. As part of the review of our BLA filing for HEPLISAV-B, the FDA requested additional data regarding our manufacturing process validation program as well as clarifying information on the manufacturing controls and facilities and there can be no assurance that our responses will be sufficient to meet the FDA requirements for GMP manufacturing.

In addition, we may not be able to comply with ongoing and comparable foreign regulations, and our manufacturing process may be subject to delays, disruptions or quality control/quality assurance problems. Noncompliance with these regulations or other problems with our manufacturing process may limit, delay or disrupt the commercialization of HEPLISAV-B and could result in significant expense. Moreover, depending on the level of market acceptance of HEPLISAV-B, if approved, we may not have the capacity in our existing facility to meet all of our future commercial supply needs. Our current manufacturing capacity could supply up to approximately 2 million doses of rHBsAg annually, and our ability to expand Düsseldorf manufacturing capacity by improving utilization in our existing facility, improving upon our current production yields or using a new facility will take time to implement and could result in substantial cost. In the event that demand exceeds our current capacity plans, we may experience a shortage in supply of HEPLISAV-B, which could have a material adverse effect on the success of HEPLISAV-B. Likewise, in the event that HEPLISAV-B is not approved, we would have to consider other alternatives for the facility in Düsseldorf, including its sale or closure, and any such efforts would be complex, expensive, and time-consuming.

If we receive regulatory approval for our product candidates, we will be subject to ongoing FDA and foreign regulatory obligations and continued regulatory review.

We and our third party suppliers are required to comply with applicable GMP regulations and other international regulatory requirements. The regulations require that our product candidates be manufactured and our records maintained in a prescribed manner with respect to manufacturing, testing and quality control/quality assurance activities. Suppliers of key components and materials must be named in a BLA submitted to the FDA for any product candidate for which we are seeking FDA approval. Additionally, these third parties and our manufacturing facility must undergo a pre-approval inspection before we can obtain marketing authorization for any of our product candidates. Even after a manufacturer has been qualified by the FDA, the manufacturer must continue to expend time, money and effort in the area of production and quality control to ensure full compliance with GMP. Manufacturers are subject to regular, periodic inspections by the FDA following initial approval. Further, to the extent that we contract with third parties for the manufacture of our products, our ability to control third-party compliance with FDA requirements will be limited to contractual remedies and rights of inspection.

If, as a result of the FDA's inspections, it determines that the equipment, facilities, laboratories or processes do not comply with applicable FDA regulations and conditions of product approval, the FDA may not approve the product or may suspend the manufacturing operations. If the manufacturing operations of any of the suppliers for our product candidates are suspended, we may be unable to generate sufficient quantities of commercial or clinical supplies of product to meet market demand, which would harm our business. In addition, if delivery of material from our suppliers were interrupted for any reason, we might be unable to ship our approved product for commercial supply or to supply our products in development for clinical trials. Significant and costly delays can occur if the qualification of a new supplier is required.

Any regulatory approvals that we receive for our product candidates are likely to contain requirements for post-marketing follow-up studies, which may be costly. Product approvals, once granted, may be modified based on data from subsequent studies or commercial use. As a result, limitations on labeling indications or marketing claims, or withdrawal from the market may be required if problems occur after commercialization.

Failure to comply with regulatory requirements could prevent or delay marketing approval or require the expenditure of money or other resources to correct. Failure to comply with applicable requirements may also result in warning letters, fines, injunctions, civil penalties, recall or seizure of products, total or partial suspension of production, refusal of the government to renew marketing applications and criminal prosecution, any of which could be harmful to our ability to generate revenues and our stock price.

We may develop, seek regulatory approval for and market our product candidates outside the U.S., requiring a significant commitment of resources. Failure to successfully manage our international operations could result in significant unanticipated costs and delays in regulatory approval or commercialization of our product candidates.

We may introduce certain of our product candidates, including HEPLISAV-B, in various markets outside the U.S. Developing, seeking regulatory approval for and marketing our product candidates outside the U.S. could impose substantial burdens on our resources and divert management's attention from domestic operations. International operations are subject to risk, including:

- the difficulty of managing geographically distant operations, including recruiting and retaining qualified employees, locating adequate facilities and establishing useful business support relationships in the local community;
- compliance with varying international regulatory requirements, laws and treaties;
- securing international distribution, marketing and sales capabilities;
- adequate protection of our intellectual property rights;
- obtaining regulatory and pricing approvals at a level sufficient to justify commercialization;
- legal uncertainties and potential timing delays associated with tariffs, export licenses and other trade barriers;
- diverse tax consequences;
- the fluctuation of conversion rates between foreign currencies and the U.S. dollar; and
- regional and geopolitical risks.

We have withdrawn our MAA in Europe and we may not be able to provide sufficient data or respond to other comments to our previously filed MAA sufficient to obtain regulatory approvals in Europe in a reasonable time period or at all. Any failure or delay in obtaining regulatory approval in one jurisdiction may have a negative effect on the regulatory approval process in other jurisdictions. If we are unable to successfully manage our international operations, we may incur significant unanticipated costs and delays in regulatory approval or commercialization of our product candidates, which would impair our ability to generate revenues.

If any products we develop are not accepted by the market or if regulatory agencies limit our labeling indications or marketing claims, we may be unable to generate significant revenues, if any.

Even if we obtain regulatory approval for our product candidates and are able to commercialize them, our products may not gain market acceptance among physicians, patients, healthcare payors and the medical community.

The degree of market acceptance of any of our approved products will depend upon a number of factors, including:

- the indication for which the product is approved and its approved labeling;
- the presence of other competing approved therapies;
- the potential advantages of the product over existing and future treatment methods;
- the relative convenience and ease of administration of the product;
- the strength of our sales, marketing and distribution support;
- the price and cost-effectiveness of the product; and
- sufficient third-party reimbursement.

The FDA or other regulatory agencies could limit the labeling indication for which our product candidates may be marketed or could otherwise limit marketing efforts for our products. If we are unable to achieve approval or successfully market any of our

product candidates, or marketing efforts are restricted by regulatory limits, our ability to generate revenues could be significantly impaired.

We face uncertainty regarding coverage, pricing and reimbursement and the practices of third party payors, which may make it difficult or impossible to sell our product candidates on commercially reasonable terms.

In both domestic and foreign markets, our ability to achieve profitability will depend in part on the negotiation of a favorable price or the availability of appropriate reimbursement from third party payors, in particular for HEPLISAV-B where existing products are already marketed. While in the U.S., pricing for hepatitis B vaccines is currently stable and reimbursement is favorable as private and public payors recognize the value of prophylaxis in this setting given the high costs of potential morbidity and mortality, there can be no assurance that HEPLISAV-B would launch with stable pricing and favorable reimbursement.

Existing laws affecting the pricing and coverage of pharmaceuticals and other medical products by government programs and other third party payors may change before any of our product candidates are approved for marketing. In addition, third party payors are increasingly challenging the price and cost-effectiveness of medical products and services, and pricing and reimbursement decisions may not allow our products to compete effectively with existing or competitive products. Because we intend to offer products, if approved, that involve new technologies and new approaches to treating disease, the willingness of third party payors to reimburse for our products is uncertain. We will have to charge a price for our products that is sufficient to enable us to recover our considerable investment in product development and our operating costs. Adequate third-party reimbursement may not be available to enable us to maintain price levels sufficient to achieve profitability and could harm our future prospects and reduce our stock price.

We are unable to predict what impact the Health Care and Education Reconciliation Act of 2010 or other reform legislation will have on our business or future prospects. The uncertainty as to the nature and scope of the implementation of any proposed reforms limits our ability to forecast changes that may affect our business. In Europe, the success of our products, in particular HEPLISAV-B, will depend largely on obtaining and maintaining government reimbursement because many providers in European countries are unlikely to use medical products that are not reimbursed by their governments. Many countries in Europe have adopted legislation and increased efforts to control prices of healthcare products. We are unable to predict the impact these actions will have on our business or future prospects.

We rely on CROs to conduct our clinical trials. If these third parties do not fulfill their contractual obligations or meet expected deadlines, our planned clinical trials may be delayed and we may fail to obtain the regulatory approvals necessary to commercialize our product candidates.

We rely on third parties to conduct our clinical trials. If these third parties do not perform their obligations or meet expected deadlines our planned clinical trials may be extended, delayed, modified or terminated. While we conduct regular reviews of the data, we are dependent on the processes and quality control efforts of our third party contractors to ensure that detailed, quality records are maintained to support the results of the clinical trials that they are conducting on our behalf. Any extension, delay, modification or termination of our clinical trials or failure to ensure adequate documentation and the quality of the results in the clinical trials could delay or otherwise adversely affect our ability to commercialize our product candidates and could have a material adverse effect on our business and operations.

A key part of our business strategy is to establish collaborative relationships to commercialize and fund development of our product candidates. We may not succeed in establishing and maintaining collaborative relationships, which may significantly limit our ability to develop and commercialize our products successfully, if at all.

Notwithstanding our initial plans to launch HEPLISAV-B in the U.S., we may establish collaborative relationships to obtain domestic and international sales, marketing and distribution capabilities for our product candidates, in particular with respect to the commercialization of HEPLISAV-B, if approved. Failure to obtain a collaborative relationship for HEPLISAV-B, particularly in the European Union and for other markets requiring extensive sales efforts, may significantly impair the potential for this product, and our recent withdrawal of our MAA increases the risk that we may be unable to enter into a collaborative relationship prior to regulatory approval. The process of establishing and maintaining collaborative relationships is difficult, time-consuming and involves significant uncertainty, including:

- our partners may seek to renegotiate or terminate their relationships with us due to unsatisfactory clinical results, manufacturing issues, a change in business strategy, a change of control or other reasons;
- our shortage of capital resources may impact the willingness of companies to collaborate with us;
- our contracts for collaborative arrangements are terminable at will on written notice and may otherwise expire or terminate and we may not have alternative funding available;
- our partners may choose to pursue alternative technologies, including those of our competitors;

- we may have disputes with a partner that could lead to litigation or arbitration;
- we have limited control over the decisions of our partners and they may change the priority of our programs in a manner that would result in termination of the agreement or add significant delay in the partnered program;
- our ability to generate future payments and royalties from our partners depends upon the abilities of our partners to establish the safety and efficacy of our drug candidates, obtain regulatory approvals and successfully manufacture and achieve market acceptance of products developed from our drug candidates;
- we or our partners may fail to properly initiate, maintain or defend our intellectual property rights, where applicable, or a party may use our proprietary information in such a way as to invite litigation that could jeopardize or potentially invalidate our proprietary information or expose us to potential liability;
- our partners may not devote sufficient capital or resources towards our product candidates; and
- our partners may not comply with applicable government regulatory requirements.

If any collaborator fails to fulfill its responsibilities in a timely manner, or at all, our research, clinical development, manufacturing or commercialization efforts pursuant to that collaboration could be delayed or terminated, or it may be necessary for us to assume responsibility for expenses or activities that would otherwise have been the responsibility of our collaborator. If we are unable to establish and maintain collaborative relationships on acceptable terms or to successfully transition terminated collaborative agreements, we may have to delay or discontinue further development of one or more of our product candidates, undertake development and commercialization activities at our own expense or find alternative sources of capital.

Many of our competitors have greater financial resources and expertise than we do. If we are unable to successfully compete with existing or potential competitors despite these disadvantages we may be unable to generate revenues and our business will be harmed.

We compete with pharmaceutical companies, biotechnology companies, academic institutions and research organizations, in developing therapies to prevent or treat infectious and inflammatory diseases. For example, if it is approved in the future, HEPLISAV-B will compete in the U.S. with established hepatitis B vaccines marketed by Merck and GSK and outside the U.S. with vaccines from those companies and several additional established pharmaceutical companies. Competitors may develop more effective, more affordable or more convenient products or may achieve earlier patent protection or commercialization of their products. These competitive products may render our product candidates obsolete or limit our ability to generate revenues from our product candidates.

Existing and potential competitors may also compete with us for qualified scientific and management personnel, as well as for technology that would be advantageous to our business. Although certain of our employees have commercialization experience, as a company we currently have limited sales, marketing and distribution capabilities. Our success in developing marketable products and achieving a competitive position will depend, in part, on our ability to attract and retain qualified personnel. If we do not succeed in attracting new personnel and retaining and motivating existing personnel, our operations may suffer and we may be unable to obtain financing, enter into collaborative arrangements, sell our product candidates or generate revenues.

As we evolve from a company primarily involved in research and development to a company potentially involved in commercialization, we may encounter difficulties in managing our growth and expanding our operations successfully.

If we are successful in advancing HEPLISAV-B through the development stage towards commercialization, we will need to expand our organization, including adding marketing and sales capabilities or contracting with third parties to provide these capabilities for us. As our operations expand, we expect that we will also need to manage additional relationships with various collaborative partners, suppliers and other third parties. Future growth will impose significant added responsibilities on our organization, in particular on management. Our future financial performance and our ability to commercialize HEPLISAV-B and to compete effectively will depend, in part, on our ability to manage any future growth effectively. To that end, we may not be able to manage our growth efforts effectively, and hire, train and integrate additional management, administrative and sales and marketing personnel, and our failure to accomplish any of these activities could prevent us from successfully growing our company.

If we fail to comply with the extensive requirements applicable to biopharmaceutical manufacturers and marketers under the healthcare fraud laws of the jurisdictions in which we conduct our business, we may be subject to significant liability.

Our activities, and the activities of our agents, including some contracted third parties, are subject to extensive government regulation and oversight both in the U.S. and in foreign jurisdictions. If we obtain approval for and commercialize a vaccine or other product, our interactions with physicians and others in a position to prescribe or purchase our products will be subject to a legal regime designed to prevent healthcare fraud and abuse. Relevant U.S. laws include:

- the Anti-Kickback Statute, which prohibits persons from, among other things, knowingly and willfully soliciting, receiving, offering or paying remuneration, directly or indirectly, in exchange for or to induce either the referral of an individual for, or the purchase, order or recommendation of, any good or service for which payment may be made under federal health care programs, such as the Medicare and Medicaid programs;
- federal false claims laws which prohibit individuals or entities from, among other things, knowingly presenting, or causing to be presented, claims for payment to the government or its agents that are false or fraudulent;
- laws that require transparency regarding financial arrangements with health care professionals, such as the reporting and disclosure requirements imposed by the Patient Protection and Affordable Care Act (“PPACA”) and state laws; and
- state law equivalents of each of the above federal laws, such as anti-kickback and false claims laws which may apply to items or services reimbursed by state health insurance programs or any third-party payer, including commercial insurers.

The Office of Inspector General for the Department of Health and Human Services, the Department of Justice, states’ Attorneys General and other governmental authorities actively enforce the laws and regulations discussed above. These entities also coordinate extensively with the FDA, using legal theories that connect violations of the Federal Food, Drug and Cosmetic Act (such as off-label promotion) to the eventual submission of false claims to government healthcare programs. Prosecution of such promotion cases under the healthcare fraud laws provides the potential for private parties (qui tam relators, or “whistleblowers”) to initiate cases on behalf of the government and provides for significantly higher penalties upon conviction.

In the U.S., pharmaceutical and biotechnology companies have been the target of numerous government prosecutions and investigations alleging violations of law, including claims asserting impermissible off-label promotion of pharmaceutical products, payments intended to influence the referral of federal or state health care business, submission of false claims for government reimbursement, or submission of incorrect pricing information.

Violations of any of the laws described above or any other applicable governmental regulations and other similar foreign laws may subject us, our employees or our agents to criminal and/or civil sanctions, including fines, civil monetary penalties, exclusion from participation in government health care programs (including Medicare and Medicaid), and the restriction or restructuring of our operations, any of which could adversely affect our ability to operate our business and our financial results. Additionally, whether or not we have complied with the law, an investigation into alleged unlawful conduct may incur significant expense, cause reputational damage, divert management time and attention, and otherwise adversely affect our business. While we have developed and instituted a corporate compliance program, we cannot guarantee that we, our employees, our consultants, contractors, or other agents are or will be in compliance with all applicable U.S. or foreign laws.

We expect there will continue to be federal and state laws and/or regulations, proposed and implemented, that could impact our operations and business. The extent to which future legislation or regulations, if any, relating to health care fraud and abuse laws and/or enforcement, may be enacted or what effect such legislation or regulation would have on our business remains uncertain.

The loss of key personnel, including our Chief Executive Officer, could delay or prevent achieving our objectives.

We depend on our senior executive officers, as well as key scientific and other personnel. Our research, product development and business efforts could be adversely affected by the loss of one or more key members of our scientific or management staff, including our Chief Executive Officer. We currently have no key person insurance on any of our employees.

We face product liability exposure, which, if not covered by insurance, could result in significant financial liability.

While we have not experienced any product liability claims to date, the use of any of our product candidates in clinical trials and the sale of any approved products will subject us to potential product liability claims and may raise questions about a product's safety and efficacy. As a result, we could experience a delay in our ability to commercialize one or more of our product candidates or reduced sales of any approved product candidates. In addition, a product liability claim may exceed the limits of our insurance policies and exhaust our internal resources. We have obtained limited clinical trial liability and umbrella insurance coverage for our clinical trials. This coverage may not be adequate or may not continue to be available in sufficient amounts, at an acceptable cost or at all. We also may not be able to obtain commercially reasonable product liability insurance for any product approved for marketing in the future. A product liability claim, product recalls or other claims, as well as any claims for uninsured liabilities or in excess of insured liabilities, would divert our management's attention from our business and could result in significant financial liability.

We are involved in legal actions that are expensive and time consuming, and, if resolved adversely, could harm our business, financial condition, or results of operations.

Two class action complaints brought by purported stockholders and one purported stockholder derivative complaint have been brought against us. Any negative outcome from such lawsuits could result in payments of monetary damages or fines, or adversely affect our products, and accordingly our business, financial condition, or results of operations could be materially and adversely affected.

There can be no assurance that a favorable final outcome will be obtained in these cases, and defending any lawsuit is costly and can impose a significant burden on management and employees. Any litigation to which we are a party may result in an onerous or unfavorable judgment that may not be reversed upon appeal or in payments of monetary damages or fines not covered by insurance, or we may decide to settle lawsuits on unfavorable terms, which could adversely affect our business, financial conditions, or results of operations.

We use hazardous materials in our business. Any claims or liabilities relating to improper handling, storage or disposal of these materials could be time consuming and costly to resolve.

Our research and product development activities involve the controlled storage, use and disposal of hazardous and radioactive materials and biological waste. We are subject to federal, state and local laws and regulations governing the use, manufacture, storage, handling and disposal of these materials and certain waste products. We believe we are currently in compliance with all government permits that are required for the storage, use and disposal of these materials. However, we cannot eliminate the risk of accidental contamination or injury to persons or property from these materials. In the event of an accident related to hazardous materials, we could be held liable for damages, cleanup costs or penalized with fines, and this liability could exceed the limits of our insurance policies and exhaust our internal resources. We may have to incur significant costs to comply with future environmental laws and regulations.

Risks Related to our Finances and Capital Requirements

We have incurred substantial losses since inception and do not have any commercial products that generate revenue.

We have experienced significant net losses in each year since our inception. Our accumulated deficit was \$592.9 million as of December 31, 2014. To date, our revenue has resulted from collaboration agreements, government and private agency grants and services and license fees from our customers, including the customers of Rhein. We anticipate that we will incur substantial additional net losses in future years as a result of our continuing investment in research and development activities and our addition of infrastructure and operations to support further development and regulatory approval of HEPLISAV-B.

We do not have any products that generate revenue. There can be no assurance whether HEPLISAV-B can be successfully developed, financed or commercialized in a timely manner based on our current plans. There can be no assurance that we will be able to achieve approval or generate meaningful sales without significant additional resources. Our ability to generate revenue depends upon obtaining regulatory approvals for our product candidates, generating product sales and entering into and maintaining successful collaborative relationships.

If we are unable to generate significant revenues or achieve profitability, we may be required to reduce or discontinue our current and planned operations, enter into a transaction that constitutes a change in control of the company or raise additional capital on less than favorable terms.

If we are unable to generate significant revenues or achieve profitability, we will require substantial additional capital to continue development of our product candidates and if our most advanced candidate, HEPLISAV-B, is approved, to commence sales and marketing activities.

To continue development of our product candidates and, if it is approved, to launch HEPLISAV-B, we will need significant additional funds. Addressing this need may occur through strategic alliance and licensing arrangements and/or future public or private financings. We expect to continue to spend substantial funds in connection with:

- development, manufacturing and, if approved, commercialization of our product candidates, particularly HEPLISAV-B;
- various human clinical trials for our product candidates; and
- protection of our intellectual property.

We currently estimate that we have sufficient resources to meet our anticipated cash needs through at least the next 12 months based on cash, cash equivalents and marketable securities on hand as well as anticipated revenues and funding from existing agreements.

Sufficient additional financing through future public or private financings, strategic alliance and licensing arrangements or other financing sources may not be available on acceptable terms or at all. Additional equity financings, if completed, could result in significant dilution or otherwise adversely affect the rights of existing stockholders. If adequate funds are not available in the future, we may need to delay, reduce the scope of, or put on hold the HEPLISAV-B program or other development programs while we seek strategic alternatives.

Risks Related to our Intellectual Property

We rely on licenses to intellectual property from third parties. Impairment of these licenses or our inability to maintain them would severely harm our business.

Our current research and development efforts depend in part upon our license arrangements for intellectual property owned by third parties. Our dependence on these licenses subjects us to numerous risks, such as disputes regarding the use of the licensed intellectual property and the creation and ownership of new discoveries under such license agreements. In addition, these license arrangements require us to make timely payments to maintain our licenses and typically contain diligence or milestone-based termination provisions. Our failure to meet any obligations pursuant to these agreements could allow our licensors to terminate our agreements or undertake other remedies such as converting exclusive to non-exclusive licenses if we are unable to cure or obtain waivers for such failures or amend such agreements on terms acceptable to us. In addition, our license agreements may be terminated or may expire by their terms, and we may not be able to maintain the exclusivity of these licenses. If we cannot obtain and maintain licenses that are advantageous or necessary to the development or the commercialization of our product candidates, we may be required to expend significant time and resources to develop or license similar technology or to find other alternatives to maintaining the competitive position of our products. If such alternatives are not available to us in a timely manner or on acceptable terms, we may be unable to continue development or commercialize our product candidates. In addition, we must make timely payments or meet diligence obligations to maintain any such licenses in effect. In the absence of a current license, we may be required to redesign our technology so it does not infringe a third party's patents, which may not be possible or could require substantial funds and time.

If third parties successfully assert that we have infringed their patents and proprietary rights or challenge our patents and proprietary rights, we may become involved in intellectual property disputes and litigation that would be costly, time consuming and delay or prevent development or commercialization of our product candidates.

We may be exposed to future litigation by third parties based on claims that our product candidates or proprietary technologies infringe their intellectual property rights, or we may be required to enter into litigation to enforce patents issued or licensed to us or to determine the ownership, scope or validity of our or another party's proprietary rights, including a challenge as to the validity of our issued and pending claims. From time to time we are involved in various interference and other administrative proceedings related to our intellectual property which has caused us to incur certain legal expenses. If we become involved in any litigation and/or other significant interference proceedings related to our intellectual property or the intellectual property of others, we will incur substantial additional expenses and it will divert the efforts of our technical and management personnel.

Two of our potential competitors, Merck and GSK, are exclusive licensees of broad patents covering methods of production of recombinant HBsAg, a component of HEPLISAV-B. In addition, the Institut Pasteur also owns or has exclusive licenses to patents relating to aspects of production of recombinant HBsAg. While some of these patents have expired or will soon expire outside the U.S., they remain in force in the U.S. To the extent we are able to commercialize HEPLISAV-B in the U.S. while these patents remain in force, Merck, GSK or their respective licensors or the Institut Pasteur may bring claims against us.

If we or our collaborators are unsuccessful in defending or prosecuting our issued and pending claims or in defending potential claims against our products, for example, as may arise in the commercialization of HEPLISAV-B or any similar product candidate, we or our collaborator could be required to pay substantial damages or be unable to commercialize our product candidates or use our proprietary technologies without a license from such third party. A license may require the payment of substantial fees or royalties, require a grant of a cross-license to our technology or may not be available on acceptable terms, if at all. Any of these outcomes could require us to change our business strategy and could materially impact our business and operations.

One of our potential competitors, Pfizer, has issued patent claims, as well as patent claims pending with the PTO and foreign patent offices, that may be asserted against our TLR agonist products and our TLR inhibitor products. We may need to obtain a license to one or more of these patent claims held by Pfizer by paying fees or royalties or offering rights to our own proprietary technologies to commercialize one or more of our formulations other than with respect to HEPLISAV-B, for which we have a license. A license for other uses may not be available to us on acceptable terms, if at all, which could preclude or limit our ability to commercialize our products.

If the combination of patents, trade secrets and contractual provisions that we rely on to protect our intellectual property is inadequate, the value of our product candidates will decrease.

Our success depends on our ability to:

- obtain and protect commercially valuable patents or the rights to patents both domestically and abroad;
- operate without infringing upon the proprietary rights of others; and
- prevent others from successfully challenging or infringing our proprietary rights.

We will be able to protect our proprietary rights from unauthorized use only to the extent that these rights are covered by valid and enforceable patents or are effectively maintained as trade secrets. We try to protect our proprietary rights by filing and prosecuting U.S. and foreign patent applications. However, in certain cases such protection may be limited, depending in part on existing patents held by third parties, which may only allow us to obtain relatively narrow patent protection. In the U.S., legal standards relating to the validity and scope of patent claims in the biopharmaceutical field can be highly uncertain, are still evolving and involve complex legal and factual questions for which important legal principles remain unresolved.

The biopharmaceutical patent environment outside the U.S. is even more uncertain. We may be particularly affected by this uncertainty since several of our product candidates may initially address market opportunities outside the U.S., where we may only be able to obtain limited patent protection.

The risks and uncertainties that we face with respect to our patents and other proprietary rights include the following:

- we may not receive an issued patent for any of our patent applications or for any patent applications that we have exclusively licensed;
- the pending patent applications we have filed or to which we have exclusive rights may take longer than we expect to result in issued patents;
- the claims of any patents that are issued may not provide meaningful protection or may not be valid or enforceable;
- we might not be able to develop additional proprietary technologies that are patentable;
- the patents licensed or issued to us or our collaborators may not provide a competitive advantage;
- patents issued to other parties may limit our intellectual property protection or harm our ability to do business;
- other parties may independently develop similar or alternative technologies or duplicate our technologies and commercialize discoveries that we attempt to patent; and
- other parties may design around technologies we have licensed, patented or developed.

We also rely on trade secret protection and confidentiality agreements to protect our interests in proprietary know-how that is not patentable and for processes for which patents are difficult to enforce. We cannot be certain that we will be able to protect our trade secrets adequately. Any disclosure of confidential data in the public domain or to third parties could allow our competitors to learn our trade secrets. If we are unable to adequately obtain or enforce proprietary rights we may be unable to commercialize our products, enter into collaborations, generate revenues or maintain any advantage we may have with respect to existing or potential competitors.

Risks Related to an Investment in our Common Stock

Our stock price is subject to volatility, and your investment may suffer a decline in value.

The market prices for securities of biopharmaceutical companies have in the past been, and are likely to continue in the future, to be, very volatile. The market price of our common stock is subject to substantial volatility depending upon many factors, many of which are beyond our control, including:

- progress or results of any of our clinical trials or regulatory or manufacturing efforts, in particular any announcements regarding the progress or results of our planned trials and BLA filing and communications from the FDA or other regulatory agencies;
- our ability to establish and maintain collaborations for the development and commercialization of our product candidates;
- our ability to raise additional capital to fund our operations;
- technological innovations, new commercial products or drug discovery efforts and preclinical and clinical activities by us or our competitors;
- changes in our intellectual property portfolio or developments or disputes concerning the proprietary rights of our products or product candidates;
- our ability to obtain component materials and successfully enter into manufacturing relationships for our product candidates or establish manufacturing capacity on our own;
- our ability to establish and maintain licensing agreements for intellectual property necessary for the development of our product candidates;
- changes in government regulations, general economic conditions or industry announcements;
- issuance of new or changed securities analysts' reports or recommendations;
- actual or anticipated fluctuations in our quarterly financial and operating results;
- our ability to maintain continued listing on the NASDAQ markets or similar exchanges; and
- the volume of trading in our common stock.

One or more of these factors could cause a substantial decline in the price of our common stock. In addition, securities class action litigation has often been brought against a company following a decline in the market price of its securities. We are currently the target of such securities litigation, resulting from the decline in our common stock following the disclosure in 2013 that the FDA would not approve HEPLISAV-B for sale without a significant additional clinical study. We may in the future be the target of additional such litigation. Securities litigation could result in substantial costs, and divert management's attention and resources, which could harm our business, operating results and financial condition.

The anti-takeover provisions of our certificate of incorporation, our bylaws, Delaware law and our share purchase rights plan may prevent or frustrate a change in control, even if an acquisition would be beneficial to our stockholders, which could affect our stock price adversely and prevent attempts by our stockholders to replace or remove our current management.

Provisions of our certificate of incorporation and bylaws may delay or prevent a change in control, discourage bids at a premium over the market price of our common stock and adversely affect the market price of our common stock and the voting or other rights of the holders of our common stock. These provisions include:

- authorizing our Board of Directors to issue additional preferred stock with voting rights to be determined by the Board of Directors;
- limiting the persons who can call special meetings of stockholders;
- prohibiting stockholder actions by written consent;
- creating a classified board of directors pursuant to which our directors are elected for staggered three year terms;
- providing that a supermajority vote of our stockholders is required for amendment to certain provisions of our certificate of incorporation and bylaws; and
- establishing advance notice requirements for nominations for election to our Board of Directors or for proposing matters that can be acted on by stockholders at stockholder meetings.

Our share purchase rights plan may have certain anti-takeover effects. Specifically, the rights issued pursuant to the plan will cause substantial dilution to a person or group that attempts to acquire the Company on terms not approved by our Board of Directors. Although the rights should not interfere with any merger or other business combination approved by the Board of Directors since the rights issued may be amended to permit such acquisition or redeemed by the Company at \$0.001 per right prior to the earliest of (i) the time that a person or group has acquired beneficial ownership of 20% or more of our common stock or (ii) the final expiration date of the rights, the effect of the rights plan may deter a potential acquisition of the Company. In addition, we remain subject to the provisions of the Delaware corporation law that, in general, prohibit any business combination with a beneficial owner of 15% or more of our common stock for three years unless the holder's acquisition of our stock was approved in advance by our Board of Directors.

We will continue to incur increased costs and demands upon management as a result of complying with the laws and regulations affecting public companies, which could affect our operating results.

As a public company, we will continue to incur legal, accounting and other expenses associated with reporting requirements and corporate governance requirements, including requirements under the Sarbanes-Oxley Act of 2002, the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010, as well as new rules implemented by the Securities and Exchange Commission and the NASDAQ Stock Market LLC. We may need to continue to implement additional financial and accounting systems, procedures and controls to accommodate changes in our business and organization and to comply with new reporting requirements. There can be no assurance that we will be able to maintain a favorable assessment as to the adequacy of our internal control over financial reporting. If we are unable to reach an unqualified assessment, or our independent registered public accounting firm is unable to issue an unqualified attestation as to the effectiveness of our internal control over financial reporting as of the end of our fiscal year, investors could lose confidence in the reliability of our financial reporting which could harm our business and could impact the price of our common stock.

Future sales of our common stock or the perception that such sales may occur in the public market could cause our stock price to fall.

Sales of a substantial number of shares of our common stock in the public market, or the perception that these sales might occur, could depress the market price of our common stock and could impair our ability to raise capital through the sale of additional equity securities. As of December 31, 2014, we had 26,306,689 shares of common stock outstanding, all of which shares were eligible for sale in the public market, subject in some cases to the volume limitations and manner of sale requirements under Rule 144 of the Securities Act of 1933, as amended.

In addition, we have filed shelf registration statements on Form S-3 under the Securities Act of 1933, as amended, to register securities that we may choose to issue in the future and on Form S-8 to register the shares of our common stock reserved for issuance under our stock option plans.

ITEM 1B. UNRESOLVED STAFF COMMENTS

None.

ITEM 2. PROPERTIES

As of December 31, 2014, we leased approximately 55,200 square feet of laboratory and office space in Berkeley, California under agreements expiring in June 2018. We also lease approximately 5,600 square meters of laboratory and office space in Düsseldorf, Germany under lease agreements expiring in March 2023.

ITEM 3. LEGAL PROCEEDINGS

From time to time in the ordinary course of business, we receive claims or allegations regarding various matters, including employment, vendor and other similar situations in the conduct of our operations.

On June 18, 2013, the first of two substantially similar securities class action complaints was filed in the U.S. District Court for the Northern District of California against the Company and certain of its former executive officers. The second was filed on June 26, 2013. On August 22, 2013, these two complaints and all related actions that subsequently may be filed in, or transferred to, the District Court were consolidated into a single case entitled *In re Dynavax Technologies Securities Litigation*. On September 27, 2013, the Court appointed a lead plaintiff and lead counsel. On November 12, 2013, lead plaintiff filed his consolidated class action complaint (the "consolidated complaint"), which named a former director of the Company as a defendant in addition to the Company and the former executive officers identified in the two prior complaints (collectively, the "defendants"). The consolidated complaint alleged that between April 26, 2012 and June 10, 2013, the Company and certain of its executive officers and directors violated Sections 10(b)

and 20(a) of the Securities Exchange Act of 1934 and Rule 10b-5 promulgated thereunder, in connection with statements related to the Company's product, HEPLISAV-B, an investigational adult hepatitis B vaccine. The consolidated complaint sought unspecified damages, interest, attorneys' fees, and other costs. On January 10, 2014, defendants filed a motion to dismiss the consolidated complaint.

On March 10, 2014, plaintiffs filed an opposition to the motion to dismiss the consolidated complaint. The opposition introduced a new theory of the case, so defendants permitted plaintiffs to amend their complaint. On April 7, 2014, plaintiffs filed an amended consolidated complaint ("ACC"). The ACC added a new plaintiff and several new defendants, and alleged that, between April 26, 2012 and June 10, 2013, the Company, certain of its executive officers and directors, and entities related to certain of its directors, violated Sections 10(b), 20A, and 20(a) of the Securities Exchange Act of 1934 and Rule 10b-5 promulgated thereunder in connection with statements related to our product candidate, HEPLISAV-B. Specifically, the ACC alleged that the Company made fraudulent misrepresentations or omissions regarding the manufacture of HEPLISAV-B and that certain insiders unlawfully profited from such misrepresentations or omissions. The ACC sought unspecified damages, interest, attorneys' fees, and other costs. On June 6, 2014, defendants filed a motion to dismiss the ACC. On August 8, 2014, plaintiffs filed their Opposition to that motion.

On September 10, 2014, plaintiffs filed the second amended complaint ("SAC") to remove or correct erroneous statements attributed to confidential witnesses. The SAC retains all allegations asserted in the ACC. On October 10, 2014 defendants filed a motion to dismiss the SAC. On November 10, 2014, plaintiffs filed an opposition to the Company's motion to dismiss the SAC. The Company filed its reply in support of the motion on December 1, 2014.

A hearing on the motion to dismiss the SAC occurred on February 20, 2015. The Court granted the motion with respect to some of the alleged misrepresentations and omissions made by the Company or certain named defendants as well as some of the insider trading claims against certain insiders and denied the motion to dismiss with respect to other alleged misrepresentations and omissions and insider trading claims.

Additionally, on July 3, 2013, a purported stockholder derivative complaint was filed in the Superior Court of California for the County of Alameda against certain of our former and current directors. On August 9, 2013, a substantially similar purported stockholder derivative complaint was filed in the U.S. District Court for the Northern District of California. The derivative complaint alleges breaches of fiduciary duties by the defendants and other violations of law. In general, the complaints allege that certain of our current and former executive officers and directors caused or allowed for the dissemination of materially false and misleading statements regarding our product, HEPLISAV-B. Plaintiff is seeking unspecified monetary damages, including restitution from defendants and attorneys' fees and costs, and other relief.

On August 21, 2013, pursuant to a stipulation between the parties, the State Court stayed the state derivative case pending a decision on the Company's motion to dismiss in the In re Dynavax Technologies Securities Litigation. On October 17, 2013, pursuant to a stipulation between the parties, the federal court stayed the federal derivative case pending a decision on the Company's motion to dismiss in the In re Dynavax Technologies Securities Litigation.

The Company believes that it has meritorious defenses and intends to defend these lawsuits vigorously.

ITEM 4. MINE SAFETY DISCLOSURE

Not applicable.

ITEM 5. MARKET FOR THE REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES

Market Information and Holders

Our common stock is traded on the NASDAQ Capital Market under the ticker symbol DVAX. Public trading of our common stock commenced on February 19, 2004. All references to numbers of shares of common stock and per-share information in this Annual Report have been adjusted retroactively to reflect the Company's ten-for-one reverse stock split effective as of November 7, 2014. The following table sets forth for the periods indicated the high and low intra-day sale prices per share of our common stock.

	Common Stock Price	
	High	Low
2014		
First Quarter	\$ 20.70	\$ 16.70
Second Quarter	\$ 17.80	\$ 13.00
Third Quarter	\$ 15.90	\$ 13.40
Fourth Quarter	\$ 17.02	\$ 13.70
2013		
First Quarter	\$ 33.90	\$ 17.40
Second Quarter	\$ 26.80	\$ 9.80
Third Quarter	\$ 14.60	\$ 10.20
Fourth Quarter	\$ 20.50	\$ 11.00

As of March 3, 2015, there were approximately 83 holders of record of our common stock, as shown on the records of our transfer agent. We believe that our stockholders exceed 18,400 as the number of record holders excludes shares held in "street name" through brokers.

Dividends

We have never paid any cash dividends on our common stock. We currently expect to retain future earnings, if any, for use in the operation and expansion of our business and do not anticipate paying any cash dividends in the foreseeable future.

Recent Sales of Unregistered Securities

None.

Issuer Purchases of Equity Securities

Period	(a) Total Number of Shares (or Units) Purchased ⁽¹⁾ (In thousands)	(b) Average Price Paid per Share (or Unit)	(c) Total Number of Shares (or Units) Purchased as Part of Publicly Announced Plans or Programs	(d) Maximum Number (or Approximate Dollar Value) of Shares (or Units) that May Yet Be Purchased Under the Plans or Programs
October 1, 2014 to October 31, 2014	-	\$ -	-	-
November 1, 2014 to November 30, 2014	-	-	-	-
December 1, 2014 to December 31, 2014	-	-	-	-
Total	-	\$ -	-	-

(1) During the 3 months ended December 31, 2014, no securities were purchased by the Company.

ITEM 6.

SELECTED FINANCIAL DATA

The following selected financial data should be read in conjunction with Management's Discussion and Analysis of Financial Condition and Results of Operations, and with the Consolidated Financial Statements and Notes thereto which are included elsewhere in this Form 10-K. The Consolidated Statements of Operations Data for the years ended December 31, 2014, 2013 and 2012 and the Consolidated Balance Sheets Data as of December 31, 2014 and 2013 are derived from the audited Consolidated Financial Statements included elsewhere in this Form 10-K. The Consolidated Statements of Operations Data for the years ended December 31, 2011 and 2010 and the Consolidated Balance Sheets Data as of December 31, 2012, 2011 and 2010 are derived from audited Consolidated Financial Statements that are not included in this Form 10-K. Historical results are not necessarily indicative of results to be anticipated in the future.

	Year Ended December 31,				
	2014	2013	2012	2011	2010
(In thousands, except per share data)					
Consolidated Statements of Operations Data:					
Total revenues	\$ 11,032	\$ 11,251	\$ 9,714	\$ 21,614	\$ 23,950
Operating expenses:					
Research and development	84,580	50,870	49,146	51,322	53,680
General and administrative	17,377	25,943	28,164	17,570	16,879
Unoccupied facility expense	386	926	-	-	-
Amortization of intangible assets	-	-	-	299	980
Total operating expenses	102,343	77,739	77,310	69,191	71,539
Loss from operations	(91,311)	(66,488)	(67,596)	(47,577)	(47,589)
Other income (expense):					
Interest income	191	116	291	103	85
Interest expense	(35)	-	(2,351)	(1,957)	(1,654)
Other income (expense), net ⁽¹⁾	433	(348)	(293)	834	(8,150)
Net loss	(90,722)	(66,720)	(69,949)	(48,597)	(57,308)
Net loss attributable to Dynavax	(90,722)	(66,720)	(69,949)	(48,597)	(57,308)
Preferred stock deemed dividend ⁽²⁾	-	(8,469)	-	-	-
Net loss allocable to Dynavax common stockholders	\$ (90,722)	\$ (75,189)	\$ (69,949)	\$ (48,597)	\$ (57,308)
Basic and diluted net loss per share allocable to Dynavax common stockholders	\$ (3.45)	\$ (3.83)	\$ (4.10)	\$ (3.88)	\$ (6.95)
Shares used to compute basic and diluted net loss per share allocable to Dynavax common stockholders	26,289	19,628	17,047	12,510	8,246

- (1) Includes the impact of the anti-dilution provision associated with the common stock and warrants issued to Symphony Capital Partners, L.P. and Symphony Strategic Partners, LLC (collectively, "Symphony") and the change in fair value of the Symphony-related long-term contingent and warrant liabilities for the year ended December 31, 2010.
- (2) Deemed dividend related to beneficial conversion feature of convertible preferred stock. The fair value of the common stock into which the Series B Preferred Stock is convertible exceeded the allocated purchase price of the Series B Preferred Stock by \$8.5 million on the date of issuance, resulting in a deemed dividend. The Company recognized the deemed dividend as a one-time, non-cash, deemed dividend to the holders of Series B Preferred Stock on the date of issuance, which is the date the stock first became convertible.

	December 31,				
	2014	2013	2012	2011	2010
(In thousands)					
Consolidated Balance Sheets Data:					
Cash, cash equivalents and marketable securities	\$ 122,652	\$ 189,376	\$ 125,130	\$ 113,961	\$ 72,154
Working capital	107,158	176,186	109,173	97,399	60,598
Total assets	138,290	204,622	139,752	134,102	84,249
Note payable to Symphony Dynamo Holdings LLC ⁽¹⁾	-	-	-	12,810	10,939
Long-term debt	9,559	-	-	-	-
Accumulated deficit	(592,933)	(502,211)	(435,491)	(365,542)	(316,945)
Total Dynavax stockholders' equity	100,482	186,294	114,826	99,880	52,111

- (1) The note payable to Symphony Dynamo Holdings LLC ("Holdings") was paid in cash on December 31, 2012.

The following Management's Discussion and Analysis of Financial Condition and Results of Operations contains forward-looking statements that involve a number of risks and uncertainties. Our actual results could differ materially from those indicated by forward-looking statements as a result of various factors, including but not limited to, the period for which we estimate our cash resources are sufficient, the availability of additional funds, as well as those set forth under "Risk Factors" and those that may be identified from time to time in our reports and registration statements filed with the Securities and Exchange Commission.

The following discussion and analysis is intended to provide an investor with a narrative of our financial results and an evaluation of our financial condition and results of operations. The discussion should be read in conjunction with "Item 6—Selected Financial Data" and the Consolidated Financial Statements and the related notes thereto set forth in "Item 8—Financial Statements and Supplementary Data."

Overview

We are a clinical-stage biopharmaceutical company that uses TLR biology to discover and develop novel vaccines and therapeutics. Our development programs are organized under our three areas of focus: vaccine adjuvants, cancer immunotherapy, and autoimmune and inflammatory diseases.

Our vaccine research has focused on the use of TLR9 agonists as novel adjuvants. Our lead vaccine product candidate is HEPLISAV-B™, an investigational adult hepatitis B vaccine in Phase 3 clinical development. HEPLISAV-B combines our proprietary TLR9 agonist adjuvant, and recombinant hepatitis B surface antigen ("rHBsAg" or "HBsAg") to elicit a response after two doses. In Phase 3 trials, HEPLISAV-B demonstrated earlier protection with fewer doses than currently-licensed vaccines and an adverse event profile similar to a licensed hepatitis B vaccine. Based on those data, we submitted a Biologics License Application ("BLA") to the U.S. Food and Drug Administration ("FDA") in 2012. In 2013 the FDA issued a Complete Response Letter ("CRL") indicating that it would not approve the BLA because hypothetical risks of the novel adjuvant warranted a larger safety database to assess the possibility of rare autoimmune side effects. In April, 2014 we initiated HBV-23, a Phase 3 study of HEPLISAV-B, in order to provide a sufficiently-sized database for the FDA to complete its review of our BLA. HBV-23 was fully enrolled in September, 2014. We expect follow-up for the last patients to be complete in October, 2015. In the first quarter of 2016, we intend to submit to FDA our revised BLA with answers to all questions raised and that submission is expected to be assigned a 6-month Prescription Drug User Fee Act (PDUFA) review period. If approved, we expect to launch HEPLISAV-B in the fourth quarter of 2016.

Through our expertise in TLR biology we have designed compounds that stimulate multiple innate mechanisms of tumor killing along with developing immune memory associated with antigens found in tumors. Our lead cancer immunotherapy candidate is SD-101, a C Class CpG TLR9 agonist that was selected for characteristics optimal for treatment of cancer, including high interferon induction. In animal models, SD-101 demonstrated significant anti-tumor effects at both the injected site and at distant sites. Two Phase 1 clinical studies of SD-101 have been completed, establishing that it is safe and well-tolerated at a range of doses far exceeding the expected therapeutic level for oncology uses. We have begun a clinical program intended to assess the preliminary efficacy of SD-101 in a range of tumors and in combination with a range of treatments.

Dynavax has several clinical and preclinical programs focused on therapeutics for autoimmune and inflammatory diseases. Our most advanced inflammatory disease candidate is AZD1419, which is partnered with AstraZeneca AB ("AstraZeneca"). AZD1419 is designed to change the basic immune response to environmental allergens, such as house dust and pollens, leading to prolonged reduction in asthma symptoms by converting the response from one primarily mediated by type-2 helper T cells ("Th2") to type-1 helper T cells ("Th1"). A Phase 1a study of AZD1419 demonstrated its safety and tolerability in healthy subjects. We are currently working with AstraZeneca to design a Phase 2 study, which AstraZeneca will fully fund and we will conduct, beginning in the second half of 2015.

There is also strong rationale for the use of TLR inhibitors to treat autoimmune disease. These conditions arise from dysfunction in the innate immune system resulting in the body seeing its own cells and tissues as pathogens and attacking them. Various autoimmune diseases are characterized by over-stimulation of endosomal TLRs. Promising programs based on this science include DV1179, our TLR7/9 inhibitor for autoimmune or inflammatory conditions. In three clinical studies in both healthy subjects and patients with autoimmune disease, DV1179 was safe and well tolerated at a range of doses with up to 8 weekly injections. In a Phase 2 study in systemic lupus, DV1179 did not meet prespecified pharmacodynamic endpoints related to reduction in interferon alpha-regulated genes. Following conclusion of the study, our collaborator on this program, GSK, declined its option to license DV1179 and we regained global rights to continue the development of DV1179 and other TLR 7/9 inhibitors for all indications. Data from the lupus trial and our preclinical work suggest that DV1179 was active but did not achieve systemic bioavailability at the levels necessary to reach all of the diverse body systems impacted by lupus. Therefore, we believe that DV1179 remains an important therapeutic candidate in autoimmune and inflammatory indications that do not require systemic bioavailability. Potential applications

include autoimmune pancreatitis, nonalcoholic steatohepatitis (“NASH”) and autoimmune skin diseases such as scleroderma and dermatomyositis.

Our revenues consist of amounts earned from collaborations, grants and fees from services and licenses. Product revenue will depend on our ability to receive regulatory approvals for, and successfully market, our drug candidates. We have yet to generate any revenues from product sales and have recorded an accumulated deficit of \$592.9 million at December 31, 2014. These losses have resulted principally from costs incurred in connection with research and development activities, compensation and other related personnel costs and general corporate expenses. Research and development activities include costs of outside contracted services including clinical trial costs, manufacturing and process development costs, research costs and other consulting services. Salaries and other personnel-related costs include non-cash stock-based compensation associated with options and other equity awards granted to employees. General corporate expenses include outside services such as accounting, consulting, business development, investor relations, insurance services and legal costs. Our operating results may fluctuate substantially from period to period principally as a result of the timing of preclinical activities and other activities related to clinical trials for our drug candidates.

As of December 31, 2014, we had \$122.7 million in cash, cash equivalents and marketable securities. Since our inception, we have relied primarily on the proceeds from public and private sales of our equity securities and revenues from collaboration agreements to fund our operations. We expect to continue to spend substantial funds in connection with the development and manufacturing of our product candidates, particularly HEPLISAV-B, human clinical trials for our product candidates and additional applications and advancement of our technology. In order to continue these activities, we may need to raise additional funds. This may occur through strategic alliance and licensing arrangements and/or future public or private debt and equity financings. If adequate funds are not available in the future, we may need to delay, reduce the scope of or put on hold the HEPLISAV-B program or other development programs while we seek strategic alternatives.

Critical Accounting Policies and the Use of Estimates

The accompanying discussion and analysis of our financial condition and results of operations are based upon our consolidated financial statements and the related disclosures, which have been prepared in accordance with U.S. generally accepted accounting principles. The preparation of these financial statements requires us to make estimates, assumptions and judgments that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the balance sheet dates and the reported amounts of revenues and expenses for the periods presented. On an ongoing basis, we evaluate our estimates, assumptions and judgments described below that have the greatest potential impact on our consolidated financial statements, including those related to revenue recognition, research and development activities and stock-based compensation. We base our estimates on historical experience and on various other assumptions that we believe to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Accounting assumptions and estimates are inherently uncertain and actual results may differ materially from these estimates under different assumptions or conditions.

While our significant accounting policies are more fully described in Note 2 to the Consolidated Financial Statements, we believe the following critical accounting policies reflect the more significant judgments and estimates used in the preparation of our financial statements.

Revenue Recognition

Our revenues consist of amounts earned from collaborations, grants and fees from services and licenses. We enter into license and manufacturing agreements and collaborative research and development arrangements with pharmaceutical and biotechnology partners that may involve multiple deliverables. Our arrangements may include one or more of the following elements: upfront license payments, cost reimbursement for the performance of research and development activities, milestone payments, other contingent payments, contract manufacturing service fees, royalties and license fees. Each deliverable in the arrangement is evaluated to determine whether it meets the criteria to be accounted for as a separate unit of accounting or whether it should be combined with other deliverables. In order to account for the multiple-element arrangements, the Company identifies the deliverables included within the arrangement and evaluates which deliverables represent separate units of accounting. Analyzing the arrangement to identify deliverables requires the use of judgment, and each deliverable may be an obligation to deliver services, a right or license to use an asset, or another performance obligation. We recognize revenue when there is persuasive evidence that an arrangement exists, delivery has occurred or services have been rendered, the price is fixed or determinable and collectability is reasonably assured.

Non-refundable upfront fees received for license and collaborative agreements entered into prior to January 1, 2011 and other payments under collaboration agreements where we have continuing performance obligations related to the payments are deferred and recognized over our estimated performance period. Revenue is recognized on a ratable basis, unless we determine that another method is more appropriate, through the date at which our performance obligations are completed. Management makes its best estimate of the period over which we expect to fulfill our performance obligations, which may include clinical development activities. Given the uncertainties of research and development collaborations, significant judgment is required to determine the duration of the

performance period. We recognize cost reimbursement revenue under collaborative agreements as the related research and development costs are incurred, as provided for under the terms of these agreements.

Contingent consideration received for the achievement of a substantive milestone is recognized in its entirety in the period in which the milestone is achieved. A milestone is defined as an event having all of the following characteristics: (i) there is substantive uncertainty at the date the arrangement is entered into that the event will be achieved, (ii) the event can only be achieved based in whole or in part on either the entity's performance or a specific outcome resulting from the entity's performance and (iii) if achieved, the event would result in additional payments being due to the entity.

Our license and collaboration agreements with our partners provide for payments to be paid to us upon the achievement of development milestones. Given the challenges inherent in developing biologic products, there is substantial uncertainty whether any such milestones will be achieved at the time we entered into these agreements. In addition, we evaluate whether the development milestones meet the criteria to be considered substantive. The conditions include: (i) the development work is contingent on either of the following: (a) the vendor's performance to achieve the milestone or (b) the enhancement of the value of the deliverable item or items as a result of a specific outcome resulting from the vendor's performance to achieve the milestone; (ii) it relates solely to past performance and (iii) it is reasonable relative to all the deliverable and payment terms within the arrangement. As a result of our analysis, we consider our development milestones to be substantive and, accordingly, we expect to recognize as revenue future payments received from such milestones as we achieve each milestone.

Milestone payments that are contingent upon the achievement of substantive at-risk performance criteria are recognized in full upon achievement of those milestone events in accordance with the terms of the agreement and assuming all other revenue recognition criteria have been met. All revenue recognized to date under our collaborative agreements has been nonrefundable.

Our license and collaboration agreements with certain partners also provide for contingent payments to be paid to us based solely upon the performance of our partner. For such contingent payments we expect to recognize the payments as revenue upon receipt, provided that collection is reasonably assured and the other revenue recognition criteria have been satisfied.

Revenues from manufacturing services are recognized upon meeting the criteria for substantial performance and acceptance by the customer.

Revenue from royalty payments is contingent on future sales activities by our licensees. As a result, we recognize royalty revenue when all revenue recognition criteria have been satisfied.

Revenue from government and private agency grants is recognized as the related research expenses are incurred and to the extent that funding is approved. Additionally, we recognize revenue based on the facilities and administrative cost rate reimbursable per the terms of the grant awards.

Research and Development Expenses and Accruals

Research and development expenses include personnel and facility-related expenses, outside contracted services including clinical trial costs, manufacturing and process development costs, research costs and other consulting services and non-cash stock-based compensation. Research and development costs are expensed as incurred. Amounts due under such arrangements may be either fixed fee or fee for service, and may include upfront payments, monthly payments and payments upon the completion of milestones or receipt of deliverables. Non-refundable advance payments under agreements are capitalized and expensed as the related goods are delivered or services are performed.

We contract with third parties to perform various clinical trial activities in the on-going development of potential products. The financial terms of these agreements are subject to negotiation, vary from contract to contract and may result in uneven payment flows to our vendors. Payments under the contracts depend on factors such as the achievement of certain events, successful enrollment of patients, and completion of portions of the clinical trial or similar conditions. Our accrual for clinical trials is based on estimates of the services received and efforts expended pursuant to contracts with clinical trial centers and clinical research organizations. We may terminate these contracts upon written notice and we are generally only liable for actual effort expended by the organizations to the date of termination, although in certain instances we may be further responsible for termination fees and penalties. The Company makes estimates of its accrued expenses as of each balance sheet date based on the facts and circumstances known to the Company at that time. There have been no material adjustments to the Company's prior period accrued estimates for clinical trial activities through December 31, 2014.

Stock-Based Compensation

Stock-based compensation expense for stock options and other stock awards is estimated at the grant date based on the award's fair value-based measurement and is recognized on a straight-line basis over the award's vesting period, assuming appropriate

forfeiture rates. Our determination of the fair value-based measurement of stock options on the date of grant using an option-pricing model is affected by our stock price, as well as assumptions regarding a number of highly complex and subjective variables. These variables include, but are not limited to, our expected stock price volatility over the term of the awards, and actual and projected employee stock option exercise behaviors. In the future, as additional empirical evidence regarding these input estimates becomes available, we may change or refine our approach of deriving these input estimates. These changes could impact our fair value-based measurement of stock options granted in the future. Changes in the fair value-based measurement of stock awards could materially impact our operating results.

We selected the Black-Scholes option pricing model as the most appropriate method for determining the estimated fair value-based measurement of our stock options. The Black-Scholes model requires the use of highly subjective and complex assumptions which determine the fair value-based measurement of stock options, including the option's expected term and the price volatility of the underlying stock. Our current estimate of volatility is based on the historical volatility of our stock price. To the extent volatility in our stock price increases in the future, our estimates of the fair value of options granted in the future could increase, thereby increasing stock-based compensation cost recognized in future periods. We derive the expected term assumption primarily based on our historical settlement experience, while giving consideration to options that have not yet completed a full life cycle. Stock-based compensation cost is recognized only for awards ultimately expected to vest. Our estimate of the forfeiture rate is based primarily on our historical experience. To the extent we revise this estimate in the future, our share-based compensation cost could be materially impacted in the period of revision.

Results of Operations

Revenues

Revenues consist of amounts earned from collaborations, grants and services and license fees. Collaboration revenue includes amounts recognized under our collaboration agreements. Grant revenue includes amounts earned under government and private agency grants. Service and license fees include revenues related to research and development and contract manufacturing services, license fees and royalty payments.

The following is a summary of our revenues for the years ended December 31, 2014, 2013 and 2012 (in thousands, except for percentages):

Revenues:	Year Ended December 31,			Increase (Decrease) from 2013 to 2014		Increase (Decrease) from 2012 to 2013	
	2014	2013	2012	\$	%	\$	%
	Collaboration revenue	\$ 7,933	\$ 4,929	\$ 4,610	\$ 3,004	61%	\$ 319
Grant revenue	2,688	5,138	3,939	(2,450)	(48)%	1,199	30%
Service and license revenue	411	1,184	1,165	(773)	(65)%	19	2%
Total revenues	<u>\$ 11,032</u>	<u>\$ 11,251</u>	<u>\$ 9,714</u>	<u>\$ (219)</u>	<u>(2)%</u>	<u>\$ 1,537</u>	<u>16%</u>

2014 versus 2013

Total revenues for the year ended December 31, 2014, decreased by \$0.2 million or 2% as compared to the same period in 2013, as the increase in collaboration revenue offset the decrease in grant revenue and service and license revenue. Collaboration revenue for the year ended December 31, 2014, increased by \$3.0 million due to a \$5.4 million payment received from AstraZeneca in the first quarter of 2014 that is being deferred and recognized over the estimated performance period and recognition of \$1.1 million of additional revenue resulting from a revision of the estimated period of performance under the GSK collaboration agreement. Grant revenue for the year ended December 31, 2014, decreased by \$2.5 million from the same period in 2013 primarily due to a decrease in revenue recognized from our National Institute of Health's National Institute of Allergy and Infectious Diseases ("NIAID") contracts for adjuvant development and other programs funded by grants. Service and license revenue for the year ended December 31, 2014, decreased by \$0.8 million from the same period in 2013 due to lower royalty revenue received by Dynavax Europe.

2013 versus 2012

Total revenues for the year ended December 31, 2013, increased by \$1.5 million, or 16%, as compared to the same period in 2012 principally due to an increase in grant revenue. Grant revenue for the year ended December 31, 2013, increased by \$1.2 million from the same period in 2012 primarily due to an increase in revenue recognized from our NIAID contract for adjuvant development and other programs funded by grants.

Research and Development

Research and development expense consists primarily of compensation and related personnel costs, which include benefits, recruitment, travel and supply costs, outside services, allocated facility costs and non-cash stock-based compensation. Outside services relate to our preclinical experiments and clinical trials, regulatory filings and manufacturing of our product candidates. For the years ended December 31, 2014, 2013 and 2012, approximately 80%, 73% and 73%, respectively, of our total research and development expense, excluding non-cash stock-based compensation, is related to our lead product candidate, HEPLISAV-B. The remainder of our research and development expense results primarily from earlier-stage programs. The following is a summary of our research and development expense (in thousands, except for percentages):

Research and Development:	Year Ended December 31,			Increase (Decrease) from 2013 to 2014		Increase (Decrease) from 2012 to 2013	
	2014	2013	2012	\$	%	\$	%
	Compensation and related personnel costs	\$ 24,352	\$ 20,649	\$ 21,134	\$ 3,703	18%	\$ (485)
Outside services	50,923	20,247	19,371	30,676	152%	876	5%
Facility costs	6,437	5,746	5,127	691	12%	619	12%
Non-cash stock-based compensation	2,868	4,228	3,514	(1,360)	(32)%	714	20%
Total research and development	<u>\$ 84,580</u>	<u>\$ 50,870</u>	<u>\$ 49,146</u>	<u>\$ 33,710</u>	66%	<u>\$ 1,724</u>	4%

2014 versus 2013

Research and development expense for the year ended December 31, 2014, increased by \$33.7 million, or 66%, as compared to 2013. Outside services increased by \$30.7 million for the year ended December 31, 2014, compared to the same period in 2013 primarily due to the initiation of our HEPLISAV-B clinical trial during 2014. Compensation and related personnel costs increased by \$3.7 million due to an overall increase in employee headcount. Non-cash stock-based compensation expense decreased by \$1.4 million as accelerated vesting of stock options and modifications of stock options related to management continuity and severance agreements was incurred in 2013 and no such expense was incurred in 2014. Facility costs increased by \$0.7 million compared to 2013 due to repairs and maintenance of our manufacturing facility.

2013 versus 2012

Research and development expense for the year ended December 31, 2013, increased by \$1.7 million, or 4%, as compared to 2012. Outside services increased by \$0.9 million compared to 2012 primarily due to additional development work related to our adjuvant studies and collaboration with AstraZeneca. Facility costs increased by \$0.6 million compared to 2012 primarily due to repairs and maintenance of our manufacturing facility and depreciation on recently purchased manufacturing equipment. Non-cash stock-based compensation expense increased by \$0.7 million due to accelerated vesting of stock options and modifications of stock options related to management continuity and severance agreements. Compensation and related personnel costs decreased by \$0.5 million primarily due to a decrease in employee headcount.

General and Administrative

General and administrative expense consists primarily of compensation and related personnel costs; outside services such as accounting, consulting, business development, investor relations and insurance services; legal costs that include corporate and patent-related expenses; allocated facility costs and non-cash stock-based compensation.

The following is a summary of our general and administrative expenses (in thousands, except for percentages):

General and Administrative:	Year Ended December 31,			Increase (Decrease) from 2013 to 2014		Increase (Decrease) from 2012 to 2013	
	2014	2013	2012	\$	%	\$	%
Compensation and related personnel costs	\$ 6,637	\$ 10,521	\$ 9,468	\$ (3,884)	(37)%	\$ 1,053	11%
Outside services	4,325	4,319	8,730	6	0%	(4,411)	(51)%
Legal costs	2,491	2,361	2,437	130	6%	(76)	(3)%
Facility costs	703	630	604	73	12%	26	4%
Non-cash stock-based compensation	3,221	8,112	6,925	(4,891)	(60)%	1,187	17%
Total general and administrative	\$ 17,377	\$ 25,943	\$ 28,164	\$ (8,566)	(33)%	\$ (2,221)	(8)%

2014 versus 2013

General and administrative expenses for the year ended December 31, 2014, decreased by \$8.6 million, or 33%, compared to the same period in 2013. Non-cash stock-based compensation decreased by \$4.9 million for the year ended December 31, 2014, as the same period in 2013 included accelerated vesting of stock options related to the transition of our former Chief Executive Officer and certain other employees and executive officers. Compensation and related personnel costs decreased by \$3.9 million for the year ended December 31, 2014, as the same period in 2013 included severance expense and other one-time compensation costs related to our former Chief Executive Officer and certain other employees and executive officers.

2013 versus 2012

General and administrative expenses for the year ended December 31, 2013, decreased by \$2.2 million, or 8%, compared to the same period in 2012. Outside services expense decreased \$4.4 million due to reduced marketing expenses. Compensation costs and non-cash stock-based compensation increased due to severance expense and other one-time compensation costs as well as accelerated vesting of stock options related to the transition of our former Chief Executive Officer and certain other employees and executive officers.

Interest Income, Interest Expense and Other Income (Expense)

Interest income is reported net of amortization of premiums and discounts on marketable securities, realized gains and losses on investments, and fees related to investment portfolio management. Interest expense in 2012 was related to the \$15 million note payable held by Symphony Dynamo Holdings LLC ("Holdings"), which was paid in cash on December 31, 2012. Other expense includes gains and losses on foreign currency transactions as well as gains and losses on disposals of property and equipment.

The following is a summary of our interest income, interest expense and other income (expense) (in thousands, except for percentages):

	Year Ended December 31,			Increase (Decrease) from 2013 to 2014		Increase (Decrease) from 2012 to 2013	
	2014	2013	2012	\$	%	\$	%
Interest income	\$ 191	\$ 116	\$ 291	\$ 75	65%	\$ (175)	(60)%
Interest expense	\$ (35)	\$ -	\$ (2,351)	\$ 35	100%	\$ (2,351)	(100)%
Other income (expense)	\$ 433	\$ (348)	\$ (293)	\$ 781	224%	\$ (55)	(19)%

Interest income for the year ended December 31, 2014, increased by \$0.1 million, or 65%, compared to the same period in 2013 due to higher average marketable securities balance in 2014 as compared to 2013, resulting from the October 2013 common stock and preferred stock offerings which resulted in net proceeds of approximately \$80.9 and \$44.2 million, respectively. Interest income for the year ended December 31, 2013, decreased by \$0.2 million, or 60%, compared to the same period in 2012 due to lower average marketable securities balance.

Interest expense for the year ended December 31, 2014 increased over the same period in 2013 due to the accretion of interest expense related to the note payable to Hercules Technology Growth Capital, Inc. ("Hercules"). Interest expense for the year ended December 31, 2013 decreased compared to the same period in 2012 due to the interest recorded for the note payable to Holdings which was repaid in cash on December 31, 2012.

Other income (expense) for the year ended December 31, 2014 increased by \$0.8 million or 224%, compared to the same period in 2013 due to gain on foreign currency transactions in 2014 related to fluctuations in the value of the Euro compared to the U.S. dollar. Other income (expense) for the year ended December 31, 2013 decreased by \$0.1 million, or 19%, compared to the same period in 2012 due to losses on foreign currency transactions in 2013 related to fluctuations in the value of the Euro compared to the U.S. dollar.

Liquidity and Capital Resources

As of December 31, 2014, we had \$122.7 million in cash, cash equivalents and marketable securities. Since our inception, we have relied primarily on the proceeds from public and private sales of our equity securities and revenues from collaboration agreements to fund our operations. Our funds are currently invested in short-term money market funds and U.S. government agency securities.

In December 2014, we entered into a Loan and Security Agreement (the "Loan Agreement") with Hercules under which we may borrow up to \$40.0 million in two tranches. We drew down the first tranche of \$10.0 million upon closing of the transaction on December 23, 2014. The second tranche, of \$30.0 million, can be drawn at our option any time prior to September 30, 2015, but only if we have achieved certain milestones relating to the ongoing HEPLISAV-B Phase 3 study. The term loan accrues interest at equal to the greater of either (i) 9.75% plus the prime rate as reported from time to time in The Wall Street Journal minus 5.25%, and (ii) 9.75% per annum and is secured by substantially all of our existing and after-acquired assets, excluding our intellectual property assets.

On November 10, 2014, we entered into an At Market Issuance Sales Agreement (the "Agreement") with Cowen and Company, LLC ("Cowen") under which we may offer and sell our common stock having aggregate sales proceeds of up to \$50 million from time to time through Cowen as our sales agent. Sales of our common stock through Cowen, if any, will be made by means of ordinary brokers' transactions on The NASDAQ Capital Market or otherwise at market prices prevailing at the time of sale, in block transactions, or as otherwise agreed upon by us and Cowen. Cowen will use commercially reasonable efforts to sell our common stock from time to time, based upon instructions from us (including any price, time or size limits or other customary parameters or conditions we may impose). We will pay Cowen a commission of up to 3.0% of the gross sales proceeds of any common stock sold through Cowen under the Agreement. No sales of our common stock have taken place under this Agreement as of December 31, 2014.

During the year ended December 31, 2014, we used \$73.7 million of cash for our operations and had a net loss of \$90.7 million, of which \$8.7 million consisted of non-cash charges such as stock-based compensation, depreciation and amortization, accretion and amortization on marketable securities and loss on lease. By comparison, during the year ended December 31, 2013, we used \$58.7 million of cash for our operations with a net loss of \$66.7 million, of which \$15.5 million consisted of non-cash charges such as stock-based compensation, depreciation and amortization, accretion and amortization on marketable securities and loss on lease. Cash used in our operations during 2014 increased by \$15.1 million. Net cash used in operating activities is impacted by changes in our operating assets and liabilities due to timing of cash receipts and expenditures.

During the year ended December 31, 2014, cash provided by investing activities was \$90.6 million compared to \$51.4 million of cash used in investing activities for the year ended December 31, 2013. Cash provided by investing activities during 2014 included \$92.3 million of net proceeds of marketable securities versus \$49.7 million of net purchases of marketable securities during 2013. Net cash used in the purchases of equipment increased an additional \$38 thousand compared to the prior year and totaled \$1.7 million and \$1.6 million in 2014 and 2013, respectively.

During the year ended December 31, 2014, cash provided by financing activities decreased by \$115.5 million, totaling \$9.9 million, compared to \$125.4 million for the year ended December 31, 2013. Cash provided by financing activities for the year ended December 31, 2014 included net proceeds of \$9.6 million drawn down under the Hercules Loan Agreement. Cash provided by financing activities in 2013 included the sale of 7,957,000 shares of common stock and 43,430 shares of Series B Convertible Preferred Stock in separate underwritten public offerings for net proceeds of \$125.1 million. Additionally, proceeds from warrant exercises for the year ended December 31, 2014 increased \$0.2 million as compared to the same period in 2013.

During the year ended December 31, 2013, we used \$58.7 million of cash for our operations and had a net loss of \$66.7 million, of which \$15.5 million consisted of non-cash charges such as stock-based compensation, depreciation and amortization, accretion and amortization on marketable securities and unoccupied facility expense. By comparison, during the year ended December 31, 2012, we used \$43.8 million of cash for our operations with a net loss of \$69.9 million, of which \$15.1 million consisted of non-cash charges such as stock-based compensation, depreciation and amortization, accretion and amortization on marketable securities and non-cash interest on borrowings. Cash used in our operations during 2013 increased by \$14.9 million, totaling \$58.7 million for the year ended December 31, 2013 compared to \$43.8 million for the same period in 2012. The increase was primarily due to a \$9.1 million change in accounts receivable related to a decrease in payments received from our collaborations with GSK and AstraZeneca in the prior year and an increase in stock based compensation of \$1.9 million related to employee severance arrangements and awards for non-employees.

During the year ended December 31, 2013, we used \$51.4 million of cash in investing activities compared to \$39.7 million for the year ended December 31, 2012. Cash provided by investing activities during 2013 included \$49.7 million of net purchases of marketable securities versus \$36.8 million of net purchases of marketable securities during 2012. Cash used in investing activities decreased an additional \$1.3 million compared to the prior year due to purchases of property and equipment which totaled \$1.6 million and \$2.9 million in 2013 and 2012, respectively.

During the year ended December 31, 2013, cash provided by financing activities increased by \$66.4 million, totaling \$125.4 million, compared to \$59.0 million for the year ended December 31, 2012. Cash provided by financing activities in 2013 included the sale of 7,957,000 shares of common stock and 43,430 shares of Series B Convertible Preferred Stock in separate underwritten public offerings for net proceeds of \$125.1 million. Cash provided by financing activities for the year ended December 31, 2012 included net proceeds of \$69.6 million from a public stock offering of common stock. These proceeds were partially offset by our \$15.0 million repayment of the note payable to Holdings on December 31, 2012. Additionally, proceeds from stock option and warrant exercises for the year ended December 31, 2013 decreased \$1.8 million as compared to the same period in 2012.

We currently estimate that we have sufficient cash resources to meet our anticipated cash needs through at least the next 12 months based on cash and cash equivalents and marketable securities on hand as of December 31, 2014 and anticipated revenues and funding from existing agreements. We expect to continue to spend substantial funds in connection with the development and manufacturing of our product candidates, particularly HEPLISAV-B, human clinical trials for our other product candidates and additional applications and advancement of our technology. In order to continue these activities, we may need to raise additional funds. This may occur through strategic alliance and licensing arrangements and/or future public or private debt or equity financings. Sufficient funding may not be available, or if available, may be on terms that significantly dilute or otherwise adversely affect the rights of existing stockholders. If adequate funds are not available in the future, we may need to delay, reduce the scope of or put on hold the HEPLISAV-B program or other development programs while we seek strategic alternatives.

Contractual Obligations

The following summarizes our significant contractual obligations at December 31, 2014 and the effect those obligations are expected to have on our liquidity and cash flows in future periods (in thousands):

Contractual Obligations:	Total	2015	2016-2017	2018-2019	2020 and Thereafter
Operating leases	\$ 10,279	\$ 2,213	\$ 4,578	\$ 1,801	\$ 1,687
Debt obligations ⁽¹⁾					
Principal	10,000	-	7,425	2,575	-
Interest	2,343	929	1,328	86	-
Fees	840	-	-	840	-
Total	<u>\$ 23,462</u>	<u>\$ 3,142</u>	<u>\$ 13,331</u>	<u>\$ 5,302</u>	<u>\$ 1,687</u>

(1) See Note 10: Long-Term Debt, of Notes to Consolidated Financial Statements for further discussion of our debt obligations.

We lease our facilities in Berkeley, California (the "Berkeley Lease"), and Düsseldorf, Germany (the "Düsseldorf Lease") under operating leases that expire in June 2018 and March 2023, respectively.

During September 2013, we decided not to occupy a portion of our facility in Berkeley, California. As a result, we recorded an estimated unoccupied facility expense of \$0.9 million during 2013, representing the present value of the rent payments and other costs associated with the lease, net of estimated sublease income, for the remaining life of the operating lease. During the first three quarters of 2014, we reassessed our timing and ability to sublet a portion of our facility and recorded a total unoccupied facility expense of \$0.4 million for the year ended December 31, 2014. In December 2014, we decided to utilize the unoccupied portion of the facility and began to recognize rent expense under the terms noted in the operating lease agreement.

During the fourth quarter of 2014, we established a letter of credit with Silicon Valley Bank as security for the Berkeley Lease in the amount of \$0.4 million. The letter of credit remained outstanding as of December 31, 2014 and is collateralized by a certificate of deposit for \$0.4 million which has been included in restricted cash in the consolidated balance sheets as of December 31, 2014 and 2013. Under the terms of the Berkeley Lease, if the total amount of our cash, cash equivalents and marketable securities falls below \$20 million for a period of more than 30 consecutive days during the lease term, the amount of the required security deposit will increase to \$1.1 million until such time as our projected cash and cash equivalents will exceed \$20 million for the remainder of the lease term, or until our actual cash and cash equivalents remains above \$20 million for a period of 12 consecutive months.

We established a letter of credit with Deutsche Bank as security for our Düsseldorf Lease in the amount of approximately 0.2 million Euros. The letter of credit remained outstanding through December 31, 2014 and is collateralized by a certificate of deposit for 0.2 million Euros which has been included in restricted cash in the consolidated balance sheets as of December 31, 2014 and 2013.

In addition to the non-cancelable commitments included above, we have entered into contractual arrangements that obligate us to make payments to the contractual counterparties upon the occurrence of future events. Also, in the normal course of operations, we have entered into license and other agreements and intend to continue to seek additional rights relating to compounds or technologies in connection with our discovery, manufacturing and development programs. Under the terms of the agreements, we may be required to pay future upfront fees, milestones, royalties on net sales of products originating from the licensed technologies or other payments contingent upon the occurrence of an event that cannot reasonably be estimated.

We rely on research institutions, contract research organizations, clinical investigators as well as clinical and commercial material manufacturers of our product candidates. As of December 31, 2014, under the terms of our agreements, including certain agreements relating to the ongoing Phase 3 trial of HEPLISAV-B, we are obligated to make future payments as services are provided of approximately \$25.5 million through 2016. These agreements are terminable by us upon written notice. Generally, we are liable only for actual effort expended by the organizations at any point in time during the contract through the notice period.

Off-balance Sheet Arrangements

We do not have any off-balance sheet arrangements as defined by rules enacted by the SEC and accordingly, no such arrangements are likely to have a current or future effect on our financial position.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Quantitative and Qualitative Disclosure About Market Risk

Interest Rate Risk

We are subject to interest rate risk. Our investment portfolio is maintained in accordance with our investment policy, which defines allowable investments, specifies credit quality standards and limits the credit exposure of any single issuer. The primary objective of our investment activities is to preserve principal and, secondarily, to maximize income we receive from our investments without significantly increasing risk. Some of the securities that we invest in may have market risk. This means that a change in prevailing interest rates may cause the principal amount of the investment to fluctuate. To minimize this risk, we maintain our portfolio of cash equivalents and investments in short-term money market funds and U.S. government agency securities. We do not invest in auction rate securities or securities collateralized by home mortgages, mortgage bank debt or home equity loans. We do not have derivative financial instruments in our investment portfolio. To assess our risk, we calculate that if interest rates were to rise or fall from current levels by 100 basis points or by 125 basis points, the pro forma change in fair value of our net unrealized loss on investments would be \$1.0 million or \$1.3 million, respectively.

Due to the short duration and conservative nature of our cash equivalents and marketable securities, as well as our intention to hold the investments to maturity, we do not expect any material loss with respect to our investment portfolio.

Foreign Currency Risk

We have certain investments outside the U.S. for the operations of Dynavax Europe with exposure to foreign exchange rate fluctuations. The cumulative translation adjustment reported in the consolidated balance sheet as of December 31, 2014 was \$1.7 million primarily related to translation of Dynavax Europe assets, liabilities and operating results from Euros to U.S. dollars. As of December 31, 2014, the effect of our exposure to these exchange rate fluctuations has not been material, and we do not expect it to become material in the foreseeable future. We do not hedge our foreign currency exposures and have not used derivative financial instruments for speculation or trading purposes.

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Report of Independent Registered Public Accounting Firm

The Board of Directors and Stockholders of Dynavax Technologies Corporation

We have audited the accompanying consolidated balance sheets of Dynavax Technologies Corporation as of December 31, 2014 and 2013, and the related consolidated statements of operations, comprehensive loss, stockholders' equity and cash flows for each of the three years in the period ended December 31, 2014. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits.

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

In our opinion, the financial statements referred to above present fairly, in all material respects, the consolidated financial position of Dynavax Technologies Corporation at December 31, 2014 and 2013, and the consolidated results of its operations and its cash flows for each of the three years in the period ended December 31, 2014, in conformity with U.S. generally accepted accounting principles.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), Dynavax Technologies Corporation's internal control over financial reporting as of December 31, 2014, based on criteria established in Internal Control—Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 Framework) and our report dated March 5, 2015 expressed an unqualified opinion thereon.

/s/ Ernst & Young LLP

Redwood City, California
March 5, 2015

DYNAVAX TECHNOLOGIES CORPORATION
CONSOLIDATED BALANCE SHEETS
(In thousands, except per share amounts)

	December 31,	
	2014	2013
Assets		
Current assets:		
Cash and cash equivalents	\$ 49,511	\$ 23,122
Marketable securities available-for-sale	73,141	166,254
Accounts receivable	727	1,627
Prepaid expenses and other current assets	4,058	1,375
Total current assets	127,437	192,378
Property and equipment, net	7,924	8,706
Goodwill	2,277	2,579
Restricted cash	632	662
Other assets	20	297
Total assets	\$ 138,290	\$ 204,622
Liabilities and stockholders' equity		
Current liabilities:		
Accounts payable	\$ 1,159	\$ 1,901
Accrued research and development	6,938	2,402
Accrued liabilities	6,317	5,764
Deferred revenues	5,865	6,125
Total current liabilities	20,279	16,192
Deferred revenues, net of current portion	6,900	1,173
Long term debt	9,559	-
Other long-term liabilities	1,070	963
Total liabilities	37,808	18,328
Commitments and contingencies (Note 7)		
Stockholders' equity:		
Preferred stock: \$0.001 par value		
Authorized: 5,000 shares; Issued and outstanding:		
Series B Convertible Preferred Stock — 43 shares at December 31, 2014 and 2013	-	-
Common stock: \$0.001 par value; 69,500 and 35,000 shares authorized at December 31, 2014 and 2013, respectively; 26,307 and 26,280 shares issued and outstanding at December 31, 2014 and 2013, respectively	26	263
Additional paid-in capital	695,058	688,390
Accumulated other comprehensive loss	(1,669)	(148)
Accumulated deficit	(592,933)	(502,211)
Total stockholders' equity	100,482	186,294
Total liabilities and stockholders' equity	\$ 138,290	\$ 204,622

See accompanying notes.

DYNAVAX TECHNOLOGIES CORPORATION
CONSOLIDATED STATEMENTS OF OPERATIONS
(In thousands, except per share amounts)

	Year Ended December 31,		
	2014	2013	2012
Revenues:			
Collaboration revenue	\$ 7,933	\$ 4,929	\$ 4,610
Grant revenue	2,688	5,138	3,939
Service and license revenue	411	1,184	1,165
Total revenues	11,032	11,251	9,714
Operating expenses:			
Research and development	84,580	50,870	49,146
General and administrative	17,377	25,943	28,164
Unoccupied Facility expense	386	926	-
Total operating expenses	102,343	77,739	77,310
Loss from operations	(91,311)	(66,488)	(67,596)
Other income (expense):			
Interest income	191	116	291
Interest expense	(35)	-	(2,351)
Other income (expense), net	433	(348)	(293)
Net loss	(90,722)	(66,720)	(69,949)
Preferred stock deemed dividend	-	(8,469)	-
Net loss allocable to common stockholders	\$ (90,722)	\$ (75,189)	\$ (69,949)
Net loss per share allocable to common stockholders - basic and diluted	\$ (3.45)	\$ (3.83)	\$ (4.10)
Weighted average shares outstanding used to compute basic and diluted net loss per share allocable to common stockholders	26,289	19,628	17,047

CONSOLIDATED STATEMENTS OF COMPREHENSIVE LOSS
(In thousands)

	Year Ended December 31,		
	2014	2013	2012
Net loss	\$ (90,722)	\$ (66,720)	\$ (69,949)
Other comprehensive (loss) income:			
Unrealized gain (loss) on marketable securities available-for-sale	32	(76)	48
Cumulative foreign currency translation adjustments	(1,553)	523	366
Total other comprehensive (loss) income	(1,521)	447	414
Total comprehensive loss	\$ (92,243)	\$ (66,273)	\$ (69,535)

See accompanying notes.

DYNAVAX TECHNOLOGIES CORPORATION
CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY

(In thousands)

	Common Stock		Preferred Stock		Additional Paid-In Capital	Accumulated Other Comprehensive Income (Loss)	Accumulated Deficit	Sto
	Shares	Par Amount	Shares	Par Amount				
Balances at December 31, 2011	15,463	155	-	-	466,276	(1,009)	(365,542)	
Issuance of common stock upon exercise of stock options and restricted stock awards	122	1	-	-	1,954	-	-	
Issuance of common stock under Employee Stock Purchase Plan	14	-	-	-	307	-	-	
Proceeds from issuances of common stock and warrants, net of issuance costs	2,680	27	-	-	71,753	-	-	
Stock compensation expense	-	-	-	-	10,439	-	-	
Total other comprehensive income	-	-	-	-	-	414	-	
Net loss	-	-	-	-	-	-	(69,949)	
Balances at December 31, 2012	18,279	183	-	-	550,729	(595)	(435,491)	
Issuance of common stock upon exercise of stock options and restricted stock awards	11	-	-	-	112	-	-	
Issuance of common stock under Employee stock purchase plan	13	-	-	-	224	-	-	
Restricted stock award delivered	12	-	-	-	-	-	-	
Issuance of common stock, net of issuance costs	7,957	80	-	-	80,919	-	-	
Issuance of Series B convertible preferred stock, net of issuance costs	-	-	43	-	44,209	-	-	
Beneficial conversion feature of Series B convertible preferred stock	-	-	-	-	-	-	-	
Deemed dividend to holders of Series B convertible preferred stock	-	-	-	-	-	-	-	
Initial expenses related to ATM agreement	-	-	-	-	(143)	-	-	
Warrants exercised	8	-	-	-	-	-	-	
Stock compensation expense	-	-	-	-	12,340	-	-	
Total other comprehensive income	-	-	-	-	-	447	-	
Net loss	-	-	-	-	-	-	(66,720)	
Balances at December 31, 2013	26,280	\$ 263	43	\$ -	\$ 688,390	\$ (148)	\$ (502,211)	\$
Issuance of common stock upon exercise of stock options and restricted stock awards	5	-	-	-	49	-	-	
Reverse stock split	-	(237)	-	-	237	-	-	
Issuance of common stock under Employee Stock Purchase Plan	11	-	-	-	130	-	-	
Warrants exercised	11	-	-	-	163	-	-	
Stock compensation expense	-	-	-	-	6,089	-	-	
Total other comprehensive income (loss)	-	-	-	-	-	(1,521)	-	
Net loss	-	-	-	-	-	-	(90,722)	
Balances at December 31, 2014	26,307	\$ 26	43	\$ -	\$ 695,058	\$ (1,669)	\$ (592,933)	\$

See accompanying notes.

DYNAVAX TECHNOLOGIES CORPORATION
CONSOLIDATED STATEMENTS OF CASH FLOWS
(In thousands)

	Year Ended December 31,		
	2014	2013	2012
Operating activities			
Net loss	\$ (90,722)	\$ (66,720)	\$ (69,949)
Adjustments to reconcile net loss to net cash used in operating activities:			
Depreciation and amortization	1,404	1,327	1,207
(Gain) loss on disposal of property and equipment	(24)	18	8
Accretion of discounts and amortization of premiums of marketable securities	881	923	1,298
Interest associated with long-term note payable to Symphony Dynamo Holdings LLC ("Holdings")	-	-	2,190
Loss on lease	386	926	-
Stock compensation expense	6,089	12,340	10,439
Changes in operating assets and liabilities:			
Accounts receivable	900	(622)	8,522
Prepaid expenses and other current assets	(2,683)	677	(922)
Restricted cash and other assets	277	176	(116)
Accounts payable	(523)	(657)	126
Accrued liabilities and other long term liabilities	4,810	(2,291)	1,916
Deferred revenues	5,467	(4,770)	1,472
Net cash used in operating activities	<u>(73,738)</u>	<u>(58,673)</u>	<u>(43,809)</u>
Investing activities			
Purchases of marketable securities	(44,807)	(192,044)	(206,149)
Proceeds from maturities of marketable securities	137,071	142,321	169,387
Purchases of property and equipment, net	(1,667)	(1,629)	(2,931)
Net cash provided by (used in) investing activities	<u>90,597</u>	<u>(51,352)</u>	<u>(39,693)</u>
Financing activities			
Proceeds from issuances of common stock	-	80,856	71,780
Proceeds from issuances of preferred stock	-	44,209	-
Proceeds from exercise of stock options and restricted stock awards	49	112	1,955
Proceeds from Employee Stock Purchase Plan	130	224	307
Proceeds from exercise of warrants	163	-	-
Proceeds from long-term debt payable to Hercules, net	9,559	-	-
Payment of notes payable to Holdings	-	-	(15,000)
Net cash provided by financing activities	<u>9,901</u>	<u>125,401</u>	<u>59,042</u>
Effect of exchange rate changes on cash and cash equivalents	(371)	147	118
Net increase (decrease) in cash and cash equivalents	26,389	15,523	(24,342)
Cash and cash equivalents at beginning of year	23,122	7,599	31,941
Cash and cash equivalents at end of year	<u>\$ 49,511</u>	<u>\$ 23,122</u>	<u>\$ 7,599</u>
Supplemental disclosure of cash flow information			
Non-cash investing and financing activities:			
Disposal of fully depreciated property and equipment	\$ 841	\$ 86	\$ 169
Net change in unrealized gain (loss) on marketable securities	<u>\$ 32</u>	<u>\$ (76)</u>	<u>\$ 48</u>

See accompanying notes.

DYNAVAX TECHNOLOGIES CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

1. Organization

Dynavax Technologies Corporation (“we,” “our,” “us,” “Dynavax” or the “Company”), is a clinical-stage biopharmaceutical company that uses toll-like receptor (“TLR”) biology to discover and develop novel vaccines and therapeutics. Our development programs are organized under our three areas of focus: vaccine adjuvants, cancer immunotherapy, and autoimmune and inflammatory diseases. We were incorporated in California in August 1996 under the name Double Helix Corporation, and we changed our name to Dynavax Technologies Corporation in September 1996. We reincorporated in Delaware in 2000.

Subsidiaries

In April 2006, we completed the acquisition of Rhein Biotech GmbH (“Rhein” or “Dynavax Europe”), a wholly-owned subsidiary in Düsseldorf, Germany. In October 2011, we formed Dynavax International, B.V., a wholly-owned subsidiary in Amsterdam, Netherlands.

2. Summary of Significant Accounting Policies

Basis of Presentation

The consolidated financial statements include our accounts and those of our wholly-owned subsidiaries. All significant intercompany accounts and transactions among the entities have been eliminated from the consolidated financial statements.

Liquidity and Financial Condition

We have incurred significant operating losses and negative cash flows from operations since our inception. As of December 31, 2014, we had cash, cash equivalents and marketable securities of \$122.7 million. We currently estimate that we have sufficient cash resources to meet our anticipated cash needs through at least the next 12 months based on cash, cash equivalents and marketable securities on hand as of December 31, 2014 and anticipated revenues and funding from existing collaboration agreements.

We expect to continue to spend substantial funds in connection with the development and manufacturing of our product candidates, particularly HEPLISAV-B, human clinical trials for our product candidates and additional applications and advancement of our technology. In order to continue these activities, we may need to raise additional funds. This may occur through strategic collaboration and licensing arrangements and/or future public or private debt and equity financings. Sufficient additional funding may not be available on acceptable terms, or at all. If adequate funds are not available in the future, we may need to delay, reduce the scope of or put on hold the HEPLISAV-B program or our other development programs while we seek strategic alternatives.

Use of Estimates

The preparation of financial statements in conformity with U.S. generally accepted accounting principles (“U.S. GAAP”) requires management to make informed estimates and assumptions that affect the amounts reported in the consolidated financial statements and accompanying notes. Actual results could differ materially from these estimates.

Reverse Stock Split

All references to numbers of shares of our common stock and per-share information in the accompanying financial statements have been adjusted retroactively to reflect the Company’s ten-for-one reverse stock split effected on November 7, 2014. The par value was not adjusted as a result of the reverse stock split.

Foreign Currency Translation

We consider the local currency to be the functional currency for our international subsidiary, Rhein. Accordingly, assets and liabilities denominated in foreign currencies are translated into U.S. dollars using the exchange rate in effect on the balance sheet date. Revenues and expenses are translated at average exchange rates prevailing throughout the year. Currency translation adjustments arising from period to period are charged or credited to accumulated other comprehensive income (loss) in stockholders’ equity. For the years ended December 31, 2014, 2013 and 2012, we reported an unrealized loss of \$1.6 million, an unrealized gain of \$0.5 million and an unrealized gain of \$0.4 million, respectively. Realized gains and losses resulting from currency transactions are included in the consolidated statements of operations. For the years ended December 31, 2014, 2013 and 2012, we reported a gain of \$0.4 million, a loss of \$0.2 million and a loss of \$0.2 million, respectively, resulting from currency transactions in our consolidated statements of operations.

Cash, Cash Equivalents and Marketable Securities

We consider all highly liquid investments purchased with an original maturity of three months or less and that can be liquidated without prior notice or penalty, to be cash equivalents. Management determines the appropriate classification of marketable securities at the time of purchase. In accordance with our investment policy, we invest in short-term money market funds and U.S. government agency securities. We believe these types of investments are subject to minimal credit and market risk.

We have classified our entire investment portfolio as available-for-sale and available for use in current operations and accordingly have classified all investments as short-term. Available-for-sale securities are carried at fair value based on inputs that are observable, either directly or indirectly, such as quoted market prices for similar securities; quoted prices in markets that are not active; or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the securities, with unrealized gains and losses included in accumulated other comprehensive income (loss) in stockholders' equity. Realized gains and losses and declines in value, if any, judged to be other than temporary on available-for-sale securities are included in interest income or expense. The cost of securities sold is based on the specific identification method. Management assesses whether declines in the fair value of investment securities are other than temporary. In determining whether a decline is other than temporary, management considers the following factors:

- Whether the investment has been in a continuous realized loss position for over 12 months;
- the duration to maturity of our investments;
- our intention and ability to hold the investments to maturity and if it is not more likely than not that we will be required to sell the investment before recovery of the amortized cost bases;
- the credit rating, financial condition and near-term prospects of the issuer; and
- the type of investments made.

To date, there have been no declines in fair value that have been identified as other than temporary.

Concentration of Credit Risk and Other Risks and Uncertainties

We operate in one business segment, which is the discovery and development of biopharmaceutical products. We determine our segments based on the way we organize our business by making operating decisions and assessing performance. In fiscal years 2014, 2013 and 2012, 96%, 89% and 88% of our revenues were earned in the United States, respectively, and the remaining revenues were earned in Germany. As of December 31, 2014 and 2013, 11% and 9%, respectively, of our long-lived assets were located in the United States and the remaining long-lived assets were located in Germany.

Financial instruments that are subject to concentration of credit risk consist primarily of cash equivalents, marketable securities and accounts receivable. Our policy is to invest cash in institutional money market funds and marketable securities of U.S. government and corporate issuers with high credit quality to limit the amount of credit exposure. We currently maintain a portfolio of cash equivalents and marketable securities in a variety of securities, including short-term money market funds and U.S. government agency securities. We have not experienced any losses on our cash equivalents and marketable securities.

Accounts receivable are recorded at invoice value. We review our exposure to accounts receivable, including the requirement for allowances based on management's judgment. We have not historically experienced any significant losses. We do not currently require collateral for any of our accounts receivable.

Our products will require approval from the U.S. Food and Drug Administration ("FDA") and foreign regulatory agencies before commercial sales can commence. There can be no assurance that our products will receive any of these required approvals. The denial or delay of such approvals would have a material adverse impact on our business.

We are subject to risks common to companies in the biopharmaceutical industry, including, but not limited to, new technological innovations, clinical development risk, establishment of appropriate commercial partnerships, protection of proprietary technology, compliance with government and environmental regulations, uncertainty of market acceptance of products, product liability, the volatility of our stock price and the need to obtain additional financing.

Long-Lived Assets

Property and equipment are recorded at cost. Depreciation is computed using the straight-line method over the estimated useful lives of the respective assets. Repair and maintenance costs are charged to expense as incurred. Leasehold improvements are amortized over the remaining life of the initial lease term or the estimated useful lives of the assets, whichever is shorter.

We evaluate the carrying value of long-lived assets, including intangible assets, whenever events or changes in business circumstances or our planned use of long-lived assets indicate, based on undiscounted future operating cash flows, that their carrying amounts may not be fully recoverable or that their useful lives are no longer appropriate. When an indicator of impairment exists, long-lived assets are written down to their respective fair values. Fair value is determined primarily using the anticipated cash flows discounted at a rate commensurate with the risk involved. Significant management judgment is required in the forecast of future operating results that are used in the preparation of expected undiscounted cash flows. No impairments of purchased intangible assets or material impairments of tangible assets have been identified during the years presented.

Goodwill

Our goodwill balance relates to our April 2006 acquisition of Rhein. Goodwill was recorded as the excess purchase price over tangible and intangible assets acquired and liabilities assumed based on their estimated fair value, by applying the acquisition method of accounting. Goodwill is not amortized but is subject to an annual impairment test which consists of a comparison of the fair value of the related reporting unit against its carrying amount including goodwill. If the carrying amount exceeds the fair value, impairment is calculated and recorded as a charge in the consolidated statements of operations. We determined that we have only one operating segment and there are no components of that operating segment that are deemed to be separate reporting units such that we have one reporting unit for purposes of our goodwill impairment testing. We evaluate goodwill for impairment on an annual basis and on an interim basis if events or changes in circumstances between annual impairment tests indicate that the asset might be impaired.

Revenue Recognition

Our revenues consist of amounts earned from collaborations, grants and fees from services and licenses. We enter into license and manufacturing agreements and collaborative research and development arrangements with pharmaceutical and biotechnology partners that may involve multiple deliverables. Our arrangements may include one or more of the following elements: upfront license payments, cost reimbursement for the performance of research and development activities, milestone payments, other contingent payments, contract manufacturing service fees, royalties and license fees. Each deliverable in the arrangement is evaluated to determine whether it meets the criteria to be accounted for as a separate unit of accounting or whether it should be combined with other deliverables. In order to account for the multiple-element arrangements, the Company identifies the deliverables included within the arrangement and evaluates which deliverables represent separate units of accounting. Analyzing the arrangement to identify deliverables requires the use of judgment, and each deliverable may be an obligation to deliver services, a right or license to use an asset, or another performance obligation. We recognize revenue when there is persuasive evidence that an arrangement exists, delivery has occurred or services have been rendered, the price is fixed or determinable and collectability is reasonably assured.

Non-refundable upfront fees received for license and collaborative agreements entered into and other payments under collaboration agreements where we have continuing performance obligations related to the payments are deferred and recognized over our estimated performance period. Revenue is recognized on a ratable basis, unless we determine that another method is more appropriate, through the date at which our performance obligations are completed. Management makes its best estimate of the period over which we expect to fulfill our performance obligations, which may include clinical development activities. Given the uncertainties of research and development collaborations, significant judgment is required to determine the duration of the performance period. We recognize cost reimbursement revenue under collaborative agreements as the related research and development costs are incurred, as provided for under the terms of these agreements.

Contingent consideration received for the achievement of a substantive milestone is recognized in its entirety in the period in which the milestone is achieved. A milestone is defined as an event having all of the following characteristics: (i) there is substantive uncertainty at the date the arrangement is entered into that the event will be achieved, (ii) the event can only be achieved based in whole or in part on either the entity's performance or a specific outcome resulting from the entity's performance and (iii) if achieved, the event would result in additional payments being due to the entity.

Our license and collaboration agreements with our partners provide for payments to be paid to us upon the achievement of development milestones. Given the challenges inherent in developing biologic products, there is substantial uncertainty whether any such milestones will be achieved at the time we entered into these agreements. In addition, we evaluate whether the development milestones meet the criteria to be considered substantive. The conditions include: (i) the development work is contingent on either of the following: (a) the vendor's performance to achieve the milestone or (b) the enhancement of the value of the deliverable item or items as a result of a specific outcome resulting from the vendor's performance to achieve the milestone; (ii) it relates solely to past performance and (iii) it is reasonable relative to all the deliverable and payment terms within the arrangement. As a result of our analysis, we consider our development milestones to be substantive and, accordingly, we expect to recognize as revenue future payments received from such milestones as we achieve each milestone.

Milestone payments that are contingent upon the achievement of substantive at-risk performance criteria are recognized in full upon achievement of those milestone events in accordance with the terms of the agreement and assuming all other revenue recognition criteria have been met. All revenue recognized to date under our collaborative agreements has been nonrefundable.

Our license and collaboration agreements with certain partners also provide for contingent payments to be paid to us based solely upon the performance of our partner. For such contingent payments we expect to recognize the payments as revenue upon receipt, provided that collection is reasonably assured and the other revenue recognition criteria have been satisfied.

Revenues from manufacturing services are recognized upon meeting the criteria for substantial performance and acceptance by the customer.

Revenue from royalty payments is contingent on future sales activities by our licensees. As a result, we recognize royalty revenue when all revenue recognition criteria have been satisfied.

Revenue from government and private agency grants is recognized as the related research expenses are incurred and to the extent that funding is approved. Additionally, we recognize revenue based on the facilities and administrative cost rate reimbursable per the terms of the grant awards.

Research and Development Expenses and Accruals

Research and development expenses include personnel and facility-related expenses, outside contracted services including clinical trial costs, manufacturing and process development costs, research costs and other consulting services and non-cash stock-based compensation. Research and development costs are expensed as incurred. Amounts due under such arrangements may be either fixed fee or fee for service, and may include upfront payments, monthly payments and payments upon the completion of milestones or receipt of deliverables. Non-refundable advance payments under agreements are capitalized and expensed as the related goods are delivered or services are performed.

We contract with third parties to perform various clinical trial activities in the on-going development of potential products. The financial terms of these agreements are subject to negotiation, vary from contract to contract and may result in uneven payment flows to our vendors. Payments under the contracts depend on factors such as the achievement of certain events, successful enrollment of patients, and completion of portions of the clinical trial or similar conditions. Our accrual for clinical trials is based on estimates of the services received and efforts expended pursuant to contracts with clinical trial centers and clinical research organizations. We may terminate these contracts upon written notice and we are generally only liable for actual effort expended by the organizations to the date of termination, although in certain instances we may be further responsible for termination fees and penalties. The Company makes estimates of its accrued expenses as of each balance sheet date based on the facts and circumstances known to the Company at that time. There have been no material adjustments to the Company's prior period accrued estimates for clinical trial activities through December 31, 2014.

Stock-Based Compensation

Stock-based compensation expense for stock options and other stock awards is estimated at the grant date based on the award's fair value-based measurement and is recognized on a straight-line basis over the award's vesting period, assuming appropriate forfeiture rates. Our determination of the fair value-based measurement of stock options on the date of grant using an option-pricing model is affected by our stock price, as well as assumptions regarding a number of highly complex and subjective variables. These variables include, but are not limited to, our stock price volatility over the term of the awards, and actual and projected employee stock option exercise behaviors. In the future, as additional empirical evidence regarding these input estimates becomes available, we may change or refine our approach of deriving these input estimates. These changes could impact our fair value-based measurement of stock options granted in the future. Changes in the fair value-based measurement of stock awards could materially impact our operating results.

We selected the Black-Scholes option pricing model as the most appropriate method for determining the estimated fair value-based measurement of our stock options. The Black-Scholes model requires the use of highly subjective and complex assumptions which determine the fair value-based measurement of stock options, including the option's expected term and the price volatility of the underlying stock. Our current estimate of volatility is based on the historical volatility of our stock price. To the extent volatility in our stock price increases in the future, our estimates of the fair value of options granted in the future could increase, thereby increasing stock-based compensation cost recognized in future periods. We derive the expected term assumption primarily based on our historical settlement experience, while giving consideration to options that have not yet completed a full life cycle. Stock-based compensation cost is recognized only for awards ultimately expected to vest. Our estimate of the forfeiture rate is based primarily on our historical experience. To the extent we revise this estimate in the future, our share-based compensation cost could be materially impacted in the period of revision.

Income Taxes

We account for income taxes using the asset and liability method, under which deferred tax assets and liabilities are determined based on the differences between the financial reporting and tax basis of assets and liabilities using enacted tax rates in effect for the

year in which the differences are expected to reverse. Additionally, we assess the likelihood that deferred tax assets will be recovered as deductions from future taxable income. We have provided a full valuation allowance on our deferred tax assets at December 31, 2014 and 2013 because we believe it is more likely than not that our deferred tax assets will not be realized as of December 31, 2014, and 2013.

Recent Accounting Pronouncements

Accounting Standards Update 2014-09

In May 2014, the FASB issued guidance codified in ASC 606, *Revenue Recognition — Revenue from Contracts with Customers*, which amends the guidance in former ASC 605, *Revenue Recognition*. The Company is currently evaluating the impact of the provisions of ASC 606. This standard is effective for public entities for annual and interim periods beginning after December 31, 2016, which will be the Company's fiscal year 2017.

3. Fair Value Measurements

The Company measures fair value as the exchange price that would be received for an asset or paid to transfer a liability (an exit price) in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants on the measurement date. Valuation techniques used to measure fair value must maximize the use of observable inputs and minimize the use of unobservable inputs. The accounting standard describes a fair value hierarchy based on three levels of inputs, of which the first two are considered observable and the last unobservable, that may be used to measure fair value which are the following:

- Level 1—Observable inputs, such as quoted prices in active markets for identical assets or liabilities;
- Level 2—Inputs other than Level 1 that are observable, either directly or indirectly, such as quoted prices for similar assets or liabilities, quoted prices in markets that are not active or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the assets or liabilities; and
- Level 3—Unobservable inputs that are supported by little or no market activity and that are significant to the fair value of the assets or liabilities; therefore, requiring an entity to develop its own valuation techniques and assumptions.

The carrying amounts of cash equivalents, accounts receivable, accounts payable and accrued liabilities are considered reasonable estimates of their respective fair value because of their short-term nature. The carrying amount of our long-term debt is considered a reasonable estimate of its respective fair value as it is amortized over its life using the effective interest rate.

Recurring Fair Value Measurements

The following table represents the fair value hierarchy for our financial assets (cash equivalents and marketable securities) measured at fair value on a recurring basis as of December 31, 2014 and 2013 (in thousands):

	Level 1	Level 2	Level 3	Total
December 31, 2014				
Money market funds	\$ 46,989	\$ -	\$ -	\$ 46,989
U.S. government agency securities	-	73,141	-	73,141
Total	<u>\$ 46,989</u>	<u>\$ 73,141</u>	<u>\$ -</u>	<u>\$ 120,130</u>
December 31, 2013				
Money market funds	\$ 20,013	\$ -	\$ -	\$ 20,013
U.S. government agency securities	-	167,597	-	167,597
Total	<u>\$ 20,013</u>	<u>\$ 167,597</u>	<u>\$ -</u>	<u>\$ 187,610</u>

Money market funds are highly liquid investments and are actively traded. The pricing information on these investment instruments is readily available and can be independently validated as of the measurement date. This approach results in the classification of these securities as Level 1 of the fair value hierarchy.

U.S. Government agency securities are measured at fair value using Level 2 inputs. We review trading activity and pricing for these investments as of each measurement date. When sufficient quoted pricing for identical securities is not available, we use market pricing and other observable market inputs for similar securities obtained from various third party data providers. These inputs represent quoted prices for similar assets in active markets or these inputs have been derived from observable market data. This approach results in the classification of these securities as Level 2 of the fair value hierarchy.

There were no transfers between Level 1 and Level 2 during the twelve months ended December 31, 2014.

4. Cash, Cash Equivalents and Marketable Securities

Cash equivalents and marketable securities as of December 31, 2014, and 2013 consist of the following (in thousands):

	Amortized Cost	Unrealized Gains	Unrealized Losses	Estimated Fair Value
December 31, 2014				
Cash and cash equivalents:				
Cash	\$ 2,522	\$ -	\$ -	\$ 2,522
Money market funds	46,989	-	-	46,989
Total cash and cash equivalents	49,511	-	-	49,511
Marketable securities available-for-sale:				
U.S. government agency securities	73,140	11	(10)	73,141
Total marketable securities available-for-sale	73,140	11	(10)	73,141
Total cash, cash equivalents and marketable securities	\$ 122,651	\$ 11	\$ (10)	\$ 122,652
December 31, 2013				
Cash and cash equivalents:				
Cash	\$ 1,766	\$ -	\$ -	\$ 1,766
Money market funds	20,013	-	-	20,013
U.S. government agency securities	1,343	-	-	1,343
Total cash and cash equivalents	23,122	-	-	23,122
Marketable securities available-for-sale:				
U.S. government agency securities	166,285	16	(47)	166,254
Total marketable securities available-for-sale	166,285	16	(47)	166,254
Total cash, cash equivalents and marketable securities	\$ 189,407	\$ 16	\$ (47)	\$ 189,376

The maturities of our marketable securities available-for-sale are as follows (in thousands):

	December 31, 2014	
	Amortized Cost	Estimated Fair Value
Mature in one year or less	\$ 72,390	\$ 72,391
Mature after one year through two years	750	750
	\$ 73,140	\$ 73,141

There were no realized gains or losses from the sale of marketable securities in the years ended December 31, 2014, 2013 and 2012. All of our investments are classified as short-term and available-for-sale, as we may not hold our investments until maturity.

5. Property and Equipment

Property and equipment as of December 31, 2014, and 2013 consist of the following (in thousands):

	Estimated Useful Life (In years)	December 31,	
		2014	2013
Manufacturing equipment	5-14	\$ 8,171	\$ 8,968
Lab equipment	5-13	6,473	7,227
Computer equipment	3	2,196	1,962
Furniture and fixtures	3	1,070	1,056
Leasehold improvements	5-7	5,690	6,048
Assets in progress		935	762
		24,535	26,023
Less accumulated depreciation and amortization		(16,611)	(17,317)
Total		\$ 7,924	\$ 8,706

Depreciation and amortization expense on property and equipment was \$1.4 million, \$1.3 million and \$1.2 million for the years ended December 31, 2014, 2013 and 2012, respectively.

6. Current Accrued Liabilities

Current accrued liabilities as of December 31, 2014, and 2013 consist of the following (in thousands):

	December 31,	
	2014	2013
Payroll and related expenses	\$ 4,613	\$ 3,639
Legal expenses	224	339
Third party research expenses	5,898	900
Third party development expenses	1,000	1,313
Third party regulatory expenses	40	189
Other accrued liabilities	1,480	1,786
Total	\$ 13,255	\$ 8,166

7. Commitments and Contingencies

We lease our facilities in Berkeley, California ("Berkeley Lease") and Düsseldorf, Germany ("Düsseldorf Lease") under operating leases that expire in June 2018 and March 2023, respectively. The Berkeley Lease provides for periods of escalating rent. The total cash payments over the life of the lease are divided by the total number of months in the lease period and the average rent is charged to expense each month during the lease period. We entered into sublease agreements under the Düsseldorf Lease for a certain portion of the leased space. The sublease income is offset against our rent expense.

During September 2013, we decided not to occupy a portion of our facility in Berkeley, California. As a result, we recorded an estimated unoccupied facility expense of \$0.9 million during 2013, representing the present value of the rent payments and other costs associated with the lease, net of estimated sublease income, for the remaining life of the operating lease. During the first three quarters of 2014, we reassessed our timing and ability to sublet a portion of our facility and recorded a total unoccupied facility expense of \$0.4 million for the year ended December 31, 2014. In December 2014, we decided to utilize the unoccupied portion of the facility and began to recognize rent expense under the terms noted in the operating lease agreement.

Total net rent expense related to our operating leases for the years ended December 31, 2014, 2013 and 2012, was \$1.7 million, \$1.9 million and \$1.7 million, respectively. Deferred rent was \$0.6 million as of December 31, 2014 and 2013. Deferred loss on lease was \$0.7 million as of December 31, 2014 and 2013.

Future minimum payments under the non-cancelable portion of our operating leases at December 31, 2014, excluding payments from sublease payments, are as follows (in thousands):

Year ending December 31,	
2015	\$ 2,213
2016	2,264
2017	2,313
2018	1,282
2019	519
Thereafter	1,687
Total	\$ 10,278

During the fourth quarter of 2004, we established a letter of credit with Silicon Valley Bank as security for our Berkeley Lease in the amount of \$0.4 million. The letter of credit remained outstanding as of December 31, 2014, and is collateralized by a certificate of deposit for \$0.4 million, which has been included in restricted cash in the consolidated balance sheets as of December 31, 2014 and 2013. Under the terms of the Berkeley Lease, if the total amount of our cash, cash equivalents and marketable securities falls below \$20 million for a period of more than 30 consecutive days during the lease term, the amount of the required security deposit will increase to \$1.1 million, until such time as our projected cash and cash equivalents will exceed \$20 million for the remainder of the lease term, or until our actual cash and cash equivalents remains above \$20 million for a period of 12 consecutive months.

We established a letter of credit with Deutsche Bank as security for our Düsseldorf Lease in the amount of approximately 0.2 million Euros. The letter of credit remained outstanding through December 31, 2014 and is collateralized by a certificate of deposit for 0.2 million Euros, which has been included in restricted cash in the consolidated balance sheets as of December 31, 2014 and 2013.

In addition to the non-cancelable commitments included above, we have entered into contractual arrangements that obligate us to make payments to the contractual counterparties upon the occurrence of future events. In addition, in the normal course of operations, we have entered into license and other agreements and intend to continue to seek additional rights relating to compounds or technologies in connection with our discovery, manufacturing and development programs. Under the terms of the agreements, we may be required to pay future up-front fees, milestones and royalties on net sales of products originating from the licensed technologies, if any, or other payments contingent upon the occurrence of future events that cannot reasonably be estimated.

We rely on research institutions, contract research organizations, clinical investigators as well as clinical and commercial material manufacturers of our product candidates. As of December 31, 2014, under the terms of our agreements, including certain agreements relating to the ongoing Phase 3 trial of HEPLISAV-B, we are obligated to make future payments as services are provided of approximately \$25.5 million through 2016. These agreements are terminable by us upon written notice. Generally, we are liable only for actual effort expended by the organizations at any point in time during the contract through the notice period.

From time to time, we are involved in claims, suits, and proceedings arising from the ordinary course of our business, including actions with respect to intellectual property claims, commercial claims, and other matters. Such claims, suits, and proceedings are inherently uncertain and their results cannot be predicted with certainty. Regardless of the outcome, such legal proceedings can have an adverse impact on us because of legal costs, diversion of management resources, and other factors. In addition, it is possible that a resolution of one or more such proceedings could result in substantial fines and penalties or orders requiring a change in our business practices, which could in the future materially and adversely affect our financial position, results of operations, or cash flows in a particular period.

8. Symphony Dynamo, Inc.

On April 18, 2006, we, Symphony and Holdings entered into a transaction involving a series of related agreements providing for the advancement of certain of our immunostimulatory sequences-based programs for cancer, hepatitis B and hepatitis C therapy (collectively, the "Programs"). Pursuant to these agreements, Symphony formed SDI and invested \$50 million to fund the Programs, and we licensed to Holdings our intellectual property rights related to the Programs, which were assigned to SDI. As a result of these agreements, Symphony owned 100% of the equity of Holdings, which owned 100% of the equity of SDI.

In April 2007, we exercised the Program Option for the hepatitis B program. In November 2009, we entered into an agreement with Holdings to modify the provisions of and to exercise the Original Purchase Option and on December 30, 2009 we completed the acquisition of all of the outstanding equity of SDI. In conjunction with the acquisition of SDI, we agreed to contingent cash payments from us equal to 50% of the first \$50 million from any upfront, pre-commercialization milestone or similar payments received by us from any agreement with any third party with respect to the development and/or commercialization of the cancer and hepatitis C therapies originally licensed to SDI. We have made no payments and have not recorded a liability as of December 31, 2014.

9. Collaborative Research, Development and License Agreements

AstraZeneca

In September 2006, we entered into a three year research collaboration and license agreement with AstraZeneca for the discovery and development of TLR9 agonist-based therapies for the treatment of asthma and chronic obstructive pulmonary disease.

In October 2011, we amended our agreement with AstraZeneca to provide that we will conduct initial clinical development of AZD1419 and AstraZeneca agreed to fund all program expenses to cover the cost of development activities through Phase 2a. Under the terms of the amended agreement, we received an initial payment of \$3 million in 2011 to begin the clinical development program. In the first quarter of 2012, we received a \$2.6 million payment to advance AZD1419 into preclinical toxicology studies, which were completed in the third quarter of 2012. We and AstraZeneca agreed to advance AZD1419 towards a Phase 1 clinical trial, which resulted in a development funding payment of \$6 million received in the fourth quarter of 2012.

In January 2014, we amended our agreement with AstraZeneca for the clinical development of AZD1419 whereby responsibility for conducting clinical trials was transferred from Dynavax to AstraZeneca upon completion of the Phase 1 trial. In the first quarter of 2014, we received a \$5.4 million payment that was due upon execution of this amended agreement.

In August 2014, we announced the results of a Phase 1 study in which AZD1419 or placebo was delivered by inhalation to 45 healthy volunteers. The primary study objective was to assess the safety of ascending doses of AZD1419 administered weekly for up

to 4 weeks. Doses up to 15.4 mg/week were well tolerated and no serious adverse events were observed in treated subjects. Secondary endpoints assessing pharmacodynamics were met, with dose-dependent induction of interferon-regulated genes in sputum and blood cells.

In December 2014, we again amended our agreement with AstraZeneca for the clinical development of AZD1419. Under the terms of this amendment, AstraZeneca will fully fund and Dynavax will conduct a Phase IIa safety and efficacy trial of AZD1419 in patients with asthma. In the fourth quarter of 2014, we received an \$8.0 million payment due upon execution of this amended agreement.

Under the terms of this agreement, as amended, we are eligible to receive up to \$100 million in additional milestone payments. Additionally, upon commercialization, we are eligible to receive tiered royalties ranging from the mid to high single-digits based on product sales of any products originating from the collaboration. We have the option to co-promote in the United States products arising from the collaboration, if any. AstraZeneca has the right to sublicense its rights upon our prior consent.

Revenue from the \$5.4 million payment received in the first quarter of 2014 was deferred and is being recognized over the estimated remaining period of performance, which is approximately 48 months. Revenue from the \$8.0 million payment received in the fourth quarter of 2014 was deferred and is being recognized over the estimated remaining period of performance, which is approximately 30 months. Revenue from the \$3.0 million initial payment received in 2011 was deferred and is being recognized over the estimated remaining period of performance, which is approximately 74 months. Revenue from the development funding payments is being recognized as the development work is performed.

The following table summarizes the revenues earned under our agreement with AstraZeneca, included as collaboration revenue in our consolidated statements of operations (in thousands):

	Year ended December 31,		
	2014	2013	2012
Initial payment	\$ 681	\$ 720	\$ 720
Subsequent payment	2,554	-	-
Performance of research activities	2,174	2,507	2,462
Total	<u>\$ 5,409</u>	<u>\$ 3,227</u>	<u>\$ 3,182</u>

As of December 31, 2014 and 2013, total deferred revenue from the initial payment, subsequent payment and development funding payments was \$12.8 million and \$4.8 million, respectively.

Absent early termination, the agreement will expire when all of AstraZeneca's payment obligations expire. AstraZeneca has the right to terminate the agreement at any time upon prior written notice and either party may terminate the agreement early upon written notice if the other party commits an uncured material breach of the agreement.

GlaxoSmithKline

In December 2008, we entered into a worldwide strategic alliance with GSK to discover, develop and commercialize TLR inhibitors. Under the terms of the arrangement, as amended, we agreed to conduct research and early clinical development of product candidates and GSK received an option to license those candidates. Under the collaboration, we conducted a Phase 1 clinical trial in the lead TLR 7/9 program with DV1179 to assess its safety and tolerability in healthy volunteers followed by a Phase 1b/2a study of safety and pharmacodynamics in patients with systematic lupus erythematosus ("SLE").

In August 2014, we announced results of the Phase 1b/2a clinical trial in which DV1179 did not meet the primary or secondary pharmacodynamic endpoints. The agreement with GSK expired in November 2014. The Company has regained global rights to continue the development of DV1179 and other TLR 7/9 inhibitors for all indications.

Under the terms of the arrangement, as amended, we received an initial payment of \$10 million in 2008. The deliverables under this arrangement did not have stand-alone value and so did not qualify as separate units of accounting. Revenue from the initial payment from GSK was deferred and is being recognized over the estimated period of performance under the agreement, initially estimated to be seven years. In 2013 we reevaluated and revised the estimated period of performance under the agreement resulting in the recognition of \$1.1 million of additional revenue for the year ended December 31, 2014.

The following table summarizes the revenues recognized under our agreement with GSK, included as collaboration revenue in our consolidated statements of operations (in thousands):

	Year ended December 31,		
	2014	2013	2012
Initial payment	\$ 2,524	\$ 1,702	\$ 1,428
Total	\$ 2,524	\$ 1,702	\$ 1,428

As of December 31, 2014, no deferred revenue relating to the initial payment remains. As of December 31, 2013, deferred revenue relating to the initial payment was \$2.5 million.

National Institutes of Health (“NIH”) and Other Funding

We have been awarded various grants from the NIH and the NIH’s National Institute of Allergy and Infectious Disease (“NIAID”) in order to fund research. The awards are related to specific research objectives and we earn revenue as the related research expenses are incurred. We have earned revenue during the years ended December 31, 2014 and 2013 from the following awards:

- August 2014, NIH awarded us \$0.2 million to fund research in developing a transgenic mouse model to study human TLR9 role in disease.
- September 2013, NIH awarded us \$0.2 million to fund research in developing TLR antagonists for therapy of hepatic fibrosis and cirrhosis.
- June 2012, NIH awarded us \$0.6 million to fund research in screening for inhibitors of TLR8 for treatment of autoimmune diseases.
- May 2012, NIH awarded us \$0.4 million to fund development of TLR8 inhibitors for treatment of rheumatoid arthritis.
- July 2011, NIH awarded us \$0.6 million to fund research in preclinical models of skin autoimmune inflammation.
- August 2010, NIAID awarded us a grant to take a systems biology approach to study the differences between individuals who do or do not respond to vaccination against the hepatitis B virus. This study will be one of several projects conducted under a grant to the Baylor Institute of Immunology Research in Dallas as part of the Human Immune Phenotyping Centers program. We have been awarded a total of \$1.4 million under this grant.
- September 2008, NIAID awarded us a five-year \$17 million contract to develop our ISS technology using TLR9 agonists as vaccine adjuvants. The contract supports adjuvant development for anthrax as well as other disease models.

The following table summarizes the revenues recognized under the various arrangements with the NIH and NIAID, included as grant revenue in our consolidated statements of operations (in thousands):

	Year ended December 31,		
	2014	2013	2012
NIAID contracts	\$ 2,095	\$ 4,103	\$ 3,571
All other NIH contracts	593	1,035	368
Total grant revenue	\$ 2,688	\$ 5,138	\$ 3,939

10. Long-Term Debt

In December 2014, we entered into a Loan and Security Agreement (“Loan Agreement”) with Hercules Technology Growth Capital, Inc. (“Hercules”) under which we may borrow up to \$40.0 million in two tranches.

We drew down the first tranche of \$10.0 million upon closing of the transaction on December 23, 2014. The second tranche, of \$30.0 million, can be drawn at our option any time prior to September 30, 2015, but only if we have achieved certain milestones relating to the ongoing HEPLISAV–B Phase 3 study (“Milestone A”). We plan to use the proceeds received under the Loan Agreement to provide additional funding for HEPLISAV–B development and pre-commercialization activities, as a potential source of funding for clinical trials for its cancer immunotherapeutic product candidate, SD-101, and for general corporate purposes.

The interest rate for each tranche in the Loan Agreement is calculated at a rate equal to the greater of either (i) 9.75% plus the prime rate as reported from time to time in The Wall Street Journal minus 5.25%, and (ii) 9.75%. Payments under the Loan Agreement are interest only until February 1, 2016 (which will be extended until August 1, 2016, if we achieve Milestone A on or before September 30, 2015, and which will be extended until February 1, 2017, if we meet certain additional HEPLISAV-B Phase 3 related milestones (“Milestone B”) on or before August 1, 2016). The interest only period will be followed by equal monthly payments of principal and interest amortized over a 30 month schedule through the scheduled maturity date on July 1, 2018 (which would be extended through January 1, 2019 if we achieve Milestone A on or before September 30, 2015 or Milestone B on or before August 1, 2016) (the “Loan Maturity Date”). The entire principal balance, including a balloon payment of principal, as applicable, will be due and payable on the Loan Maturity Date, which we recorded as a liability and debt discount at the origination of the loan.

A final payment equal to \$840,000 (if an aggregate of \$10.0 million is advanced under the Loan Agreement) or \$2,400,000 (if an aggregate of \$40.0 million is advanced under the Loan Agreement) will be due on the Loan Maturity Date, or such earlier date specified in the Loan Agreement. Our obligations under the Loan Agreement are secured by a security interest in substantially all of its assets, other than its intellectual property. Additionally, we paid a \$400,000 facility charge to Hercules. The debt issuance costs and final payment fee are being amortized and accreted, respectively, to interest expense over the term of the term loan using the effective interest method.

In addition, Hercules was granted the right, at its discretion, to participate in any Subsequent Financing in an aggregate amount of up to \$1,500,000 (that is, a maximum amount of \$1,500,000 with respect to all subsequent financings collectively) on the same terms, conditions and pricing afforded to others participating in any such Subsequent Financing.

The Hercules Loan Agreement includes customary affirmative and restrictive covenants, but does not include any financial maintenance covenants, and also includes standard events of default. At December 31, 2014, we were in compliance with all loan covenants. Upon an event of default, including a change of control, Hercules has the option to accelerate repayment of the loan, including payment of any applicable prepayment charges, which is 1.50% of the outstanding loan balance and accrued but unpaid interest.

As of December 31, 2014, we had outstanding borrowings under the Hercules Loan Agreement of \$10.0 million, with a carrying value of \$9.6 million, net of the debt discounts of the \$0.4 million facility charge and a \$45 thousand commitment fee. Amortization of the debt discount was immaterial for the year ended December 31, 2014.

The following table summarizes our outstanding future minimum payments associated with our long-term debt as of December 31, 2014 (in thousands):

Obligations:	Total	2015	2016-2017	2018-2019	2020 and Thereafter
Principal payments on long-term debt	\$ 10,000	\$ -	\$ 7,425	\$ 2,575	\$ -
Interest payments on long-term debt	2,343	929	1,328	86	-
Total	\$ 12,343	\$ 929	\$ 8,753	\$ 2,661	\$ -

11. Net Loss Per Share

Basic net loss per share allocable to common stockholders is calculated by dividing the net loss allocable to common stockholders by the weighted-average number of common shares outstanding during the period. Diluted net loss per share allocable to common stockholders is computed by dividing the net loss allocable to common stockholders by the weighted-average number of common shares outstanding during the period and giving effect to all potentially dilutive common shares using the treasury-stock method. For purposes of this calculation, common stock subject to repurchase by us, outstanding stock options, stock awards, warrants and Series B Convertible Preferred Stock are considered to be potentially dilutive common shares and are only included in the calculation of diluted net loss per share allocable to common stockholders when their effect is dilutive.

	December 31,		
	2014	2013	2012
Basic and diluted net loss per share (in thousands, except per share amounts):			
Numerator:			
Net loss	(90,722)	(66,720)	(69,949)
Preferred stock deemed dividend	-	(8,469)	-
Net loss allocable to common stockholders	<u>\$ (90,722)</u>	<u>\$ (75,189)</u>	<u>\$ (69,949)</u>
Denominator for basic and diluted net loss per share allocable to common stockholders:			
Weighted-average common shares outstanding	26,289	19,628	17,047
Basic and diluted net loss per share allocable to common stockholders	<u>\$ (3.45)</u>	<u>\$ (3.83)</u>	<u>\$ (4.10)</u>

Outstanding warrants, stock options, Series B Convertible Preferred Stock and stock subject to repurchase by us under stock awards were excluded from the calculation of net loss per share allocable to common stockholders as the effect of their inclusion would have been anti-dilutive.

	December 31,		
	2014	2013	2012
Outstanding securities not included in diluted net loss per share calculation (in thousands):			
Stock options and stock awards	1,998	1,704	1,556
Series B Convertible Preferred Stock (as converted to common stock)	4,343	4,343	-
Warrants	1,081	1,246	1,271
	<u>7,422</u>	<u>7,293</u>	<u>2,827</u>

12. Preferred Stock, Common Stock and Warrants

Preferred Stock Outstanding

As of December 31, 2014 there were 5,000,000 shares of preferred stock authorized and 43,430 shares of Series B Convertible Preferred Stock outstanding.

In October 2013 the Company sold 43,430 shares of \$0.001 par value Series B Convertible Preferred Stock for a purchase price of \$1,075 per share and gross proceeds of approximately \$46.7 million in an underwritten public offering. After issuance costs of approximately \$2.5 million, the net proceeds from the offering were approximately \$44.2 million.

Each share of Series B Convertible Preferred Stock is convertible into 100 shares of common stock at any time at the holder's option. However, the holder is prohibited from converting the Series B Convertible Preferred Stock into shares of common stock if, as a result of such conversion, the holder and its affiliates would own more than 9.98% of the total number of shares of common stock then issued and outstanding. In the event of the Company's liquidation, dissolution, or winding up, holders of Series B Convertible Preferred Stock will receive a payment equal to \$0.001 per share before any proceeds are distributed to the common stockholders. Shares of Series B Convertible Preferred Stock generally have no voting rights, except as required by law and except that the consent of holders of a majority of the outstanding Series B Convertible Preferred Stock is required to amend the terms of the Series B Convertible Preferred Stock. Holders of Series B Convertible Preferred Stock are not entitled to receive any dividends, unless and until specifically declared by the Company's board of directors. The Series B Convertible Preferred Stock ranks senior to the Company's common stock as to distributions of assets upon the Company's liquidation, dissolution or winding up, whether voluntarily or involuntarily. The Series B Convertible Preferred Stock may rank senior to, on parity with or junior to any class or series of the Company's capital stock created in the future depending upon the specific terms of such future stock issuance.

The fair value of the common stock into which the Series B Convertible Preferred Stock is convertible exceeded the allocated purchase price of the Series B Convertible Preferred Stock by \$8.5 million on the date of issuance, for which the Company recorded a deemed dividend. The Company recognized the deemed dividend equal to the number of shares of Series B Convertible Preferred Stock sold on October 30, 2013 multiplied by the difference between the value of the common stock and the Series B Convertible Preferred Stock conversion price per share on that date. The dividend was reflected as a one-time, non-cash, deemed dividend to the holders of Series B Convertible Preferred Stock on the date of issuance, which is the date the stock first became convertible.

Preferred Share Purchase Rights

On November 4, 2008, our Board of Directors declared a dividend of one preferred share purchase right (a "Right") for each outstanding share of our Common Stock, par value \$0.001 per share (the "Common Shares"). The dividend was payable on November 17, 2008 to the stockholders of record on that date. Each Right entitles the registered holder to purchase from us one one-hundredth of a share of Series A Junior Participating Preferred Stock, par value \$0.001 per share (the "Preferred Shares"), at a price of \$6.00 per one one-hundredth of a Preferred Share, subject to adjustment. Upon the acquisition of, or announcement of the intent to acquire, 20 percent or more of our outstanding Common Shares by a person, entity or group of affiliated or associated persons ("Acquiring Person"), each holder of a Right, other than Rights held by the Acquiring Person, will have the right to purchase that number of Common Shares having a market value of two times the exercise price of the Right. If we are acquired in a merger or other business combination transaction or 50 percent or more of our assets or earning power are sold to an Acquiring Person, each holder of a Right will thereafter have the right to purchase, at the then current exercise price of the Right, that number of shares of common stock of the acquiring company which at the time of such transaction will have a market value of two times the exercise price of the Right. The Rights plan is intended to maximize the value of the Company in the event of an unsolicited attempt to take over the Company in a manner or on terms not approved by the Company's Board of Directors. The Rights will expire on November 17, 2018, unless the Rights are earlier redeemed or exchanged by the Company.

Common Stock Outstanding

On November 10, 2014, we entered into an At Market Issuance Sales Agreement (the "ATM Agreement") with Cowen and Company, LLC ("Cowen") under which we may offer and sell our common stock having aggregate sales proceeds of up to \$50,000,000 from time to time through Cowen as our sales agent. Sales of our common stock through Cowen, if any, will be made by means of ordinary brokers' transactions on the NASDAQ Capital Market or otherwise at market prices prevailing at the time of sale, in block transactions, or as otherwise agreed upon by us and Cowen. Cowen will use commercially reasonable efforts to sell our common stock from time to time, based upon instructions from us (including any price, time or size limits or other customary parameters or conditions we may impose). We will pay Cowen a commission of up to 3.0% of the gross sales proceeds of any common stock sold through Cowen under the Agreement. No sales of our common stock have taken place under this ATM Agreement as of December 31, 2014.

In October 2013 we completed an underwritten public offering of 7,957,000 shares of our common stock to the public at \$1.075 per share. The gross proceeds to us from this offering were approximately \$85.5 million. After deducting issuance costs of approximately \$4.5 million, the net proceeds from the offering were approximately \$80.9 million.

Warrants

As of December 31, 2014, warrants to purchase an aggregate of approximately 1,100,000 shares of our common stock were outstanding. The warrants are exercisable at a weighted average price of \$15.00 per share and will expire on April 16, 2015. During the years ended December 31, 2014, and 2013, warrants were exercised to purchase an aggregate of approximately 11,000 and 25,000 shares, respectively, of our common stock.

13. Equity Plans and Stock-Based Compensation

Stock Plans

Under the 2004 Stock Incentive Plan options to purchase 349,853 shares of common stock remained outstanding as of December 31, 2014

Under the 2010 Employment Inducement Award Plan options to purchase 12,500 shares of common stock remained outstanding as of December 31, 2014

The 2011 Equity Incentive Plan (“2011 Plan”) was approved by the Company’s stockholders and adopted in January 2011. On May 29, 2013, the stockholders of the Company approved an amendment to the 2011 Plan to increase the number of shares of common stock authorized for issuance under the plan by 1,000,000. The 2011 Plan, as amended, provides for the issuance of up to 2,500,000 shares of our common stock to employees and non-employees of the Company and became effective on January 6, 2011. The 2011 Plan is administered by our Board of Directors, or a designated committee of the Board of Directors, and awards granted under the 2011 Plan have a term of 10 years unless earlier terminated by the Board of Directors. After the adoption of the 2011 Plan, no additional awards were granted under either the 2004 Plan or the Inducement Plan. As of January 6, 2011, all shares subject to awards outstanding under the 2004 Plan and Inducement Plan that expire or are forfeited will be included in the reserve for the 2011 Plan to the extent such shares would otherwise return to such plans. As of December 31, 2014, options to purchase 1,456,927 shares of common stock remained outstanding under the 2011 Plan. As of December 31, 2014, there were 1,023,365 shares of common stock reserved for issuance under the 2011 Plan.

Activity under our stock plans is set forth below:

	Shares		Weighted-Average Exercise Price Per Share	Weighted-Average Remaining Contractual Term (years)	Aggregate Intrinsic Value (in thousands)
	Underlying Options (in thousands)	Outstanding			
Balance at December 31, 2013		1,576	\$ 31.66		
Options granted		582	16.75		
Options exercised		(5)	9.90		
Options cancelled:					
Options forfeited (unvested)		(86)	23.94		
Options cancelled (vested)		(247)	30.51		
Balance at December 31, 2014		<u>1,820</u>	<u>27.48</u>	<u>6.07</u>	<u>\$ 833</u>
Vested and expected to vest at December 31, 2014		<u>1,820</u>	<u>27.48</u>	<u>6.07</u>	<u>\$ 833</u>
Exercisable at December 31, 2014		<u>1,040</u>	<u>33.10</u>	<u>4.02</u>	<u>\$ 649</u>

The total intrinsic value of stock options exercised during the years ended December 31, 2014, 2013 and 2012 was, \$0.1 million, \$0.3 million and \$2.7 million, respectively. The total intrinsic value of exercised stock options is calculated based on the difference between the exercise price and the quoted market price of our common stock as of the close of the exercise date.

The total fair value of stock options vested during the years ended December 31, 2014, 2013 and 2012 was, \$5.6 million, \$12.1 million and \$9.6 million, respectively.

Our non-vested stock awards are comprised of restricted stock units granted with performance and time-based vesting criteria. A summary of the status of non-vested restricted stock units as of December 31, 2014, and activities during 2014 are summarized as follows:

	Number of Shares (In thousands)	Weighted-Average Grant-Date Fair Value
Non-vested as of December 31, 2013	128	\$ 39.30
Granted	155	\$ 17.92
Vested	-	\$ -
Forfeited or expired	(104)	\$ 42.02
Non-vested as of December 31, 2014	<u>179</u>	<u>\$ 17.13</u>

Stock-based compensation expense related to restricted stock units was approximately \$0.6 million for the year ended December 31, 2014. The aggregate intrinsic value of the restricted stock units outstanding as of December 31, 2014, based on our stock price on that date, was \$3.0 million.

The weighted average grant-date fair value of restricted stock units granted during the years ended December 31, 2014, 2013 and 2012 was, \$17.92, \$12.30 and \$42.30, respectively. The total fair value of restricted stock units vested during the years ended December 31, 2013 and 2012 was \$0.1 million and \$0.2 million, respectively. No restricted stock units vested during 2014.

Stock-Based Compensation

Under our stock-based compensation plans, option awards generally vest over a four-year period contingent upon continuous service and expire ten years from the date of grant (or earlier upon termination of continuous service). The Company has also granted performance-based equity awards to certain of our employees under the 2011 Plan, the 2004 Plan and the Inducement Plan. As of December 31, 2014, 76,247 shares were outstanding related to options and restricted stock units subject to these performance-based vesting criteria. The fair value of each option is estimated on the date of grant using the Black-Scholes option valuation model and the following weighted-average assumptions:

	Stock Options			Employee Stock Purchase Plan		
	Year Ended December 31,			Year Ended December 31,		
	2014	2013	2012	2014	2013	2012
Weighted-average fair value	\$ 15.16	\$ 24.15	\$ 33.00	\$ 7.45	\$ 9.30	\$ 35.40
Risk-free interest rate	1.8%	1.1%	0.5%	0.2%	0.2%	0.2%
Expected life (in years)	5.9	5.9	4.2	1.2	1.3	1.1
Volatility	1.4	1.4	1.6	0.9	0.8	1.6

Expected volatility is based on historical volatility of our stock price. The expected life of options granted is estimated based on historical option exercise and employee termination data, while giving consideration to options that have not yet completed a full life cycle. Our senior management, who hold a majority of the options outstanding, and other employees were grouped and considered separately for valuation purposes. The risk-free rate for periods within the contractual life of the option is based on the U.S. Treasury yield curve in effect at the time of grant. The dividend yield is zero percent for all years and is based on our history and expectation of dividend payouts.

Compensation expense is based on awards ultimately expected to vest and reflects estimated forfeitures. For equity awards with time-based vesting, the fair value is amortized to expense on a straight-line basis over the vesting periods. For equity awards with performance-based vesting criteria, the fair value is amortized to expense when the achievement of the vesting criteria becomes probable.

We recognized the following amounts of stock-based compensation expense (in thousands):

	Year Ended December 31,		
	2014	2013	2012
Employees and directors stock-based compensation expense	\$ 6,062	\$ 11,828	\$ 10,439
Non-employees stock-based compensation expense	27	512	-
Total	\$ 6,089	\$ 12,340	\$ 10,439

	Year Ended December 31,		
	2014	2013	2012
Research and development	\$ 2,868	\$ 4,228	\$ 3,514
General and administrative	3,221	8,112	6,925
Total	\$ 6,089	\$ 12,340	\$ 10,439

During the year ended December 31, 2013, we recognized \$1.3 million in additional stock-based compensation expense due to the modification of the terms of stock options for five employees. Stock based compensation expense recognized for the year ended December 31, 2013 included \$4.9 million related to employee severance arrangements and \$0.5 million for awards to non-employees.

As of December 31, 2014, the total unrecognized compensation cost related to non-vested stock options and awards deemed probable of vesting, including all stock options with time-based vesting, net of estimated forfeitures, amounted to \$13.5 million, which is expected to be recognized over the remaining weighted-average vesting period of 2.7 years. As of December 31, 2014, the total unrecognized compensation cost related to non-vested stock options not deemed probable of vesting, net of estimated forfeitures, amounted to \$0.4 million.

As of December 31, 2014, the total unrecognized compensation cost related to shares of our common stock under the Purchase Plan, amounted to \$0.1 million, which is expected to be recognized over the remaining weighted-average vesting period of 1.6 years.

Employee Stock Purchase Plan

In January 2004, the Board of Directors and stockholders adopted the 2004 Employee Stock Purchase Plan. As of December 31, 2014, 99,600 shares were approved for issuance under the 2004 Employee Stock Purchase Plan, subject to adjustment for a stock split, or any future stock dividend or other similar change in our common stock or capital structure. To date, employees have acquired 94,104 shares of our common stock under the 2004 Employee Stock Purchase Plan. As of December 31, 2014, 5,496 shares of our common stock remained available for future purchases.

In May 2014, stockholders of the Company approved the 2014 Employee Stock Purchase Plan (the "Purchase Plan"), pursuant to which the Company may issue up to 50,000 shares of its common stock to its employees. The Purchase Plan provides for the purchase of common stock by eligible employees and became effective on May 28, 2014. The purchase price per share is the lesser of (i) 85% of the fair market value of the common stock on the commencement of the offer period (generally, the fifteenth day in February or August) or (ii) 85% of the fair market value of the common stock on the exercise date, which is the last day of a purchase period (generally, the fourteenth day in February or August).

14. Employee Benefit Plan

We maintain a 401(k) Plan, which qualifies as a deferred salary arrangement under Section 401(k) of the Internal Revenue Code. Under the 401(k) Plan, participating employees may defer a portion of their pretax earnings. We may, at our discretion, contribute for the benefit of eligible employees. We have not contributed to the 401(k) Plan as of December 31, 2014.

15. Income Taxes

Consolidated income (loss) before provision for income taxes consisted of the following (in thousands):

	Year Ended December 31,		
	2014	2013	2012
U.S.	\$ (91,121)	\$ (67,004)	\$ (70,792)
Non U.S.	399	284	843
Total	\$ (90,722)	\$ (66,720)	\$ (69,949)

No income tax expense was recorded for the years ended December 31, 2014, 2013 and 2012 due to net operating loss carryforwards to offset the net income at Dynavax Europe and a valuation allowance which offsets the deferred tax assets. The difference between the consolidated income tax benefit and the amount computed by applying the federal statutory income tax rate to the consolidated loss before income taxes was as follows (in thousands):

	Year Ended December 31,		
	2014	2013	2012
Income tax benefit at federal statutory rate	\$ (30,818)	\$ (22,678)	\$ (23,650)
State tax	1,204	(178)	(89)
Business credits	(1,484)	(2,515)	-
Deferred compensation charges	2,710	3,072	1,002
Change in valuation allowance	28,093	22,354	21,966
Other	295	(55)	771
Total income tax expense	\$ -	\$ -	\$ -

Deferred tax assets and liabilities as of December 31, 2014 and 2013 consisted of the following (in thousands):

	December 31,	
	2014	2013
Deferred tax assets:		
Net operating loss carry forwards	\$ 178,008	\$ 147,655
Research tax credit carry forwards	22,914	21,336
Accruals and reserves	9,053	9,501
Capitalized research costs	8,601	10,662
Deferred revenue	654	2,486
Other	1,531	1,255
Total deferred tax assets	220,761	192,895
Less valuation allowance	(220,544)	(192,733)
Net deferred tax assets	217	162
Deferred tax liabilities:		
Fixed Assets	(217)	(162)
Total deferred tax liabilities	(217)	(162)
Net deferred tax assets	<u>\$ -</u>	<u>\$ -</u>

The tax benefit of net operating losses, temporary differences and credit carryforwards is required to be recorded as an asset to the extent that management assesses that realization is "more likely than not." Realization of the future tax benefits is dependent on our ability to generate sufficient taxable income within the carryforward period. Because of our recent history of operating losses, management believes that recognition of the deferred tax assets arising from the above-mentioned future tax benefits is currently not likely to be realized and, accordingly, has provided a full valuation allowance. The valuation allowance increased by \$27.8 million, \$22.5 million and \$22.0 million during the years ended December 31, 2014, 2013 and 2012, respectively. The amount of the valuation allowance for deferred tax assets associated with excess tax deductions from stock based compensation arrangements that will be allocated to contributed capital if the future tax benefits are subsequently recognized is \$0.3 million.

We intend to postpone remittance of all or part of net investment (including earnings) indefinitely (i.e., essentially permanently reinvest). As of December 31, 2014, we have not recognized U.S. deferred income taxes as we have cumulative total undistributed losses for non-U.S. subsidiaries.

We have not recorded deferred income taxes applicable to undistributed earnings of a foreign subsidiary that are indefinitely reinvested in foreign operations. Generally, such earnings become subject to U.S. tax upon the remittance of dividends and under certain other circumstances. It is not practicable to estimate the amount of the deferred tax liability on such undistributed earnings.

As of December 31, 2014, we had federal net operating loss carryforwards of approximately \$479.1 million, which will expire in the years 2018 through 2034 and federal research and development tax credits of approximately \$16.4 million, which expire in the years 2015 through 2034.

As of December 31, 2014, we had net operating loss carryforwards for California state income tax purposes of approximately \$202.2 million, which expire in the years 2015 through 2034, and California state research and development tax credits of approximately \$12.7 million which do not expire.

As of December 31, 2014, we had net operating loss carryforwards for foreign income tax purposes of approximately \$23.1 million, which do not expire.

Uncertain Income Tax positions

The total amount of unrecognized tax benefits as of December 31, 2014 is \$2.4 million. If recognized, none of the unrecognized tax benefits would affect the effective tax rate.

The following table summarizes the activity related to the Company's unrecognized tax benefits:

Balance at December 31, 2013	\$	-
Tax positions related to the current year		
Additions		-
Reductions		-
Tax positions related to the prior year		
Additions		(2,426)
Reductions		-
Balance at December 31, 2014	\$	(2,426)

Our policy is to account for interest and penalties, if any, as a component of general and administrative expense. As of the December 31, 2014, the Company had no interest related to unrecognized tax benefits. No amounts of penalties related to unrecognized tax benefits were recognized in the provision for income taxes.

The Tax Reform Act of 1986 limits the annual use of net operating loss and tax credit carryforwards in certain situations where changes occur in stock ownership of a company. In the event the Company has a change in ownership, as defined, the annual utilization of such carryforwards could be limited. Due to past equity issuances and changes in ownership of Dynavax common stock, we believe that our ability to use some of our net operating losses and tax credits in the future may be limited.

We are subject to income tax examinations for U.S. federal and state income taxes from 1996 forward. We are subject to tax examination in Germany from 2010 forward.

16. Selected Quarterly Financial Data (Unaudited; in thousands, except per share amounts)

	Year Ended December 31, 2014			
	Q1	Q2	Q3	Q4
Revenues	\$ 3,498	\$ 3,048	\$ 2,209	\$ 2,277
Net loss	\$ (13,840)	\$ (24,777)	\$ (29,819)	\$ (22,286)
Net loss allocable to common stockholders	\$ (13,840)	\$ (24,777)	\$ (29,819)	\$ (22,286)
Basic and diluted net loss per share allocable to common stockholders	\$ (0.53)	\$ (0.94)	\$ (1.13)	\$ (0.85)
Shares used to compute basic and diluted net loss per share allocable to common stockholders	26,283	26,286	26,291	26,298

	Year Ended December 31, 2013			
	Q1	Q2	Q3	Q4
Revenues	\$ 2,085	\$ 3,392	\$ 2,927	\$ 2,847
Net loss	\$ (20,825)	\$ (17,164)	\$ (15,675)	\$ (13,056)
Net loss allocable to common stockholders	\$ (20,825)	\$ (17,164)	\$ (15,675)	\$ (21,525)
Basic and diluted net loss per share allocable to common stockholders	\$ (1.14)	\$ (0.94)	\$ (0.86)	\$ (0.91)
Shares used to compute basic and diluted net loss per share allocable to common stockholders	18,285	18,291	18,302	23,588

17. Subsequent Events

On February 26, 2015, 26,000 shares of our Series B Convertible Preferred Stock were converted into 2,600,000 shares of common stock.

ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

None.

(a) Evaluation of Disclosure Controls and Procedures

We maintain disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934 (“the Exchange Act”)) that are designed to ensure that information required to be disclosed in our Exchange Act reports is recorded, processed, summarized and reported within the time periods specified in the Securities and Exchange Commission rules and forms and that such information is accumulated and communicated to our management, including our Chief Executive Officer and Principal Financial Officer, as appropriate, to allow for timely decisions regarding required disclosure. In designing and evaluating the disclosure controls and procedures, management recognizes that any controls and procedures, no matter how well designed and operated, can only provide reasonable, not absolute, assurance of achieving the desired control objectives.

Based on their evaluation of the effectiveness of the design and operation of our disclosure controls and procedures as of the end of the period covered by this report, our management, with the participation of our Chief Executive Officer and our Principal Financial Officer, concluded that our disclosure controls and procedures are effective and were operating at the reasonable assurance level to ensure that information required to be disclosed by us in reports that we file or submit under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the Securities and Exchange Commission rules and forms.

(b) 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) under the Exchange Act. Our management, with the participation of our Chief Executive Officer and Principal Financial Officer, conducted an evaluation of the effectiveness of our internal control over financial reporting based on the framework in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 Framework). Based on that evaluation, our management concluded that our internal control over financial reporting was effective as of December 31, 2014. The Company’s independent registered public accountants, Ernst & Young LLP, audited the consolidated financial statements included in this Annual Report on Form 10-K and have issued a report on the Company’s internal control over financial reporting. The report on the audit of internal control over financial reporting appears below.

The Board of Directors and Stockholders of Dynavax Technologies Corporation

We have audited Dynavax Technologies Corporation's internal control over financial reporting as of December 31, 2014, based on criteria established in *Internal Control—Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 Framework) (the COSO criteria). Dynavax Technologies Corporation's management is responsible for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting included in the accompanying Management's Annual Report on Internal Control over Financial Reporting. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit.

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

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

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

In our opinion, Dynavax Technologies Corporation maintained, in all material respects, effective internal control over financial reporting as of December 31, 2014, based on the COSO criteria.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the consolidated balance sheets of Dynavax Technologies Corporation as of December 31, 2014 and 2013, and the related consolidated statements of operations, comprehensive loss, stockholders' equity, and cash flows for each of the three years in the period ended December 31, 2014 of Dynavax Technologies Corporation and our report dated March 5, 2015 expressed an unqualified opinion thereon.

/s/ Ernst & Young LLP

Redwood City, California
March 5, 2015

(c) Changes in Internal Control Over Financial Reporting

There has been no change in our internal control over financial reporting during our most recent fiscal quarter that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

ITEM 9B. OTHER INFORMATION

None.

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

Information required by this Item is incorporated by reference to the sections entitled “Proposal 1—Elections of Directors,” “Executive Officers,” “Corporate Governance” and “Section 16(a) Beneficial Ownership Reporting Compliance” in our Definitive Proxy Statement in connection with the 2015 Annual Meeting of Stockholders (the “Proxy Statement”) which will be filed with the Securities and Exchange Commission within 120 days after the fiscal year ended December 31, 2014.

We have adopted the Dynavax Code of Conduct, a code of ethics that applies to our employees, including our Chief Executive Officer, Principal Financial Officer and to our non-employee directors. The Code of Conduct is publicly available on our website under the Investor Relations section at www.dynavax.com. This website address is intended to be an inactive, textual reference only; none of the material on this website is part of this report. If any substantive amendments are made to the Code of Conduct or any waiver granted, including any implicit waiver, from a provision of the Code of Conduct to our Chief Executive Officer or Principal Financial Officer, we will disclose the nature of such amendment or waiver on that website or in a report on Form 8-K. We will provide a written copy of the Dynavax Code of Conduct to anyone without charge, upon request written to Dynavax, Attention: Corporate Secretary, 2929 Seventh Street, Suite 100, Berkeley, CA 94710-2753, (510) 848-5100.

ITEM 11. EXECUTIVE COMPENSATION

Information required by this Item is incorporated by reference to the section entitled “Executive Compensation,” “Director Compensation,” “Compensation Discussion and Analysis,” “Report of the Compensation Committee of the Board of Directors,” and “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 regarding security ownership of certain beneficial owners and management is incorporated by reference to the section entitled “Security Ownership of Certain Beneficial Owners and Management” in the Proxy Statement. Information regarding our stockholder approved and non-approved equity compensation plans are incorporated by reference to the section entitled “Equity Compensation Plans” in the Proxy Statement.

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE

Information required by this Item is incorporated by reference to the sections entitled “Transactions with Related Persons” and “Independence of the Board of Directors” in the Proxy Statement.

ITEM 14. PRINCIPAL ACCOUNTING FEES AND SERVICES

Information required by this Item is incorporated by reference to the section entitled “Audit Fees” in the Proxy Statement.

PART IV

ITEM 15. EXHIBITS, FINANCIAL STATEMENT SCHEDULES

(a) Documents filed as part of this report:

1. Financial Statements

- Report of Independent Registered Public Accounting Firm
- Consolidated Balance Sheets
- Consolidated Statements of Operations
- Consolidated Statements of Comprehensive Loss
- Consolidated Statements of Stockholders' Equity
- Consolidated Statements of Cash Flows
- Notes to Consolidated Financial Statements

2. Financial Statement Schedules

None, as all required disclosures have been made in the Consolidated Financial Statements and notes thereto or are not applicable.

(b) Exhibits

Incorporated by Reference

Exhibit Number	Document	Exhibit Number	Filing	Filing Date	File No.	Filed Herewith
3.1	Sixth Amended and Restated Certificate of Incorporation	3.1	S-1/A	February 5, 2004	333-109965	
3.2	Amended and Restated Bylaws	3.2	S-1/A	February 5, 2004	333-109965	
3.3	Form of Certificate of Designation of Series A Junior Participating Preferred Stock	3.3	8-K	November 6, 2008	000-50577	
3.4	Certificate of Amendment of Amended and Restated Certificate of Incorporation	3.1	8-K	January 4, 2010	001-34207	
3.5	Certificate of Amendment of Amended and Restated Certificate of Incorporation	3.1	8-K	January 5, 2011	001-34207	
3.6	Certificate of Amendment of Amended and Restated Certificate of Incorporation	3.6	8-K	May 30, 2013	001-34207	

Exhibit Number	Document	Exhibit Number	Filing	Filing Date	File No.	Filed Herewith
3.7	Certificate of Amendment of the Sixth Amended and Restated Certificate of Incorporation	3.1	8-K	November 10, 2014	001-34207	
3.8	Certificate of Designation of Series B Convertible Preferred Stock	3.1	8-K	November 1, 2013	001-34207	
4.1	Reference is made to Exhibits 3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 3.7 and 3.8 above					
4.2	Registration Rights Agreement, dated as of July 18, 2007, by and between the Company and Deerfield Entities	4.1	S-3	August 31, 2007	333-145836	
4.3	Form of Warrant to Purchase Common Stock	4.2	S-3	August 31, 2007	333-145836	
4.4	Form of Specimen Common Stock Certificate	4.2	S-1/A	January 16, 2004	333-109965	
4.5	Rights Agreement, dated as of November 5, 2008, by and between the Company and Mellon Investor Services LLC	4.4	8-K	November 6, 2008	000-50577	
4.6	Form of Right Certificate	4.5	8-K	November 6, 2008	000-50577	
4.7	Form of Restricted Stock Unit Award Agreement under the 2004 Stock Incentive Plan	4.6	10-K	March 6, 2009	001-34207	
4.8	Form of Warrant to Purchase Common Stock	4.7	10-K	March 16, 2010	001-34207	
4.9	Form of Warrant to Purchase Common Stock	4.8	8-K	April 13, 2010	001-34207	
4.10	Form of Specimen Preferred Stock Certificate	4.1	8-K	November 1, 2013	001-34207	

Exhibit Number	Document	Exhibit Number	Filing	Filing Date	File No.	Filed Herewith
10.01†	Research Collaboration and License Agreement, dated September 1, 2006, by and between the Company and AstraZeneca AB	10.30	10-Q	November 3, 2006	000-50577	
10.02†	License Agreement, dated June 26, 2007, between Coley Pharmaceuticals Group, Inc. and the Company	10.32	10-Q	August 3, 2007	000-50577	
10.03+	Form of Amended Management Continuity Agreement between the Company and certain of its executive officers	10.38	10-K	March 6, 2009	001-34207	
10.04†	Amendment No. 2 to the Research Collaboration and License Agreement, dated September 1, 2006, by and between the Company and AstraZeneca AB, dated February 3, 2009	10.40	10-Q	April 30, 2009	001-34207	
10.05	Amended and Restated Purchase Option Agreement, dated November 9, 2009, between the Company and Symphony Dynamo Holdings LLC and Symphony Dynamo, Inc.	10.47	10-K	March 16, 2010	001-34207	
10.06	Warrant Purchase Agreement, dated as of November 9, 2009, between the Company and Symphony Dynamo Holdings LLC	10.48	10-K	March 16, 2010	001-34207	
10.07	Amended and Restated Registration Rights Agreement, dated as of November 9, 2009, between the Company and Symphony Dynamo Holdings LLC	10.49	10-K	March 16, 2010	001-34207	
10.08	Standstill and Corporate Governance Agreement, dated as of December 30, 2009, between the Company and Symphony Dynamo Holdings LLC	10.50	10-K	March 16, 2010	001-34207	

Exhibit Number	Document	Exhibit Number	Filing	Filing Date	File No.	Filed Herewith
10.09	Amendment No. 3 to the Research Collaboration and License Agreement, dated September 1, 2006, by and between the Company and AstraZeneca AB, dated September 30, 2010	10.54	8-K	October 4, 2010	001-34207	
10.10	Lease, dated January 7, 2004, between the Company and 2929 Seventh Street, LLC	10.17	S-1/A	January 16, 2004	333-109965	
10.11	First Amendment to Lease, dated as of May 21, 2004, between the Company and 2929 Seventh Street, LLC	10.55	8-K	October 13, 2010	001-34207	
10.12	Second Amendment to Lease, dated as of October 12, 2010, between the Company and 2929 Seventh Street, LLC	10.56	8-K	October 13, 2010	001-34207	
10.13+	Amended and Restated Management Continuity and Severance Agreement, dated as of November 12, 2010 by and between the Company and J. Tyler Martin, M.D.	10.59	8-K	November 23, 2010	001-34207	
10.14+	Form of Amendment to Amended Management Continuity Agreement between the Company and certain of its executive officers	10.61	10-Q	May 6, 2011	001-34207	
10.15+	2011 Equity Incentive Plan	99.1	S-8	January 6, 2011	333-171552	
10.16+	Form of Restricted Stock Unit Award Notice and Restricted Stock Unit Award Agreement under the 2011 Equity Incentive Plan	99.2	S-8	January 6, 2011	333-171552	
10.17+	Form of Stock Option Grant Notice and Option Agreement under the 2011 Equity Incentive Plan	99.3	S-8	January 6, 2011	333-171552	

Exhibit Number	Document	Exhibit Number	Filing	Filing Date	File No.	Filed Herewith
10.18	Third Amendment to Lease, dated as of April 1, 2011, between the Company and 2929 Seventh Street, LLC	10.65	10-Q	August 3, 2011	001-34207	
10.19†	Amendment No. 4 to the Research Collaboration and License Agreement, dated September 1, 2006, by and between AstraZeneca AB and the Company, dated September 23, 2011	10.67	10-K	March 12, 2012	001-34207	
10.20+	Employment Offer Letter to Christine R. Larson, dated August 1, 2012	10.70	10-Q	November 2, 2012	001-34207	
10.21	Fourth Amendment to Lease, dated as of December 14, 2012, between the Company and 2929 Seventh Street, LLC	10.72	10-K	March 8, 2013	001-34207	
10.22	Lease, dated as of December 14, 2012, between the Company and 2929 Seventh Street, LLC	10.73	10-K	March 8, 2013	001-34207	
10.23+	Consulting Agreement, dated as of November 14, 2012, by and between the Company and Stanley A. Plotkin	10.74	10-K	March 8, 2013	001-34207	
10.24+	Amended and Restated Management Continuity and Severance Agreement, dated October 31, 2012, between the Company and J. Tyler Martin	10.37	10-K	March 8, 2013	001-34207	
10.25	Consulting Agreement, dated as of March 29, 2013, by and between Solution Partners and the Company	10.76	8-K	April 4, 2013	001-34207	
10.26+	Employment Agreement, dated as of April 3, 2013, by and between Eddie Gray and the Company	10.78	8-K	May 3, 2013	001-34207	

Exhibit Number	Document	Exhibit Number	Filing	Filing Date	File No.	Filed Herewith
10.27+	Management Continuity and Severance Agreement, dated as of April 3, 2013, by and between Eddie Gray and the Company	10.79	8-K	May 3, 2013	001-34207	
10.28+	Consulting Agreement, dated as of May 1, 2013, by and between Dino Dina, M.D. and the Company	10.80	8-K	May 3, 2013	001-34207	
10.29	Sales Agreement, dated November 10, 2014, between the Company and Cowen and Company, LLC	10.1	8-K	November 10, 2014	001-34207	
10.30†	Amendment No. 5 to the Research Collaboration and License Agreement, dated September 1, 2006, by and between AstraZeneca AB and the Company, dated January 7, 2014	10.88	10-K	March 10, 2014	001-34207	
10.31+	Employment Agreement, dated March 21, 2013, by and between David Novack and the Company	10.84	10-K	March 10, 2014	001-34207	
10.32+	Employment Agreement, dated July 11, 2013, by and between Robert Janssen, M.D. and the Company	10.85	10-K	March 10, 2014	001-34207	
10.33+	Employment Agreement, dated February 5, 2014, by and between David L. Johnson and the Company	10.86	10-K	March 10, 2014	001-34207	
10.34+	2014 Employee Stock Purchase Plan	10.1	8-K	May 29, 2014	001-34207	
10.35+	Amended and Restated 2004 Non-Employee Director Option Program and Amended and Restated 2005 Non-Employee Director Cash Compensation Program, Amended February 5, 2015					X

Exhibit Number	Document	Exhibit Number	Filing	Filing Date	File No.	Filed Herewith
10.36††	Amendment No. 6 to the Research Collaboration and License Agreement, dated September 1, 2006, by and between AstraZeneca AB and the Company, dated December 4, 2014					X
10.37	Term Loan Agreement, dated December 23, 2014, by and between Hercules Technology Growth Capital, Inc. and the Company					X
12.1	Statement of Computation of Ratio of Earnings to Fixed Charges					X
21.1	List of Subsidiaries					X
23.1	Consent of Independent Registered Public Accounting Firm					X
31.1	Certification of Chief Executive Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002					X
31.2	Certification of Principal Financial Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002					X
32.1*	Certification of Chief Executive Officer to Section 906 of the Sarbanes-Oxley Act of 2002					X
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EX—101.INS	XBRL Instance Document
EX—101.SCH	XBRL Taxonomy Extension Schema Document
EX—101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document
EX—101.DEF	XBRL Taxonomy Extension Definition Linkbase
EX—101.LAB	XBRL Taxonomy Extension Labels Linkbase Document
EX—101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document

† We have been granted confidential treatment with respect to certain portions of this agreement. Omitted portions have been filed separately with the Securities and Exchange Commission.

†† Portions of this Exhibit have been omitted and filed separately with the Securities and Exchange Commission as part of an application for confidential treatment.

+ Indicates management contract, compensatory plan or arrangement.

* The certifications attached as Exhibits 32.1 and 32.2 that accompany this Annual Report on Form 10-K, are not deemed filed with the Securities and Exchange Commission and are not to be incorporated by reference into any filing of the Company 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 Form 10-K), irrespective of any general incorporation language contained in such filing.

<u>Signature</u>	<u>Title</u>	<u>Date</u>
/s/ EDDIE GRAY _____ Eddie Gray	Chief Executive Officer <i>(Principal Executive Officer)</i>	March 5, 2015
/s/ MICHAEL OSTRACH _____ Michael Ostrach	Chief Financial Officer <i>(Principal Financial Officer)</i>	March 5, 2015
/s/ DAVID JOHNSON _____ David Johnson	Vice President <i>(Principal Accounting Officer)</i>	March 5, 2015
/s/ ARNOLD L. ORONSKY, PH.D. _____ Arnold L. Oronsky, Ph.D.	Chairman of the Board	March 5, 2015
/s/ LAURA BREGE _____ Laura Brege	Director	March 5, 2015
/s/ FRANCIS R. CANO, PH.D. _____ Francis R. Cano, Ph.D.	Director	March 5, 2015
/s/ DENNIS A. CARSON, M.D. _____ Dennis A. Carson, M.D.	Director	March 5, 2015
/s/ DENISE M. GILBERT, PH.D. _____ Denise M. Gilbert, Ph.D.	Director	March 5, 2015
/s/ DANIEL L. KISNER, M.D. _____ Daniel L. Kisner, M.D.	Director	March 5, 2015
/s/ PEGGY V. PHILLIPS _____ Peggy V. Phillips	Director	March 5, 2015
/s/ STANLEY A. PLOTKIN, M.D. _____ Stanley A. Plotkin, M.D.	Director	March 5, 2015
/s/ NATALE S. RICCIARDI _____ Natale S. Ricciardi	Director	March 5, 2015

EXHIBIT INDEX

Incorporated by Reference

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3.1	Sixth Amended and Restated Certificate of Incorporation	3.1	S-1/A	February 5, 2004	333-109965	
3.2	Amended and Restated Bylaws	3.2	S-1/A	February 5, 2004	333-109965	
3.3	Form of Certificate of Designation of Series A Junior Participating Preferred Stock	3.3	8-K	November 6, 2008	000-50577	
3.4	Certificate of Amendment of Amended and Restated Certificate of Incorporation	3.1	8-K	January 4, 2010	001-34207	
3.5	Certificate of Amendment of Amended and Restated Certificate of Incorporation	3.1	8-K	January 5, 2011	001-34207	
3.6	Certificate of Amendment of Amended and Restated Certificate of Incorporation	3.6	8-K	May 30, 2013	001-34207	
3.7	Certificate of Amendment of the Sixth Amended and Restated Certificate of Incorporation	3.1	8-K	November 10, 2014	001-34207	
3.8	Certificate of Designation of Series B Convertible Preferred Stock	3.1	8-K	November 1, 2013	001-34207	
4.1	Reference is made to Exhibits 3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 3.7 and 3.8 above					
4.2	Registration Rights Agreement, dated as of July 18, 2007, by and between the Company and Deerfield Entities	4.1	S-3	August 31, 2007	333-145836	
4.3	Form of Warrant to Purchase Common Stock	4.2	S-3	August 31, 2007	333-145836	
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Exhibit Number	Document	Exhibit Number	Filing	Filing Date	File No.	Filed Herewith
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- † We have been granted confidential treatment with respect to certain portions of this agreement. Omitted portions have been filed separately with the Securities and Exchange Commission.
 - †† Portions of this Exhibit have been omitted and filed separately with the Securities and Exchange Commission as part of an application for confidential treatment.
 - + Indicates management contract, compensatory plan or arrangement.
 - * The certifications attached as Exhibits 32.1 and 32.2 that accompany this Annual Report on Form 10-K, are not deemed filed with the Securities and Exchange Commission and are not to be incorporated by reference into any filing of the Company 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 Form 10-K), irrespective of any general incorporation language contained in such filing.

**DYNAVAX TECHNOLOGIES CORPORATION
AMENDED AND RESTATED 2004 NON-EMPLOYEE DIRECTOR OPTION PROGRAM
AND
AMENDED AND RESTATED 2005 NON-EMPLOYEE DIRECTOR CASH COMPENSATION PROGRAM**

**EFFECTIVE APRIL 14, 2005
AMENDED February 5, 2015
(REVISION VERSION 6.0)**

**ARTICLE I
ESTABLISHMENT AND PURPOSE OF THE PROGRAM**

1.1 Establishment of Program

The Dynavax Technologies Corporation 2004 Non-Employee Director Option Program, as revised herein, including the Non-Employee Director Cash Compensation Program (collectively, the "Director Program") is adopted pursuant to the Dynavax Technologies Corporation 2011 Equity Incentive Plan (the "2011 Plan"), in addition to the terms and conditions set forth below, is subject to the provisions of the Plan.

1.2 Purpose of Program

The purpose of the Director Program is to enhance the ability of the Company to attract and retain directors who are not Employees ("Non-Employee Directors") through an Option and Cash Compensation program.

1.3 Effective Date of the Program

The Director Program is effective as of the Registration Date, and as revised on February 5, 2015.

**ARTICLE II
DEFINITIONS**

Capitalized terms in this Director Program, unless otherwise defined herein, have the meaning given to them in the Plan.

**ARTICLE III
OPTION TERMS**

3.1 Date of Grant and Number of Shares

Effective April 14, 2005, a Non-Qualified Stock Option to purchase 15,000 shares of Common Stock shall be granted (the "Initial Grant") to each Non-Employee Director and 25,000 shares shall be granted to the Non-Employee Chairman of the Board (the "Initial Grant"), and such Initial Grant to be made to Non-Employee Directors elected or appointed to the Board upon the date each such Non-Employee Director first becomes a Non-Employee Director.

In addition, immediately following each annual meeting of the Company's stockholders, commencing with the annual meeting of the Company's stockholders in 2012, each Non-Employee Director who continues as a Non-Employee Director following such annual meeting shall be granted a Non-Qualified Stock Option to purchase 7,500 shares of Common Stock (a "Subsequent Grant"). Based on the Non-Employee Director's election date, the first subsequent grant shall be pro-rated as follows:

Service Period from Election Date	Option Grant Schedule
More than 10 up to 12 months	100% of grant (7,500 shares)
More than 7 months, but less than 10	75% of grant (5,625 shares)
More than 4 months, but less than 7	50% of grant (3,750 shares)
More than 1 month, but less than 4	25% of grant (1,875 shares)

Each such Subsequent Grant shall be made on the date of the annual stockholders' meeting in question.

3.2 Vesting

Each Initial Grant of Common Stock subject to the Option under the Director Program shall vest twenty-five percent (25%) twelve (12) months after the grant date and an additional twenty-five percent (25%) of the shares of Common Stock subject to the Option shall vest on each yearly anniversary of the grant date thereafter, such that the Option will be fully exercisable four (4) years after its date of grant.

Each Subsequent Grant under the Director Program will vest and become exercisable as to all of the shares of Common Stock subject to the Option twelve (12) months after the grant date.

3.3 Exercise Price

The exercise price per share of Common Stock of each Initial Grant and Subsequent Grant shall be one hundred percent (100%) of the Fair Market Value per share on the date of grant.

3.4 Corporate Transaction/Change in Control

Each Option under the Director Program shall be subject to the provisions of Section 9 of the 2011 Plan relating to the exercise or termination of the Option in the event of a Corporate Transaction or a Change in Control.

3.5 Other Terms

The Administrator (the "Dynavax Board of Directors") of the Plan shall determine the remaining terms and conditions of the Options awarded under the Program.

ARTICLE IV CASH COMPENSATION TERMS

4.1 Annual Fees

Each Non-Employee Director currently on the Company's board, or elected in 2012 and thereafter, shall receive an annual retainer fee of \$40,000. The Chairman of the Board shall receive an annual retainer fee of \$65,000. Such annual retainer fees will be paid in quarterly installments at the end of each fiscal quarter where such person is an active director of the board ("active director" requires attendance at 75% of the annually scheduled board meetings) and is inclusive of 5 scheduled board meetings.

4.2 [Intentionally Removed]

4.3 Committee Meeting Fees

The Chairman of the Audit Committee shall receive an annual retainer of \$20,000. Each member of the audit committee shall receive an annual retainer of \$7,500.

The Chairman of the Compensation Committee shall receive an annual retainer of \$15,000. Each member of the compensation committee shall receive an annual retainer of \$7,000.

The Chairman of the Nominating and Governance Committee shall receive an annual retainer of \$10,000. Each member of the nominating committee shall receive an annual retainer of \$5,000.

Such annual retainer fees will be paid quarterly at the end of each fiscal quarter where such person is an active Chairman or member of the Committee and an Active Director.

4.4 Travel and Related Costs

Reasonable travel and related costs associated with attending Board and committee meetings shall be reimbursed. The Board member needs to submit proper documentation for reimbursement.

AMENDMENT No. 6

This Amendment No. 6 (the “**Amendment**”) to the Agreement dated 1 September 2006 by and between

- (1) ASTRAZENECA AB, a company incorporated in Sweden under no. 556011-7482 with registered offices at 151 85 Södertälje and with offices at SE-431 83, Mölndal, Sweden (“**AstraZeneca**”); and
- (2) DYNVAX TECHNOLOGIES CORPORATION, a Delaware corporation with offices at 2929 Seventh Street, Suite 100, Berkeley, CA 94710-2753, USA (“**Dynavax**”)

as amended (the “**Agreement**”) is made effective as of 8th December 2014 (the “**Amendment Effective Date**”).

Recitals

WHEREAS, the Research Term has expired and the Joint Research has been completed; and

WHEREAS, under the Agreement, AstraZeneca has nominated AZD1419 as Lead Compound; and

WHEREAS, under the Agreement, AstraZeneca has the responsibility, as set forth therein, for Developing Candidate Drugs selected and Commercialising Products and Combination products and for costs associated with the Development and Commercialisation; and

WHEREAS, in furtherance of the Development of AZD1419 the Parties agreed in Amendment No 4 that Dynavax would carry out certain portions of the Development, primarily consisting of the Phase I Study and the Phase II a Study, as more closely described and on the terms set forth in the Amendment No 4; and

WHEREAS, the Parties agreed in Amendment No 5 to revert parts of the work allocation agreed in Amendment No 4 so that after completion by Dynavax of the Phase I Study, AstraZeneca would

resume responsibility for carrying out the Phase II a Study and all subsequent Development of AZD 1419 under the Agreement as envisaged prior to the adoption of the changes set out in Amendment No 4; and

WHEREAS, the Parties now wish to further change the allocation of Development work to be carried out between the Parties under the Agreement by agreeing that Dynavax shall reassume the responsibility for carrying out the Phase II a Study. For the avoidance of doubt, AstraZeneca shall remain responsible for carrying out all subsequent Development of AZD1419 under the Agreement.

WHEREAS, in addition to the agreed work allocation, the Parties acknowledge and agree that the numbering in Sections 1.124 though 1.139 in Amendment 4 and 5 may need clarification. Therefore, the Parties agree that in addition to agreed amendments thereto, to reinstate all Sections 1.124 though 1.139 with correct numbering for clarity.

WHEREAS, the parties desire to further amend, modify and restate certain terms and conditions of the Agreement.

Agreement

NOW, THEREFORE, in consideration of the mutual covenants contained in this Amendment, and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties, intending to be legally bound, agree as follows:

1 Definitions

Any capitalized term not separately defined in this Amendment shall have the meaning ascribed to it in the Agreement.

2 Modifications

2.1 *The following modifications and clarifications shall be inserted immediately after Section 1.123 of the Agreement as new or renumbered Sections 1.124 through 1.138.*

“1.124“**AZD 1419**” means Lead Candidate coded by AstraZeneca as AZD1419.

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1.125“**Anti-Corruption Laws**” means the US Foreign Corrupt Practices of 1977, the UK Bribery Act 2010 and any other Applicable Law for the prevention of fraud, corruption, racketeering, money laundering and/or terrorism.

1.126“**Authority**” means any court or government body, whether national, supranational, federal, state, local, foreign or provincial, including any political subdivision thereof, including any department, commission, board, bureau, agency, or other regulatory or administrative governmental authority or instrumentality, and further including any quasi-governmental person or entity exercising the functions of any of these.

1.127“**Commercially Sensitive Information**” means any and all commercially or strategically sensitive information relating to the business of a Party or its Affiliates, including information about prices and pricing policies, cost structures and business strategies.

1.128“**External Interactions Policy**” means the AstraZeneca Global Policy – External Interactions available at www.AstraZeneca.com following the links Responsibility / Code, policies & standards / Policies & standards / External interactions, as in force from time to time.

1.129“**Group**” means a Party and its Affiliates.

1.130“**Key Requirements**” means the key requirements to be met by AstraZeneca external contractors and suppliers as required by the External Interactions Policy, which requirements are set forth on Schedule 1.

1.131“**Material Anti-Corruption Law Violation**” means a violation of any Anti-Corruption Law which would if it was publicly known, in the reasonable view of AstraZeneca, have a material adverse effect on Dynavax or on the reputation of AstraZeneca because of its relationship with Dynavax.

1.132“**Phase I Study**” means the clinical study regarding AZD1419 with the design, endpoint, number of subjects and time plan described, and otherwise as described, in the Amendment Development Phase I Study Plan, attached hereto as a Schedule 2.

1.133“**Phase II a Study**” means the clinical study regarding AZD1419 with the design as described, in the Amendment Development Phase II a Study Plan, attached hereto as a Schedule 3.

1.134“**Phase II a Manufacturing Services**” means the manufacturing of Compound with a quality and in a quantity sufficient, and further in accordance with the specifications and conditions set forth in Schedule 4, attached hereto, for the purpose of carrying out the Phase II a Study.

1.135“**Sub-Contract**” means any contract between Dynavax and a third party pursuant to which Dynavax perform its obligations under this Agreement.

1.136“**Sub-Contractor**” means a Person with whom Dynavax enters into a Sub-Contract or such Person’s employees, servants or agents, and any further third party with whom that Person enters into a sub-contract or such further third party’s employees, servants or agents.

1.137“**Toxicology Study**” means the twelve weeks toxicology studies being part if the Phase I Study as described in Schedule 5 attached hereto.

1.138“**Dynavax Development Work**” means the Phase I Study, the Phase II a Manufacturing Services and the Phase II a Study.”

The space for Section 1.139 shall be left blank.

2.2 The Sections 8.2.B, 8.2.C and 8.2.D are hereby deleted and shall be replaced by new Sections 8.2.B, 8.2.C and 8.2.D .

“8.2. BNotwithstanding what is stated in Section 8.2; Dynavax shall be responsible for completing the Dynavax Development Work in accordance with the budget and plan agreed by JSC and with what is otherwise stated herein. Upon the request of Dynavax, AstraZeneca agrees to provide necessary and reasonable assistance for the purpose of timely completion of the Phase II a Study. Upon completion of the Dynavax Development Work such Regulatory Documentation, Regulatory Filing and,

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as applicable, Health Registration Approvals, generated by Dynavax shall be transferred to AstraZeneca free of charge in a format useful and suitable for AstraZeneca for the purpose of being able to continue the Development and carry out Commercialisation in accordance with this Agreement.

8.2. CWithout prejudice to what is stated in Section 8.3.2, Dynavax shall be responsible for developing Regulatory Documentation and preparing and submitting Regulatory Filings and, as applicable, maintain Health Registration Approvals for AZD1419 for the purpose of the Dynavax Development Work. Upon completion of the Dynavax Development Work, such Regulatory Documentation, Regulatory Filing and, as applicable, Health Registration Approvals, shall be transferred to AstraZeneca free of charge in a format useful and suitable for AstraZeneca for the purpose of being able to continue the Development and carry out Commercialisation on accordance with the Agreement. Sections 8.2, 8.3.4 and 8.3.5 shall apply *mutatis mutandis* to Dynavax regarding its conduct thereof.

Dynavax shall use Commercially Reasonable Efforts to carry out the Dynavax Development Work. For the avoidance of doubt, AstraZeneca's obligation to use Commercially Reasonable Efforts as set forth in Sections 8.2 and 8.10 shall be deemed to have been fulfilled, and deemed to continue to be fulfilled, for as long as the Dynavax Development Work is ongoing.

8.2. DImmediately upon completion of the Dynavax Development Work, or at any other time before such completion as decided from time to time by the JSC, Dynavax shall make available and transfer to AstraZeneca any Dynavax Know-How, compounds and other materials generated by or on behalf of Dynavax, solely or jointly with AstraZeneca or any Third Party, in the course of the Dynavax Development Work in a format useful and suitable for AstraZeneca to be able to continue the Development and carry out the Commercialisation in accordance with this Agreement.”

2.3 The Sections 8.9. B and 8.9. C are hereby deleted and shall be replaced by new Sections 8.9. B, 8.9. C and 8.9. D.

“8.9. B Notwithstanding what is stated in Section 8.9, the Parties have agreed on a total estimated cost required for the Phase II a Study and the Phase II a Manufacturing Services to be [*] allocated as set forth in a) through b) which funding is reasonably assessed to cover all Dynavax’ fully loaded costs for all activities contained therein and all costs for outsourcing of services and other Third Party contracts required for the Phase II a Study and the Phase II a Manufacturing Services.

AstraZeneca shall provide the following funding as the sole compensation, subject to the reconciliation set forth in Section 8.9 C, to Dynavax for carrying out the Phase II a Study and the Phase II a Manufacturing Services:

- (a) Eight million U.S. Dollars (\$ 8,000,000) payable within twenty (20) days following signature of this Amendment No 6 for the purpose of covering Dynavax’ costs for carrying out the 2015 agreed activities.
- (b) No later than 31st October each year for the duration of the Dynavax Development Work, Dynavax shall submit to AstraZeneca an invoice, including an accounting of all costs to be incurred by Dynavax pursuant to the plan and annual budget agreed by JSC for the purpose of the Phase II a Study and the Phase II a Manufacturing Services in the subsequent year. AstraZeneca shall pay such invoices within forty five (45) days of receipt of such invoice by AstraZeneca.

For the avoidance of doubt, the aggregate funding invoiced under Section 8.9. B (a) and (b) shall not exceed [*], unless separately approved by AstraZeneca under the following process.

If in the opinion of Dynavax, additional funding is necessary to complete the Phase II a Study, Dynavax shall provide the JSC with a fully loaded cost estimate and budget for outstanding activities and requested additional funding. Thereafter, the JSC shall discuss and decide whether any additional funding shall be approved and, if so,

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the additional funding amount approved; provided however, that AstraZeneca shall be under no obligation to approve such additional funding.

If the JSC or AstraZeneca declines additional funding requested by Dynavax, Dynavax shall be under no obligation to expend any amount greater than the aggregate of the originally agreed total estimated cost and any previously approved additional funding requests. Under such circumstances, prior to incurring the anticipated excess costs, the JSC shall agree upon reasonable modifications to the Phase II a Study (such as reduction in number of patients, sites, or study visits) to decrease its total cost consistent with the approved funding level.

No later than the 25th of October each year for the duration of the Dynavax Development Work, the JSC shall agree an annual budget for the purpose of the Phase II a Study and the Phase II a Manufacturing Services activities to be performed by Dynavax in the subsequent year.

- 8.9. C Upon completion of Dynavax Development Work, Dynavax shall forthwith disclose to AstraZeneca in sufficient detail the costs spent or incurred by Dynavax for the completed Dynavax Development Work. Should the total spend and costs incurred have been lower than the amount paid by AstraZeneca for Dynavax Development Work then AstraZeneca may offset the amount corresponding to the excess paid by AstraZeneca from the next milestone payment under Section 9.4 or, if necessary, from royalty payments under Section 10.1. Should no further milestone or payment be due, whether due to AstraZeneca's termination of this Agreement or otherwise, then Dynavax shall repay the amounts concerned to AstraZeneca within sixty (60) days of the date of completion of the Dynavax Development Work. This Section 8.9. C shall survive the expiration or termination of this Agreement.
- 8.9. D Should Dynavax notify AstraZeneca in parallel with the submission of the final Phase II a Clinical Study Report ("Phase II a CSR") to AstraZeneca, of a request for AstraZeneca to order study drug for the purpose of Phase II b Development work, AstraZeneca shall place an order (the "Order") for the manufacturing of study drug

with a quality and in a quantity sufficient to initiate Phase II b Development work (“Phase II b Materials”). Provided, however, that should AstraZeneca despite Commercially Reasonable Efforts not be able to identify a manufacturer to produce Phase II b Materials in sufficient quantity and quality in compliance with AstraZeneca’s internal processes, AstraZeneca shall inform Dynavax thereof and thereby be relieved from this undertaking.

Should AstraZeneca have identified an appropriate manufacturer for the purpose of manufacturing the Phase II b Materials but not placed an Order within one hundred and twenty (120) days after receipt of notification by Dynavax of its request for an Order to be placed, AstraZeneca shall be deemed to have served notice under Section 20.2 of its determination not to pursue the Development of AZD1419.”

2.4 The Section 25.2.is hereby deleted and shall be replaced by new Section 25.2.

“25.2. Address for Notice

For: AstraZeneca AB
Address: AstraZeneca AB
SE-431 83 Mölndal
Sweden

Facsimile: +46 (0)31-776 38 71

For the attention of: Director, Scientific & Partnering Alliances, Respiratory/Inflammation

With a copy to:

Address:AstraZeneca UK Limited
1S92, Mereside
Alderley Park, Macclesfield, Cheshire
England SK10 4TF
Facsimile:+44 1625 518805
For the attention of: Deputy General Counsel

For: Dynavax Technologies Corporation
Address: Dynavax Technologies Corporation
2929 Seventh Street
Suite 100
Berkeley, CA 94710-2753
Facsimile:(510) 848-1327
For the attention of: General Counsel

3 Counterparts

This Amendment may be executed in two or more counterparts, each of which shall be deemed an original and all of which shall together be deemed to constitute one agreement. The parties agree that execution of this Amendment by exchanging facsimile or PDF signatures shall have the same legal force and effect as the exchange of original signatures.

4 Entire Agreement

This Amendment, together with the Agreement, as amended, constitutes the entire agreement between the parties with respect to the subject matter of the Agreement. The Agreement together with this Amendment supersedes all prior agreements, whether written or oral, with respect to the subject matter of the Agreement, as amended. All Attachments referred to in this Amendment are intended to be and are hereby specifically incorporated into and made a part of the Agreement. The parties hereby agree that subject to the modifications specifically stated in this Amendment, all terms and conditions of the Agreement, as amended, shall remain in full force and effect.

[SIGNATURE PAGE FOLLOWS.]

Each party is signing this Amendment on the date stated opposite that party's signature.

DYNAVAX TECHNOLOGIES
CORPORATION ASTRAZENECA AB (publ)

BY: /s/ EDDIE GRAY BY: /s/ MAARTEN KRAAN

NAME: EDDIE GRAY NAME: MAARTEN KRAAN

TITLE: CEO TITLE: VP iMED RIA

DATE: 12.4.2014 DATE: DECEMBER 4, 2014

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Schedule 1

KEY REQUIREMENTS — EXTERNAL INTERACTIONS POLICY

1. GIVING ITEMS OF VALUE TO HCPS/HCOS/PAYERS/PUBLIC OFFICIALS

- 1.1 The Counterparty must respect the independence of HCPs, HCOs, HCP Service Providers, Payers and Public Officials in whatever capacity they act.
- 1.2 The Counterparty must not seek to influence or reward HCPs, HCOs, HCP Service Providers, Payers or Public Officials in any improper way.

2. PRODUCT INFORMATION AND PROMOTION

Counterparties engaged in any Promotion or Promotional Activity for AstraZeneca products must ensure:

- (A) all Promotional Activities and Promotional Materials are accurate, fair and balanced.
- (B) all Promotional Activities and Promotional Materials are free from ambiguity and allow the therapeutic value of AstraZeneca products to be assessed by HCPs and HCOs in the interest of optimal patient care.
- (C) Promotional Activities do not compromise the independence of decisions taken by HCPs and HCOs in prescribing medicines for patients, or the recommendation, purchase, administration, authorisation or supply of AstraZeneca products.
- (D) AstraZeneca Products are only promoted when the time is right to do so (which will never be before the AstraZeneca Product has been given the necessary market approvals). Off Label uses of AstraZeneca products must never be promoted.

3. NON-PROMOTIONAL COMMUNICATIONS REGARDING OUR PRODUCTS

Counterparties engaged in Non-Promotional Communications regarding AstraZeneca products:

- 3.1 Must support the safe and effective use of AstraZeneca products. Counterparties must not provide medical advice to members of the general public, but Counterparties may provide Non-Promotional educational and scientific information where this is appropriate and permitted by local law.
- 3.2 Must never undermine the relationship between HCPs and their patients. All health-related information provided to members of the general public must be accurate, fair, not misleading, and support HCP-patient interaction

4. MEETINGS AND ASSOCIATED HOSPITALITY

Counterparties engaged in organising meetings and associated hospitality relating to their activities for AstraZeneca must:

- 4.1 Ensure that every aspect of the Meeting is in keeping with the ABAC Principles, the External Interactions Policy and other AstraZeneca global policies and standards communicated by AstraZeneca to the Counterparty, and must in any event be appropriate in all the circumstances.
- 4.2 Meetings organised or sponsored by, or with the participation of, the Counterparty must always have an objectively justifiable business and/or medical education purpose.

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- 4.3 The venue and conduct of Meetings must always be modest, and appropriate for the business and/or medical education purpose of the Meeting.
- 4.4 Those AstraZeneca policies concerning payment, compensation or reimbursement for the attendance of HCPs, HCOs, HCP Service Providers, Payers and/or Public Officials at meetings which are provided to Counterparty must be strictly adhered to in all circumstances.
- 4.5 The venue, conduct or other arrangements made for Meetings must never be used to reward, influence or induce HCPs, HCOs, Payers or Public Officials to give the Counterparty business or a business advantage, nor create any appearance of doing so.
5. **ENGAGING HCPS AND OTHER MEDICAL AND SCIENTIFIC CONSULTANTS TO PROVIDE SERVICES TO THE COUNTERPARTY**
- 5.1 Interactions with HCP Service Providers must at all times be professional exchanges, designed to enhance the practice of medicine to benefit patients.
- 5.2 Interactions with HCP Service Providers must be marked by integrity, transparency, ethical conduct and full compliance with applicable laws, regulations and accepted industry codes of practice and the relevant AstraZeneca policies communicated to the Counterparty.
- 5.3 HCP Service Providers must only be engaged where there is a legitimate need for their services and the relevant person is an appropriate candidate based on their qualifications and experience in the relevant subject matter or activity.
- 5.4 The level of compensation provided to an individual HCP Service Provider must not have, and must not create an impression that either Counterparty or AstraZeneca has undue influence on that HCP Service Provider due to the level of compensation received by that HCP Service Provider or otherwise.

6. **SAMPLES**

- 6.1 Samples of AstraZeneca products must only be distributed to enable patients, through their HCPs, to become familiar with AstraZeneca products; to enable HCPs to gain experience with the use and prescription of an AstraZeneca product; to determine a particular patient's response to an AstraZeneca product; or to evaluate clinical responses to an AstraZeneca product more widely. Samples must not be distributed for any other purposes.
- 6.2 Samples must never be provided to HCPs for the purpose of enabling the HCP to profit or gain a business advantage from the use of the sample, or for any other improper purpose.

7. **DONATIONS, GRANTS, SPONSORSHIP AND PARTNERSHIPS**

- 7.1 Counterparty should be committed to making a positive contribution to its local communities and supporting the work of others in the healthcare environment through contributions to charities or other non-profit organisations established for research, educational and/or charitable purposes; sponsorship of activities that may enhance Counterparty's reputation; and, working in partnership with other organisations.
- 7.2 All such contributions and support by Counterparty must always be open and transparent.
- 7.3 Counterparty must be vigilant to ensure that any support provided in the form of Donations, Grants and Sponsorship or through Partnerships (collectively, "Support") does not seek to improperly influence decisions concerning the supply or use of AstraZeneca products or the conduct of Counterparty's business more generally, and that it is not provided in circumstances where it could be misconstrued as such.

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8. PATIENT GROUPS

Where Counterparty has interactions with Patient Groups in connection with AstraZeneca products:

- 8.1 Counterparty must be committed to the advancement and understanding of medicines through open and transparent support of Patient Groups, which may include the provision of Donations and Sponsorship (often comprising or including in-kind assistance) of projects designed to enhance patient welfare.
- 8.2 No support must be given by Counterparty to a Patient Group in order to influence decisions concerning the supply or use of AstraZeneca products, nor made in circumstances where it could be misconstrued

9. MARKET RESEARCH

Where the Counterparty is authorised to conduct Market Research in respect of AstraZeneca products:

- 9.1 Market Research activities in respect of AstraZeneca products must only be undertaken and used to address the Counterparty's unmet information and business needs so that it is able to make better business decisions.
- 9.2 Market Research activities must not be undertaken or used to promote AstraZeneca products or to reward HCPs and HCOs for their willingness to prescribe, recommend or use the Products.

10. NON-INTERVENTIONAL STUDIES

- 10.1 Counterparty must never in connection with any activities for AstraZeneca be involved in the decision to place a particular patient on a specific medicine. That decision must be made solely by the patient's HCP.
- 10.2 If there is a NIS relating to an AstraZeneca product, Counterparty must ensure the prescription of the AstraZeneca product is clearly separated from the decision to include a patient in an NIS. NISs must not include any additional procedures (diagnostic or monitoring) and be observational in nature. All collected data must undergo a formal analysis

11. INVESTIGATOR SPONSORED STUDIES

- 11.1 The Counterparty must recognise the importance of ISSs in expanding scientific knowledge related to potential uses of AstraZeneca products.
- 11.2 The Counterparty may provide support to an ISS if its activities for AstraZeneca are suitable for an ISS. The Counterparty must not , be considered to be the sponsor or undertake responsibilities which the applicable regulatory authority has designated as responsibilities of the sponsor.

12. DEFINITIONS

The following capitalised terms have the following meanings for purposes of this Schedule:

“**Consultant**” means an HCP contracted and retained by the Counterparty to provide services to the Counterparty.

“**Donation**” means monetary or funding given by the Counterparty to charities/non-profit organisations for which no return is required by or provided to the Counterparty.

“**Gift**” means any benefit of any kind, including but not limited to money, vouchers, goods, services or other non-financial benefits provided as a mark of appreciation or friendship.

“**Grant**” means a Donation that is such for a purpose specified by the Counterparty.

“**HCO**” means any healthcare organisation, which includes hospitals and other healthcare organisations, health insurers (including managed care organisations), pharmacies and formulary or benefit administrators and relevant staff and other individuals employed by, or otherwise affiliated with, such entities who may or do prescribe,

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administer, recommend, purchase, pay for, reimburse, authorise, approve or supply any AstraZeneca product or AstraZeneca service sold or provided by the Counterparty.

“**HCP**” means a healthcare professional, including any member of the medical, dental, pharmacy or nursing professions, along with their relevant associated administrative staff who may or does prescribe, administer, recommend, purchase, pay for, reimburse, authorise, approve or supply any AstraZeneca product or AstraZeneca service sold or provided by the Counterparty.

“**HCP Service Provider**” means an HCP, HCO or other medical or scientific advisor or company retained by the Counterparty to provide contracted services.

“**Hospitality**” means meals and invitations or tickets to social, entertainment, cultural or sporting events.

“**ISS**” means a clinical study that is independently initiated, designed and conducted by an external investigator (who assumes both the sponsor and principal investigator role) or medical institution, collaborative research group or academic research organisation (which assumes the Sponsor role and appoints principal investigator(s) for the study).

“**Market Research**” means the systematic gathering and interpretation of quantitative or qualitative data on the market environment from HCPs and patients using statistical and analytical methods to gain insight and support decision making. It does not include the gathering and interpretation or ‘real world evidence’.

“**Meeting**” means a meeting attended by one or more HCPs, HCOs, Payers or Public Officials which the Counterparty has organised or sponsored or which an external organisation (e.g. a medical society) has organised and for which the Counterparty has arranged or sponsored Speakers or Consultants.

“**NIS**” means a study where the Product is prescribed in the usual manner in accordance with the terms of the marketing authorisation.

“**Non-Promotional Activity**” means activities which are not Promotional Activities.

“**Off Label**” means inconsistent with the locally authorised prescribing information for an AstraZeneca product, including indications, uses, doses, or populations that are not included in the local marketing authorisation.

“**Partnership**” means an agreement that the Counterparty enters into with an organisation to deliver specific measurable outcomes that are solely directed to ensuring patient welfare, including partnerships with non-profit organisations to deliver outcomes that are for the public good.

“**Patient Group**” means a non-profit organisation (including umbrella organisations to which they belong) mainly composed of patients and/or caregivers that represent and/or support the needs of patients and/or caregivers.

“**Payer**” means an entity, other than the patient, that finances or reimburses the cost of prescription drugs or healthcare services, e.g. insurance carriers, either private or public (governmental), health plans, or health plan sponsors (employers or unions).

“**Promotion,**” “**Promotional**” and “**Promotional Activity**” means any activity undertaken, organised or sponsored by or on behalf of the Counterparty that is intended to promote the prescription, recommendation, supply, administration, sale or consumption of an AstraZeneca products or services through all media, including the internet.

“**Promotional Materials**” means any Promotional items or communications that mention an AstraZeneca product name or contain AstraZeneca product or medical information, which are intended for use with, or dissemination to, HCPs and HCOs in a promotional manner.

“**Public Officials**” are individuals who (i) hold a legislative, administrative or judicial position of any kind whether appointed or elected; (ii) exercise a public function for a country or territory, or any public agency or public enterprise of that country or territory; or (iii) act as an official or agent of a public international organisation.

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“**Sample**” means a unit of an AstraZeneca pharmaceutical product that is not to be sold but is provided free of charge to an HCP to allow the HCP and an appropriate patient to determine tolerability and effectiveness of the AstraZeneca product.

“**Speaker**” means an HCP Service Provider engaged by the Counterparty to speak on behalf of the Counterparty at a Meeting.

“**Sponsorship**” means the provision of funding in monetary or non-monetary form for an activity or initiative where the Counterparty’s name is associated with the activity, the funding is dedicated to a certain pre-defined initiative/activity and the Counterparty may receive an opportunity to engage in certain activities in association with the sponsorship that may enhance its reputation (such as providing an exhibition stand at a meeting).

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Phase 1 Study Plan

[*]

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Phase 2a study plan

[*]

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Phase 2a Manufacturing Services

[*]

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12 week Toxicology Studies in Mice and Non-human Primates

[*]

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LOAN AND SECURITY AGREEMENT

THIS LOAN AND SECURITY AGREEMENT is made and dated as of December 23, 2014 and is entered into by and between DYNAVAX TECHNOLOGIES CORPORATION, a Delaware corporation (hereinafter referred to as the "Borrower") the several banks and other financial institutions or entities from time to time parties to this Agreement (collectively, referred to as "Lender") and HERCULES TECHNOLOGY GROWTH CAPITAL, INC., a Maryland corporation, in its capacity as administrative agent for itself and the Lender (in such capacity, the "Agent").

RECITALS

- A. Borrower has requested Lender to make available to Borrower a loan in an aggregate principal amount of up to Forty Million Dollars (\$40,000,000.00) (the "Term Loan"); and
- B. Lender is willing to make the Term Loan on the terms and conditions set forth in this Agreement.

AGREEMENT

NOW, THEREFORE, Borrower, Agent and Lender agree as follows:

SECTION 1. DEFINITIONS AND RULES OF CONSTRUCTION

1.1 Unless otherwise defined herein, the following capitalized terms shall have the following meanings:

"Account Control Agreement(s)" means any agreement entered into by and among the Agent, Borrower and a third party Bank or other institution (including a Securities Intermediary) in which Borrower maintains a Deposit Account or an account holding Investment Property and which perfects Agent's security interest in the subject account or accounts.

"ACH Authorization" means the ACH Debit Authorization Agreement in substantially the form of Exhibit H.

"Advance(s)" means a Term Loan Advance.

"Advance Date" means the funding date of any Advance.

"Advance Request" means a request for an Advance submitted by Borrower to Agent in substantially the form of Exhibit A.

"Agent" has the meaning given to it in the preamble to this Agreement.

“Agreement” means this Loan and Security Agreement, as amended from time to time.

“Amortization Date” means February 1, 2016; provided however, if Performance Milestone A is achieved and no default or Event of Default shall have occurred, then August 1, 2016, and if Performance Milestone B is achieved and no default or Event of Default shall have occurred, then February 1, 2017.

“Assignee” has the meaning given to it in Section 11.13.

“Borrower Products” means all products, software, service offerings, technical data or technology currently being designed, manufactured or sold by Borrower or which Borrower intends to sell, license, or distribute in the future including any products or service offerings under development, collectively, together with all products, software, service offerings, technical data or technology that have been sold, licensed or distributed by Borrower since its incorporation.

“Business Day” means any day other than Saturday, Sunday and any other day on which banking institutions in the State of California are closed for business.

“Cash” means all cash and liquid funds.

“Change in Control” means any (i) reorganization, recapitalization, consolidation or merger (or similar transaction or series of related transactions) of Borrower or any Subsidiary, sale or exchange of outstanding shares (or similar transaction or series of related transactions) of Borrower or any Subsidiary in which the holders of Borrower or Subsidiary’s outstanding shares immediately before consummation of such transaction or series of related transactions do not, immediately after consummation of such transaction or series of related transactions, retain shares representing more than fifty percent (50%) of the voting power of the surviving entity of such transaction or series of related transactions (or the parent of such surviving entity if such surviving entity is wholly owned by such parent), in each case without regard to whether Borrower or Subsidiary is the surviving entity, or (ii) sale or issuance by Borrower of new shares of Preferred Stock of Borrower to investors, none of whom are current investors in Borrower, and such new shares of Preferred Stock are senior to all existing Preferred Stock and Common Stock with respect to liquidation preferences, and the aggregate liquidation preference of the new shares of Preferred Stock is more than fifty percent (50%) of the aggregate liquidation preference of all shares of Preferred Stock of Borrower.

“Claims” has the meaning given to it in Section 11.10.

“Closing Date” means the date of this Agreement.

“Collateral” means the property described in Section 3.

“Commitment Fee” means \$45,000, which fee has been paid, and shall be deemed fully earned on the Closing Date regardless of the early termination of this Agreement.

“Confidential Information” has the meaning given to it in Section 11.12.

“Contingent Obligation” means, as applied to any Person, any direct or indirect liability, contingent or otherwise, of that Person with respect to (i) any Indebtedness, lease, dividend, letter of credit or other obligation of another, including any such obligation directly or indirectly guaranteed, endorsed, co-made or discounted or sold with recourse by that Person, or in respect of which that Person is otherwise directly or indirectly liable; (ii) any obligations with respect to undrawn letters of credit, corporate credit cards or merchant services issued for the account of that Person; and (iii) all obligations arising under any interest rate, currency or commodity swap agreement, interest rate cap agreement, interest rate collar agreement, or other agreement or arrangement designated to protect a Person against fluctuation in interest rates, currency exchange rates or commodity prices; provided, however, that the term “Contingent Obligation” shall not include endorsements for collection or deposit in the ordinary course of business. The amount of any Contingent Obligation shall be deemed to be an amount equal to the stated or determined amount of the primary obligation in respect of which such Contingent Obligation is made or, if not stated or determinable, the maximum reasonably anticipated liability in respect thereof as determined by such Person in good faith; provided, however, that such amount shall not in any event exceed the maximum amount of the obligations under the guarantee or other support arrangement.

“Copyright License” means any written agreement granting any right to use any Copyright or Copyright registration, now owned or hereafter acquired by Borrower or in which Borrower now holds or hereafter acquires any interest.

“Copyrights” means all copyrights, whether registered or unregistered, held pursuant to the laws of the United States, any State thereof, or of any other country.

“Deposit Accounts” means any “deposit accounts,” as such term is defined in the UCC, and includes any checking account, savings account, or certificate of deposit.

“Domestic Subsidiary” means any Subsidiary that is not a Foreign Subsidiary.

“DSMB” means Data and Safety Monitoring Board.

“ERISA” means the Employee Retirement Income Security Act of 1974, as amended, and the regulations promulgated thereunder.

“Event of Default” has the meaning given to it in Section 9.

“Facility Charge” means \$400,000, representing one percent (1.0%) of Maximum Term Loan Amount.

“Financial Statements” has the meaning given to it in Section 7.1.

“Foreign Subsidiary” means any Subsidiary other than a Subsidiary organized under the laws of any state or other jurisdiction within the United States.

“GAAP” means generally accepted accounting principles in the United States of America, as in effect from time to time.

“Guarantor” means Rhein Biotech GmbH.

“Guaranty” means the secured Guaranty of Guarantor in a form reasonably acceptable to Agent.

“Guarantor Collateral” means the personal property assets of Guarantor described in Section 3.2.

“Guarantor Security Documents” means the documents described in Section 3.2.

“Indebtedness” means indebtedness of any kind, including (a) all indebtedness for borrowed money or the deferred purchase price of property or services (excluding trade credit entered into in the ordinary course of business due within ninety (90) days), including reimbursement and other obligations with respect to surety bonds and letters of credit, (b) all obligations evidenced by notes, bonds, debentures or similar instruments, (c) all capital lease obligations, and (d) all Contingent Obligations.

“Insolvency Proceeding” is any proceeding by or against any Person under the United States Bankruptcy Code, or any other bankruptcy or insolvency law, including assignments for the benefit of creditors, compositions, extensions generally with its creditors, or proceedings seeking reorganization, arrangement, or other similar relief.

“Intellectual Property” means all of Borrower’s Copyrights; Trademarks; Patents; Licenses; trade secrets and inventions; mask works; domain names and websites; Borrower’s applications therefor and reissues, extensions, or renewals thereof; and Borrower’s goodwill associated with any of the foregoing, together with Borrower’s rights to sue for past, present and future infringement of Intellectual Property and the goodwill associated therewith.

“Investment” means any beneficial ownership (including stock, partnership or limited liability company interests) of or in any Person, or any loan, advance or capital contribution to any Person or the acquisition of all, or substantially all, of the assets of another Person.

“Joinder Agreements” means for each Domestic Subsidiary, a completed and executed Joinder Agreement in substantially the form attached hereto as Exhibit G.

“Lender” has the meaning given to it in the preamble to this Agreement.

“License” means any Copyright License, Patent License, Trademark License or other license of rights or interests.

“Lien” means any mortgage, deed of trust, pledge, hypothecation, assignment for security, security interest, encumbrance, levy, lien or charge of any kind, whether voluntarily incurred or arising by operation of law or otherwise, against any property, any conditional sale or other title retention agreement, and any lease in the nature of a security interest.

“Loan” means the Advances made under this Agreement.

“Loan Documents” means this Agreement, the Notes (if any), the ACH Authorization, the Account Control Agreements, the Joinder Agreements, all UCC Financing Statements, the Guaranty, the Guarantor Security Documents, any guaranties and related security

documents executed after the Closing Date, and any other documents executed in connection with the Secured Obligations or the transactions contemplated hereby, as the same may from time to time be amended, modified, supplemented or restated.

“Material Adverse Effect” means a material adverse effect upon: (i) the business, operations, properties, assets, or condition (financial or otherwise) of Borrower; or (ii) the ability of Borrower to perform the Secured Obligations in accordance with the terms of the Loan Documents, or the ability of Agent or Lender to enforce any of its rights or remedies with respect to the Secured Obligations; or (iii) the Collateral or Agent’s Liens on the Collateral or the priority of such Liens.

“Maximum Term Loan Amount” means Forty Million and No/100 Dollars (\$40,000,000.00).

“Maximum Rate” shall have the meaning assigned to such term in Section 2.3.

“Note(s)” means a Term Note.

“Patent License” means any written agreement granting any right with respect to any invention on which a Patent is in existence or a Patent application is pending, in which agreement Borrower now holds or hereafter acquires any interest.

“Patents” means all letters patent of, or rights corresponding thereto, in the United States or in any other country, all registrations and recordings thereof, and all applications for letters patent of, or rights corresponding thereto, in the United States or any other country.

“Performance Milestone A” means Borrower’s receipt on or before September 30, 2015 of a positive decision in each of the first, second and third DSMB meetings for the ongoing HEPLISAV–B Phase 3 study.

“Performance Milestone B” means Borrower’s meeting the primary endpoints of the HEPLISAV–B Phase 3 trial on or before August 1, 2016.

“Permitted Indebtedness” means: (i) Indebtedness of Borrower in favor of Lender or Agent arising under this Agreement or any other Loan Document; (ii) Indebtedness existing on the Closing Date which is disclosed in Schedule 1A; (iii) Indebtedness of up to \$1,000,000 (excluding Indebtedness existing on the Closing Date which is disclosed in Schedule 1A) outstanding at any time secured by a Lien described in clause (vii) of the defined term “Permitted Liens,” provided such Indebtedness does not exceed the lesser of the cost or fair market value of the Equipment financed with such Indebtedness; (iv) Indebtedness to trade creditors incurred in the ordinary course of business, including Indebtedness incurred in the ordinary course of business with corporate credit cards; (v) Indebtedness that also constitutes a Permitted Investment; (vi) Subordinated Indebtedness; (vii) reimbursement obligations in connection with corporate credit cards and letters of credit that are secured by cash or cash equivalents and issued on behalf of the Borrower or a Subsidiary thereof in an amount not to exceed \$1,500,000 at any time outstanding, (viii) Indebtedness secured by a Lien described in clause (xi) of the defined term Permitted Liens, (ix) Indebtedness consisting of fees, royalties, advances for research and development activities, and other amounts paid by third parties to Borrower or a Subsidiary

thereof which, by the express terms of the agreement, license, contract or other instrument to which they relate, are payable in advance, and with respect to the payment of which Borrower or a Subsidiary may have contingent liabilities, (x) other Indebtedness in an amount not to exceed \$250,000 at any time outstanding, and (xi) extensions, refinancings and renewals of any items of Permitted Indebtedness, provided that the principal amount is not increased or the terms modified to impose materially more burdensome terms upon Borrower or its Subsidiary, as the case may be.

“Permitted Investment” means: (i) Investments existing on the Closing Date which are disclosed in Schedule 1B; (ii) (a) marketable direct obligations issued or unconditionally guaranteed by the United States of America or any agency or any State thereof maturing within one year from the date of acquisition thereof, (b) commercial paper maturing no more than one year from the date of creation thereof and currently having a rating of at least A-2 or P-2 from either Standard & Poor’s Corporation or Moody’s Investors Service, (c) certificates of deposit issued by any bank with assets of at least \$500,000,000 maturing no more than one year from the date of investment therein, (d) money market accounts, and (e) any Investments permitted by Borrower’s investment policy, as amended from time to time, provided that such investment policy (and any such amendment thereto) has been approved in writing by Borrower’s Board of Directors; (iii) Investments consisting of the endorsement of negotiable instruments for deposit or collection or similar transactions in the ordinary course of business; (iv) repurchases of stock from former employees, directors, or consultants of Borrower under the terms of applicable repurchase agreements at the original issuance price of such securities in an aggregate amount not to exceed \$250,000 in any fiscal year, provided that no Event of Default has occurred, is continuing or would exist after giving effect to the repurchases; (v) Investments accepted in connection with Permitted Transfers; (vi) Investments (including debt obligations) received in connection with the bankruptcy or reorganization of customers or suppliers and in settlement of delinquent obligations of, and other disputes with, customers or suppliers arising in the ordinary course of Borrower’s business; (vii) Investments consisting of notes receivable of, or prepaid royalties and other credit extensions, to customers and suppliers who are not affiliates, in the ordinary course of business, provided that this subparagraph (vii) shall not apply to Investments of Borrower in any Subsidiary; (viii) Investments consisting of loans not involving the net transfer on a substantially contemporaneous basis of cash proceeds to employees, officers or directors relating to the purchase of capital stock of Borrower pursuant to employee stock purchase plans or other similar agreements approved by Borrower’s Board of Directors; (ix) Investments consisting of travel advances and relocation loans in the ordinary course of business, provided however that Investments consisting of relocation loans shall not exceed \$500,000 in the aggregate in any fiscal year; (x) Investments by Borrower in newly-formed or acquired Domestic Subsidiaries, provided that each such Domestic Subsidiary enters into a Joinder Agreement promptly after its formation or acquisition by Borrower and executes such other documents as shall be reasonably requested by Agent; (xi) Investments by Borrower in newly-formed or acquired or previously existing Foreign Subsidiaries (including Rhein Biotech GmbH) by way of contributions to capital, purchases of capital securities, or loans or advances, in an aggregate amount not to exceed \$6,000,000 in 2015 and \$3,000,000 in each subsequent year, provided that each such newly-formed or acquired Foreign Subsidiary enters into a guaranty promptly after its formation or acquisition by Borrower and executes such other documents as shall be reasonably requested by Agent, (xii) joint ventures or strategic alliances in the ordinary course of Borrower’s business consisting of the non-exclusive licensing, or, subject to clause (ii) of Permitted Transfers,

exclusive licensing of technology, the development of technology or the providing of technical support, provided that any cash Investments by Borrower do not exceed \$250,000 in the aggregate in any fiscal year; (xiii) Investments consisting of Deposit Accounts or accounts holding Investment Property subject to compliance with Section 7.12; (xiv) mergers and acquisitions permitted under Section 7.9; and (xv) additional Investments that do not exceed \$400,000 in the aggregate.

“Permitted Liens” means any and all of the following: (i) Liens in favor of Agent or Lender; (ii) Liens existing on the Closing Date which are disclosed in Schedule 1C; (iii) Liens for taxes, fees, assessments or other governmental charges or levies, either not delinquent or being contested in good faith by appropriate proceedings; provided, that Borrower maintains adequate reserves therefor in accordance with GAAP; (iv) Liens securing claims or demands of materialmen, artisans, mechanics, carriers, warehousemen, landlords and other like Persons arising in the ordinary course of Borrower’s business and imposed without action of such parties; provided, that the payment thereof is not yet required; (v) Liens arising from judgments, decrees or attachments in circumstances which do not constitute an Event of Default hereunder; (vi) the following deposits, to the extent made in the ordinary course of business: deposits under worker’s compensation, unemployment insurance, social security and other similar laws, or to secure the performance of bids, tenders, leases or contracts (other than for the repayment of borrowed money) or to secure indemnity, performance or other similar bonds for the performance of bids, tenders or contracts (other than for the repayment of borrowed money) or to secure statutory obligations (other than Liens arising under ERISA or environmental Liens) or surety or appeal bonds, or to secure indemnity, performance or other similar bonds; (vii) Liens on Equipment or software or other intellectual property constituting purchase money Liens and Liens in connection with capital leases securing Indebtedness permitted in clause (iii) of “Permitted Indebtedness”; (viii) Liens incurred in connection with Subordinated Indebtedness; (ix) (a) leasehold interests in leases or subleases and (b) licenses granted by Borrower or any of its Subsidiaries in the ordinary course of business and not interfering in any material respect with the business of Borrower or any of its Subsidiaries; (x) Liens in favor of customs and revenue authorities arising as a matter of law to secure payment of custom duties that are promptly paid on or before the date they become due; (xi) Liens securing the payment of financed insurance premiums that are promptly paid on or before the date they become due provided that such Liens extend only to the insurance policies and all money due Borrower thereunder (including the return of premiums and dividends) and not to any other property or assets; (xii) statutory and common law rights of set-off and other similar rights as to deposits of cash and securities in favor of banks, other depository institutions and brokerage firms; (xiii) easements, zoning restrictions, rights-of-way and similar encumbrances on real property imposed by law or arising in the ordinary course of business so long as they do not materially impair the value or marketability of the related property; (xiv) Liens on cash or cash equivalents securing obligations permitted under clause (vii) of the definition of Permitted Indebtedness; and (xv) Liens incurred in connection with the extension, renewal or refinancing of the Indebtedness secured by Liens of the type described in clauses (i) through (xiv) above; provided, that any extension, renewal or replacement Lien shall be limited to the property encumbered by the existing Lien and the principal amount of the Indebtedness being extended, renewed or refinanced (as may have been reduced by any payment thereon) does not increase.

“Permitted Transfers” means (i) sales or other dispositions of Inventory in the ordinary course of business, (ii) non-exclusive licenses and similar arrangements for the use of Intellectual Property in the ordinary course of Borrower’s business, and exclusive licenses for the use of Intellectual Property in the ordinary course of Borrower’s business, including the exclusive licenses existing on the Closing Date which are disclosed in Schedule 1D; provided that, with respect to exclusive licenses for the use of Intellectual Property in the ordinary course of Borrower’s business entered into after the Closing Date, prior to execution and delivery of such license, (A) Borrower shall have provided Agent written notice of such license and (B) Borrower’s Board of Directors shall have approved such license, (iii) dispositions of worn-out, obsolete or surplus Equipment at fair market value in the ordinary course of business, (iv) the sale or dissolution of Dynavax International, B.V.; (v) Permitted Liens and Permitted Investments; and (vi) other Transfers of assets having a fair market value of not more than \$400,000 in the aggregate in any fiscal year.

“Person” means any individual, sole proprietorship, partnership, joint venture, trust, unincorporated organization, association, corporation, limited liability company, institution, other entity or government.

“Preferred Stock” means at any given time any equity security issued by Borrower that has any rights, preferences or privileges senior to Borrower’s common stock.

“Prepayment Charge” shall have the meaning assigned to such term in Section 2.5.

“Receivables” means (i) all of Borrower’s Accounts, Instruments, Documents, Chattel Paper, Supporting Obligations, letters of credit, proceeds of any letter of credit, and Letter of Credit Rights, and (ii) all customer lists, software, and business records related thereto.

“Required Lenders” means at any time, the holders of more than 50% of the aggregate unpaid principal amount of the Term Loans then outstanding.

“SEC” shall mean the Securities and Exchange Commission, any successor thereto, and any analogous governmental authority.

“Secured Obligations” means Borrower’s obligations under this Agreement and any Loan Document, including any obligation to pay any amount now owing or later arising.

“Subordinated Indebtedness” means Indebtedness subordinated to the Secured Obligations in amounts and on terms and conditions satisfactory to Agent in its sole discretion.

“Subsequent Financing” means the closing of any Borrower financing which becomes effective after the Closing Date and results in aggregate proceeds to Borrower of at least \$15,000,000.

“Subsidiary” means an entity, whether corporate, partnership, limited liability company, joint venture or otherwise, in which Borrower owns or controls 50% or more of the outstanding voting securities, including each entity listed on Schedule 1 hereto.

“Term Commitment” means as to any Lender, the obligation of such Lender, if any, to make a Term Loan Advance to the Borrower in a principal amount not to exceed the amount set forth under the heading “Term Commitment” opposite such Lender’s name on Schedule 1.1.

“Term Loan Advance” means any Term Loan funds advanced under this Agreement.

“Term Loan Interest Rate” means for any day a per annum rate of interest equal to the greater of either (i) 9.75% plus the prime rate as reported in The Wall Street Journal minus 5.25%, and (ii) 9.75%.

“Term Loan Maturity Date” means July 1, 2018, but if the Amortization Date is August 1, 2016 or February 1, 2017, then January 1, 2019.

“Term Note” means a Promissory Note in substantially the form of Exhibit B.

“Trademark License” means any written agreement granting any right to use any Trademark or Trademark registration, now owned or hereafter acquired by Borrower or in which Borrower now holds or hereafter acquires any interest.

“Trademarks” means all trademarks (registered, common law or otherwise) and any applications in connection therewith, including registrations, recordings and applications in the United States Patent and Trademark Office or in any similar office or agency of the United States, any State thereof or any other country or any political subdivision thereof.

“UCC” means the Uniform Commercial Code as the same is, from time to time, in effect in the State of California; provided, that in the event that, by reason of mandatory provisions of law, any or all of the attachment, perfection or priority of, or remedies with respect to, Agent’s Lien on any Collateral is governed by the Uniform Commercial Code as the same is, from time to time, in effect in a jurisdiction other than the State of California, then the term “UCC” shall mean the Uniform Commercial Code as in effect, from time to time, in such other jurisdiction solely for purposes of the provisions thereof relating to such attachment, perfection, priority or remedies and for purposes of definitions related to such provisions.

Unless otherwise specified, all references in this Agreement or any Annex or Schedule hereto to a “Section,” “subsection,” “Exhibit,” “Annex,” or “Schedule” shall refer to the corresponding Section, subsection, Exhibit, Annex, or Schedule in or to this Agreement. Unless otherwise specifically provided herein, any accounting term used in this Agreement or the other Loan Documents shall have the meaning customarily given such term in accordance with GAAP, and all financial computations hereunder shall be computed in accordance with GAAP, consistently applied. Unless otherwise defined herein or in the other Loan Documents, terms that are used herein or in the other Loan Documents and defined in the UCC shall have the meanings given to them in the UCC.

SECTION 2. THE LOAN

2.1

[Intentionally Omitted.]

- (a) **Advances.** Subject to the terms and conditions of this Agreement, Lender will severally (and not jointly) make in an amount not to exceed its respective Term Commitment, and Borrower agrees to draw, a Term Loan Advance of \$10,000,000 on the Closing Date. From the date of Borrower's achievement of Performance Milestone A and continuing until September 30, 2015, Borrower may request an additional Term Loan Advance in the amount of \$30,000,000. The aggregate outstanding Term Loan Advances may be up to the Maximum Term Loan Amount.
- (b) **Advance Request.** To obtain a Term Loan Advance, Borrower shall complete, sign and deliver an Advance Request (at least five (5) Business Days before the Advance Date) to Agent. Lender shall fund the Term Loan Advance in the manner requested by the Advance Request provided that each of the conditions precedent to such Term Loan Advance is satisfied as of the requested Advance Date.
- (c) **Interest.** The principal balance of each Term Loan Advance shall bear interest thereon from such Advance Date at the Term Loan Interest Rate based on a year consisting of 360 days, with interest computed daily based on the actual number of days elapsed. The Term Loan Interest Rate will float and change on the day the Prime Rate changes from time to time, provided however, that if Borrower achieves Performance Milestone B on or before August 1, 2016, the Term Loan Interest Rate shall be fixed at the rate in effect on the date Borrower achieves Performance Milestone B.
- (d) **Payment.** Borrower will pay interest on the outstanding principal amount of each Term Loan Advance on the first day of each month, beginning the month after the Advance Date thereof. Borrower shall repay the aggregate Term Loan principal balance that is outstanding on the day immediately preceding the Amortization Date, in equal monthly installments of principal and interest (mortgage style) amortized over a 30-month schedule beginning on the Amortization Date and continuing on the first Business Day of each month thereafter until the Term Loan Maturity Date, or subject to Section 2.5, any earlier repayment of the Secured Obligations. The entire Term Loan principal balance, including a balloon payment of principal, as applicable, and all accrued but unpaid interest hereunder, shall be due and payable on the Term Loan Maturity Date. Borrower shall make all payments under this Agreement without setoff, recoupment or deduction and regardless of any counterclaim or defense. Lender will initiate debit entries to the Borrower's account as authorized on the ACH Authorization (i) on each payment date of all periodic obligations payable to Lender under each Term Advance and (ii) of out-of-pocket legal fees and costs incurred by Agent or Lender in connection with and subject to Section 11.11 of this Agreement.

2.3 **Maximum Interest.** Notwithstanding any provision in this Agreement or any other Loan Document, it is the parties' intent not to contract for, charge or receive interest at a rate that is greater than the maximum rate permissible by law that a court of competent jurisdiction shall deem applicable hereto (which under the laws of the State of California shall be deemed to be the laws relating to permissible rates of interest on commercial loans) (the "Maximum Rate"). If a court of competent jurisdiction shall finally determine that Borrower has actually paid to Lender an amount of interest in excess of the amount that

would have been payable if all of the Secured Obligations had at all times borne interest at the Maximum Rate, then such excess interest actually paid by Borrower shall be applied as follows: first, to the payment of the Secured Obligations consisting of the outstanding principal; second, after all principal is repaid, to the payment of Lender's accrued interest, costs, expenses, professional fees and any other Secured Obligations; and third, after all Secured Obligations are repaid, the excess (if any) shall be refunded to Borrower.

2.4 Default Interest. In the event any payment is not paid on the scheduled payment date, an amount equal to five percent (5%) of the past due amount shall be payable on demand. In addition, upon the occurrence and during the continuation of an Event of Default hereunder, all Secured Obligations, including principal, interest, compounded interest, and professional fees, shall bear interest at a rate per annum equal to the rate set forth in 2.2(c), plus five percent (5%) per annum. In the event any interest is not paid when due hereunder, delinquent interest shall be added to principal and shall bear interest on interest, compounded at the rate set forth in Section 2.2(c) or Section 2.4, as applicable.

2.5 Prepayment. At its option upon at least seven (7) Business Days prior notice to Agent, Borrower may terminate Lender's commitment to make Term Loan Advances hereunder and prepay all, but not less than all, of the outstanding Advances by paying the entire principal balance and all accrued and unpaid interest thereon, together with a prepayment charge equal to 1.5% of the Advance amount being prepaid if such Advance amounts are prepaid on or before the Amortization Date (a "Prepayment Charge"); if such Advance amounts are prepaid after the Amortization Date, there shall be no Prepayment Charge. Borrower agrees that the Prepayment Charge is a reasonable calculation of Lender's lost profits in view of the difficulties and impracticality of determining actual damages resulting from an early repayment of the Advances. Borrower shall prepay the outstanding amount of all principal and accrued interest through the prepayment date upon the occurrence of a Change in Control, and, if the Change in Control occurs on or before the Amortization Date, the Prepayment Charge.

2.6 End of Term Charge. On the earliest to occur of (i) the Term Loan Maturity Date, (ii) the date that Borrower prepays the outstanding Secured Obligations, or (iii) the date that the Secured Obligations become due and payable, Borrower shall pay Lender a charge of either (a) \$840,000 if the aggregate amount of Term Loan Advances made under Section 2.2(a) is \$10,000,000, or (b) \$2,400,000 if the aggregate amount of Term Loan Advances made under Section 2.2(a) is \$40,000,000. Notwithstanding the required payment date of such charge, it shall be deemed earned by Lender as of the Closing Date.

2.7 Notes. If so requested by Lender by written notice to Borrower, then Borrower shall execute and deliver to Lender (and/or, if applicable and if so specified in such notice, to any Person who is an assignee of Lender pursuant to Section 11.13) (promptly after the Borrower's receipt of such notice) a Note or Notes to evidence Lender's Loans.

2.8 Pro Rata Treatment. Each payment (including prepayment) on account of any fee and any reduction of the Term Loans shall be made pro rata according to the Term Commitments of the relevant Lender.

SECTION 3. SECURITY INTEREST

3.1 As security for the prompt, complete and indefeasible payment when due (whether on the payment dates or otherwise) of all the Secured Obligations, Borrower grants to Agent a security interest in all of Borrower's right, title, and interest in and to the following personal property whether now owned or hereafter acquired (collectively, the "Collateral"): (a) Receivables; (b) Equipment; (c) Fixtures; (d) General Intangibles (other than Intellectual Property); (e) Inventory; (f) Investment Property; (g) Deposit Accounts; (h) Cash; (i) Goods; and all other tangible and intangible personal property of Borrower whether now or hereafter owned or existing, leased, consigned by or to, or acquired by, Borrower and wherever located, and any of Borrower's property in the possession or under the control of Agent; and, to the extent not otherwise included, all Proceeds of each of the foregoing and all accessions to, substitutions and replacements for, and rents, profits and products of each of the foregoing. Notwithstanding the foregoing, the Collateral shall not include (i) any Intellectual Property, whether now owned or hereafter acquired; provided, however, that the Collateral shall include all Accounts and General Intangibles that consist of rights to payment and proceeds from the sale, licensing or disposition of all or any part, or rights in, the Intellectual Property (the "Rights to Payment"). Notwithstanding the foregoing, if a judicial authority (including a U.S. Bankruptcy Court) holds that a security interest in the underlying Intellectual Property is necessary to have a security interest in the Rights to Payment, then the Collateral shall automatically, and effective as of the date of this Agreement, include the Intellectual Property to the extent necessary to permit perfection of Agent's security interest in the Rights to Payment; (ii) rights held under a license that are not assignable by their terms without the consent of the licensor thereof (but only to the extent such restriction on assignment is enforceable under applicable law), (iii) any interest of Borrower as a lessee or sublessee under a real property lease, (iv) any interest in Equipment being financed by Borrower as a lessee under an Equipment lease or as a purchaser under a vendor agreement if Borrower is prohibited by the terms of such lease or agreement from granting a security interest in the Equipment subject to such lease or agreement or under which such assignment or Lien would cause a default to occur under such lease or agreement, provided, however, that upon termination of such prohibition, such interest shall immediately become Collateral without any action by Borrower or Agent, and (v) cash or cash equivalents securing obligations permitted under clause (vii) of the definition of Permitted Indebtedness.

3.2 As security for the prompt, complete and indefeasible payment when due (whether on the payment dates or otherwise) of all the Secured Obligations, Guarantor shall execute or issue the Guaranty, together with pledge, debenture and related documents (collectively, the "Guarantor Security Documents") granting Agent a security interest in all of Guarantor's personal property assets other than Guarantor's intellectual property (collectively, the "Guarantor Collateral"), to be delivered in accordance with Section 7.16 hereof.

3.3 As security for the prompt, complete and indefeasible payment when due (whether on the payment dates or otherwise) of all the Secured Obligations, Borrower shall deliver and pledge to the Agent all certificated securities and interests held in its Subsidiaries (other than Dynavax International BV) and if such securities and interests are uncertificated, Borrower shall provide Agent with appropriate control agreements, as

applicable, providing the Agent with control over such securities and interests and first priority of its Liens in such Collateral.

3.4 If this Agreement is terminated, Agent's Lien in the Collateral shall continue until the Secured Obligations (other than inchoate indemnity obligations) are satisfied in full, and at such time, Agent shall, at Borrower's sole cost and expense, terminate its security interest in the Collateral and all rights therein shall revert to Borrower.

SECTION 4. CONDITIONS PRECEDENT TO LOAN

The obligations of Lender to make the Loan hereunder are subject to the satisfaction by Borrower of the following conditions:

4.1 Initial Advance. On or prior to the Closing Date, Borrower shall have delivered to Agent the following:

(a) executed originals of the Loan Documents, Account Control Agreements, a legal opinion of Borrower's counsel, and all other documents and instruments reasonably required by Agent to effectuate the transactions contemplated hereby or to create and perfect the Liens of Agent with respect to all Collateral, in all cases in form and substance reasonably acceptable to Agent;

(b) certified copy of resolutions of Borrower's board of directors evidencing approval of the Loan and other transactions evidenced by the Loan Documents;

(c) certified copies of the Certificate of Incorporation and the Bylaws, as amended through the Closing Date, of Borrower;

(d) a certificate of good standing for Borrower from its state of incorporation and similar certificates from all other jurisdictions in which it does business and where the failure to be qualified would have a Material Adverse Effect;

(e) payment of the Facility Charge and reimbursement of Agent's and Lender's current expenses reimbursable pursuant to this Agreement, which amounts may be deducted from the initial Advance (Agent and Lender acknowledge that, prior to the date hereof, they have received the Commitment Fee to be applied in its entirety toward the payment of any non-legal transaction costs and non-legal due diligence expenses incurred by Agent and Lender through the Closing Date); and

(f) such other documents as Agent may reasonably request.

4.2 All Advances. On each Advance Date:

(a) Agent shall have received (i) an Advance Request for the relevant Advance as required by 2.2(b), each duly executed by Borrower's Chief Executive Officer or Principal Financial Officer, and (ii) any other documents Agent may reasonably request.

(b) The representations and warranties set forth in this Agreement and in Section 5 shall be true and correct in all material respects on and as of the Advance Date with the same effect as though made on and as of such date, except to the extent such representations and warranties expressly relate to an earlier date.

(c) Borrower shall be in compliance with all the terms and provisions set forth herein and in each other Loan Document on its part to be observed or performed, and at the time of and immediately after such Advance, and no Event of Default shall have occurred and be continuing.

(d) Each Advance Request shall be deemed to constitute a representation and warranty by Borrower on the relevant Advance Date as to the matters specified in paragraphs (b) and (c) of this Section 4.2 and as to the matters set forth in the Advance Request.

4.3 No Default. As of the Closing Date and each Advance Date, (i) no fact or condition exists that would (or would, with the passage of time, the giving of notice, or both) constitute an Event of Default and (ii) no event that has had or could reasonably be expected to have a Material Adverse Effect has occurred and is continuing.

SECTION 5. REPRESENTATIONS AND WARRANTIES OF BORROWER

Borrower represents and warrants that:

5.1 Corporate Status. Borrower is a corporation duly organized, legally existing and in good standing under the laws of the State of Delaware, and is duly qualified as a foreign corporation in all jurisdictions in which the nature of its business or location of its properties require such qualifications and where the failure to be qualified could reasonably be expected to have a Material Adverse Effect. Borrower's present name, former names (if any), locations, place of formation, tax identification number, organizational identification number and other information are correctly set forth in Exhibit C, as may be updated by Borrower in a written notice (including any Compliance Certificate) provided to Agent after the Closing Date.

5.2 Collateral. Borrower owns the Collateral and the Intellectual Property, free of all Liens, except for Permitted Liens. Borrower has the power and authority to grant to Agent a Lien in the Collateral as security for the Secured Obligations .

5.3 Consents. Borrower's execution, delivery and performance of this Agreement and all other Loan Documents (i) have been duly authorized by all necessary corporate action of Borrower, (ii) will not result in the creation or imposition of any Lien upon the Collateral, other than Permitted Liens and the Liens created by this Agreement and the other Loan Documents, (iii) do not violate any provisions of Borrower's Certificate or Articles of Incorporation (as applicable), bylaws, or any, law, regulation, order, injunction, judgment, decree or writ to which Borrower is subject and (iv) except as described on Schedule 5.3, do not violate any contract or agreement or require the consent

or approval of any other Person which has not already been obtained. The individual or individuals executing the Loan Documents are duly authorized to do so.

5.4 **Material Adverse Effect.** No event that has had or could reasonably be expected to have a Material Adverse Effect has occurred and is continuing. Borrower is not aware of any event likely to occur that is reasonably expected to result in a Material Adverse Effect.

5.5 **Actions Before Governmental Authorities.** Except as described on Schedule 5.5, there are no actions, suits or proceedings at law or in equity or by or before any governmental authority now pending or, to the knowledge of Borrower, threatened against or affecting Borrower or its property.

5.6 **Laws.** Borrower is not in violation of any law, rule or regulation, or in default with respect to any judgment, writ, injunction or decree of any governmental authority, where such violation or default is reasonably expected to result in a Material Adverse Effect. Borrower is not in default in any manner under any provision of any agreement or instrument evidencing Indebtedness, or any other material agreement to which it is a party or by which it is bound.

5.7 **Information Correct and Current.** No information, report, Advance Request, financial statement, exhibit or schedule furnished, by or on behalf of Borrower to Agent in connection with any Loan Document or included therein or delivered pursuant thereto contained, contains or will contain any material misstatement of fact or omitted, omits or will omit to state any material fact necessary to make the statements therein, in the light of the circumstances under which they were, are or will be made, not misleading at the time such statement was made or deemed made. Additionally, any and all financial or business projections provided by Borrower to Agent, whether prior to or after the Closing Date, shall be (i) provided in good faith and based on the most current data and information available to Borrower, and (ii) the most current of such projections provided to Borrower's Board of Directors.

5.8 **Tax Matters.** Except as described on Schedule 5.8, (a) Borrower has filed all federal, state and local tax returns that it is required to file, (b) Borrower has duly paid or fully reserved for all taxes or installments thereof (including any interest or penalties) as and when due, which have or may become due pursuant to such returns, and (c) Borrower has paid or fully reserved for any tax assessment received by Borrower for the three (3) years preceding the Closing Date, if any (including any taxes being contested in good faith and by appropriate proceedings).

5.9 **Intellectual Property Claims.** Borrower is the sole owner of, or otherwise has the right to use, the Intellectual Property except for joint ownership of Intellectual Property pursuant to research collaboration and license agreements disclosed on Schedule 5.9. Except as described on Schedule 5.9, (i) to the best of Borrower's knowledge, each of the material Copyrights, Trademarks and Patents is valid and enforceable, (ii) no material part of the Intellectual Property has been judged invalid or unenforceable, in whole or in part, and (iii) no claim has been made to Borrower that any material part of the Intellectual Property violates the rights of any third party. Exhibit D is a true, correct and complete list

of each of Borrower's Patents, registered Trademarks, registered Copyrights, and material agreements under which Borrower licenses Intellectual Property from third parties (other than shrink-wrap software licenses), together with application or registration numbers, as applicable, owned by Borrower or any Subsidiary, in each case as of the Closing Date. Borrower is not in material breach of, nor has Borrower failed to perform any material obligations under, any of the foregoing contracts, licenses or agreements and, to Borrower's knowledge, no third party to any such contract, license or agreement is in material breach thereof or has failed to perform any material obligations thereunder.

5.10 Intellectual Property. Except as described on Schedule 5.10, Borrower has, or in the case of any proposed business, will have, all material rights with respect to Intellectual Property necessary in the operation or conduct of Borrower's business as currently conducted and proposed to be conducted by Borrower. Without limiting the generality of the foregoing, and in the case of Licenses, except for restrictions that are unenforceable under applicable law, Borrower has the right, to the extent required to operate Borrower's business, to freely transfer, license or assign Intellectual Property without condition, restriction or payment of any kind (other than license payments in the ordinary course of business) to any third party, except for Intellectual Property subject to Licenses to the extent such Licenses constitute Permitted Transfers of the type described in clause (ii) of the definition of Permitted Transfer, and Borrower owns or has the right to use, pursuant to valid licenses, all software development tools, library functions, compilers and all other third-party software and other items that are used in the design, development, promotion, sale, license, manufacture, import, export, use or distribution of Borrower Products.

5.11 Borrower Products. Except as described on Schedule 5.11, no Intellectual Property owned by Borrower or Borrower Product has been or is subject to any actual or, to the knowledge of Borrower, threatened litigation, proceeding (including any proceeding in the United States Patent and Trademark Office or any corresponding foreign office or agency) or outstanding decree, order, judgment, settlement agreement or stipulation that restricts in any manner Borrower's use, transfer or licensing thereof or that may affect the validity, use or enforceability thereof. There is no decree, order, judgment, agreement, stipulation, arbitral award or other provision entered into in connection with any litigation or proceeding that obligates Borrower to grant licenses or ownership interest in any future Intellectual Property related to the operation or conduct of the business of Borrower or Borrower Products. Borrower has not received any written notice or claim, or, to the knowledge of Borrower, oral notice or claim, challenging or questioning Borrower's ownership in any Intellectual Property (or written notice of any claim challenging or questioning the ownership in any licensed Intellectual Property of the owner thereof) or suggesting that any third party has any claim of legal or beneficial ownership with respect thereto nor, to Borrower's knowledge, is there a reasonable basis for any such claim. Neither Borrower's use of its Intellectual Property nor the production and sale of Borrower Products infringes the Intellectual Property or other rights of others.

5.12 Financial Accounts. Exhibit E, as may be updated by the Borrower in a written notice provided to Agent after the Closing Date, is a true, correct and complete list of (a) all banks and other financial institutions at which Borrower or any Subsidiary maintains Deposit Accounts and (b) all institutions at which Borrower or any Subsidiary

maintains an account holding Investment Property, and such exhibit correctly identifies the name, address and telephone number of each bank or other institution, the name in which the account is held, a description of the purpose of the account, and the complete account number therefor.

5.13 Employee Loans. Except for Permitted Investments disclosed in Schedule 5.13, Borrower has no outstanding loans to any employee, officer or director of the Borrower nor has Borrower guaranteed the payment of any loan made to an employee, officer or director of the Borrower by a third party.

5.14 Capitalization and Subsidiaries. Borrower's capitalization as of the Closing Date is set forth on Schedule 5.14 annexed hereto. Borrower does not own any stock, partnership interest or other securities of any Person, except for Permitted Investments. Attached as Schedule 5.14, as may be updated by Borrower in a written notice provided after the Closing Date, is a true, correct and complete list of each Subsidiary.

SECTION 6. INSURANCE; INDEMNIFICATION

6.1 Coverage. Borrower shall cause to be carried and maintained commercial general liability insurance, on an occurrence form, against risks customarily insured against in Borrower's line of business. Such risks shall include the risks of bodily injury, including death, property damage, personal injury, advertising injury, and contractual liability per the terms of the indemnification agreement found in Section 6.3. Borrower must maintain a minimum of \$1,000,000 of commercial general liability insurance for each occurrence with a minimum of \$1,000,000 additional umbrella liability coverage. Borrower has and agrees to maintain a minimum of \$2,000,000 of directors' and officers' insurance for each occurrence and \$5,000,000 in the aggregate. So long as there are any Secured Obligations (other than inchoate indemnity obligations) outstanding, Borrower shall also cause to be carried and maintained insurance upon the Collateral, insuring against special form of physical loss or damage howsoever caused, in an amount not less than the full replacement cost of the Collateral, provided that such insurance may be subject to standard exceptions and deductibles.

6.2 Certificates. Borrower shall deliver to Agent certificates of insurance that evidence Borrower's compliance with its insurance obligations in Section 6.1 and the obligations contained in this Section 6.2. Borrower's insurance certificate shall state Agent (shown as "Hercules Technology Growth Capital, Inc., as Agent") is an additional insured for commercial general liability, a loss payee for special form property damage insurance, subject to the insurer's approval, and a loss payee for property insurance and additional insured for liability insurance for any future insurance that Borrower may acquire from such insurer. Attached to the certificates of insurance will be additional insured endorsements for liability and lender's loss payable endorsements for all risk property damage insurance. Borrower will provide a minimum of thirty (30) days (ten (10) days for non-payment of premium) advance written notice to Agent of cancellation or any other change adverse to Agent's interests. Any failure of Agent to scrutinize such insurance certificates for compliance is not a waiver of any of Agent's rights, all of which are reserved.

6.3 Indemnity. Borrower agrees to indemnify and hold Agent, Lender and their officers, directors, employees, agents, in-house attorneys, representatives and shareholders (each, an “Indemnified Person”) harmless from and against any and all claims, costs, expenses, damages and liabilities (including such claims, costs, expenses, damages and liabilities based on liability in tort, including strict liability in tort), including reasonable attorneys’ fees and disbursements and other costs of investigation or defense (including those incurred upon any appeal) (collectively, “Liabilities”), that may be instituted or asserted against or incurred by such Indemnified Person as the result of credit having been extended, suspended or terminated under this Agreement and the other Loan Documents or the administration of such credit, or in connection with or arising out of the transactions contemplated hereunder and thereunder, or any actions or failures to act in connection therewith, or arising out of the disposition or utilization of the Collateral, excluding in all cases Liabilities to the extent resulting from any Indemnified Person’s gross negligence or willful misconduct. Borrower agrees to pay, and to save Agent and Lender harmless from, any and all liabilities with respect to, or resulting from any delay in paying, any and all excise, sales or other similar taxes (excluding taxes imposed on or measured by the net income of Agent or Lender) that may be payable or determined to be payable with respect to any of the Collateral or this Agreement. In no event shall any Indemnified Person be liable on any theory of liability for any special, indirect, consequential or punitive damages (including any loss of profits, business or anticipated savings).

SECTION 7. COVENANTS OF BORROWER

Borrower agrees as follows:

7.1 Financial Reports. Borrower shall furnish to Agent the financial statements and reports listed hereinafter (the “Financial Statements”):

(a) as soon as practicable (and in any event within 30 days) after the end of each month, unaudited monthly and year-to-date financial statements as of the end of such month (prepared on a consolidated and consolidating basis, if applicable), including balance sheet and related statements of income accompanied by a report detailing any material contingencies (including the commencement of any material litigation by or against Borrower) or any other occurrence that would reasonably be expected to have a Material Adverse Effect, all certified by Borrower’s Chief Executive Officer or Principal Financial Officer to the effect that they have been prepared in accordance with GAAP, except (i) for the absence of footnotes, (ii) that they are subject to normal quarterly and year end adjustments, and (iii) they do not contain certain non-cash items that are customarily included in quarterly and annual financial statements;

(b) as soon as practicable (and in any event within 45 days) after the end of each calendar quarter, unaudited interim and year-to-date financial statements as of the end of such calendar quarter (prepared on a consolidated and consolidating basis, if applicable), including interim and year-to-date balance sheet and related statements of income and year-to-date cash flows accompanied by a report detailing any material contingencies (including the commencement of any material litigation by or against Borrower) or any other occurrence that would reasonably be expected to have a Material Adverse Effect, certified by Borrower’s Chief Executive Officer or Principal Financial

Officer to the effect that they have been prepared in accordance with GAAP, except (i) for the absence of footnotes, and (ii) that they are subject to normal year end adjustments;

(c) as soon as practicable (and in any event within ninety (90) days) after the end of each fiscal year, unqualified audited consolidated financial statements as of the end of such year, including balance sheet, related statements of operations, cash flows and footnotes, and setting forth in comparative form the corresponding figures for the preceding fiscal year, certified by a firm of independent certified public accountants selected by Borrower and reasonably acceptable to Agent, accompanied by any management report from such accountants;

(d) as soon as practicable (and in any event at the same time as the financial statements are delivered pursuant to Section 7.1(a) and (b)), a Compliance Certificate in the form of Exhibit F;

(e) as soon as practicable (and in any event within 30 days) after the end of each month, a report showing agings of accounts receivable and accounts payable;

(f) promptly after the sending or filing thereof, as the case may be, copies of any proxy statements, financial statements or reports that Borrower has made available to its stockholders and copies of any regular, periodic and special reports or registration statements that Borrower files with the Securities and Exchange Commission or any governmental authority that may be substituted therefor, or any national securities exchange; and

(g) financial and business projections promptly following their approval by Borrower's Board of Directors, and in any event, within 60 days after the end of Borrower's fiscal year, as well as budgets, operating plans and other financial information reasonably requested by Agent.

Borrower shall not (without the consent of Agent, such consent not to be unreasonably withheld or delayed), make any change in its (a) accounting policies or reporting practices, except as required by GAAP or (b) fiscal years or fiscal quarters. The fiscal year of Borrower shall end on December 31.

The executed Compliance Certificate may be sent via facsimile to Agent at (650) 473-9194 or via e-mail to pedwards@herculestech.com. All Financial Statements required to be delivered pursuant to clauses (a), (b) and (c) shall be sent via e-mail to financialstatements@herculestech.com with a copy to pedwards@herculestech.com provided, that if e-mail is not available or sending such Financial Statements via e-mail is not possible, they shall be sent via facsimile to Agent at: (866) 468-8916, attention Chief Investment Officer. To the extent any documents required to be delivered pursuant to the terms hereof are included in materials otherwise filed with the SEC, Borrower electronically may deliver such documents by e-mailing a link to the applicable filing posted on the SEC website currently located at <http://www.sec.gov>.

7.2 Management Rights. Borrower shall permit any representative that Agent or Lender authorizes, including its attorneys and accountants, to inspect the Collateral and examine and make copies and abstracts of the books of account and records of Borrower at

reasonable times and upon reasonable notice during normal business hours; provided that, such inspection and examination shall be conducted no more often than twice every twelve (12) months unless an Event of Default has occurred and is continuing. In addition, any such representative shall have the right to meet with management and officers of Borrower to discuss such books of account and records. In addition, Agent or Lender shall be entitled at reasonable times and intervals to consult with and advise the management and officers of Borrower concerning significant business issues affecting Borrower. Such consultations shall not unreasonably interfere with Borrower's business operations. The parties intend that the rights granted Agent and Lender shall constitute "management rights" within the meaning of 29 C.F.R Section 2510.3-101(d)(3)(ii), but that any advice, recommendations or participation by Agent or Lender with respect to any business issues shall not be deemed to give Agent or Lender, nor be deemed an exercise by Agent or Lender of, control over Borrower's management or policies.

7.3 Further Assurances. Borrower shall from time to time execute, deliver and file, alone or with Agent, any financing statements, security agreements, collateral assignments, notices, control agreements, or other documents to perfect or give the highest priority to Agent's Lien on the Collateral. Borrower shall from time to time procure any instruments or documents as may be reasonably requested by Agent, and take all further action that may be necessary or desirable, or that Agent may reasonably request, to perfect and protect the Liens granted hereby and thereby. In addition, and for such purposes only, Borrower hereby authorizes Agent to execute and deliver on behalf of Borrower and to file such financing statements, collateral assignments, notices, control agreements, security agreements and other documents without the signature of Borrower either in Agent's name or in the name of Agent as agent and attorney-in-fact for Borrower. Borrower shall protect and defend Borrower's title to the Collateral and Agent's Lien thereon against all Persons claiming any interest adverse to Borrower or Agent other than Permitted Liens.

7.4 Indebtedness. Borrower shall not create, incur, assume, guarantee or be or remain liable with respect to any Indebtedness, or permit any Subsidiary so to do, other than Permitted Indebtedness, or prepay any Indebtedness or take any actions which impose on Borrower an obligation to prepay any Indebtedness, except for the Secured Obligations, the conversion of Indebtedness into equity securities and the payment of cash in lieu of fractional shares in connection with such conversion.

7.5 Collateral. Borrower shall at all times keep the Collateral, the Intellectual Property and all other property and assets used in Borrower's business or in which Borrower now or hereafter holds any interest free and clear from any legal process or Liens whatsoever (except for Permitted Liens), and shall give Agent prompt written notice of any legal process affecting the Collateral, the Intellectual Property, such other property and assets, or any Liens thereon, provided however, that the Collateral and such other property and assets may be subject to Permitted Liens except that there shall be no Liens whatsoever on Intellectual Property other than Permitted Liens of the type described in clauses (i), (ii), (iii) and (ix) of the definition of Permitted Liens. Borrower shall cause its Subsidiaries to protect and defend such Subsidiary's title to its assets from and against all Persons claiming any interest adverse to such Subsidiary, and Borrower shall cause its Subsidiaries at all times to keep such Subsidiary's property and assets free and clear from any legal process or Liens whatsoever (except for Permitted Liens, provided however, that there shall be no

Liens whatsoever on Intellectual Property other than Permitted Liens of the type described in clauses (i), (ii), (iii) and (ix)(b) of the definition of Permitted Liens), and shall give Agent prompt written notice of any legal process affecting such Subsidiary's assets. Borrower shall not agree with any Person other than Agent or Lender not to encumber its property except for Permitted Liens of the type describe in clauses (ii), (vii), (ix)(b) and (xiv) of the definition of Permitted Liens and customary anti-assignment provisions in contracts or licenses, in each case only to the extent such covenant not to encumber is limited to the specific asset that is the subject of the applicable Permitted Lien. To the extent Borrower's equity interest in any Subsidiary becomes certificated, Borrower shall promptly deliver to Agent or Agent's custodian, as requested by Agent, possession of the applicable stock certificate.

7.6 Investments. Borrower shall not directly or indirectly acquire or own, or make any Investment in or to any Person, or permit any of its Subsidiaries so to do, other than Permitted Investments.

7.7 Distributions. Borrower shall not, and shall not allow any Subsidiary to, (a) repurchase or redeem any class of stock or other equity interest other than (i) pursuant to employee, director or consultant stock purchase or repurchase plans or other similar agreements, provided, however, in each case the repurchase or redemption price does not exceed the original consideration paid for such stock or equity interest, and (ii) the conversion of any of its convertible securities into other securities pursuant to the terms of such convertible securities or otherwise in exchange therefor, or (b) declare or pay any cash dividend or make a cash distribution on any class of stock or other equity interest, except that a Subsidiary may pay dividends or make distributions to Borrower, and Borrower may pay dividends solely in common stock, or (c) except for Permitted Investments, lend money to any employees, officers or directors or guarantee the payment of any such loans granted by a third party or (d) waive, release or forgive any Indebtedness owed by any employees, officers or directors in excess of \$100,000 in the aggregate.

7.8 Transfers. Except for Permitted Transfers, Borrower shall not voluntarily or involuntarily transfer, sell, lease, license, lend or in any other manner convey any equitable, beneficial or legal interest in any material portion of its assets.

7.9 Mergers or Acquisitions. Borrower shall not merge or consolidate, or permit any of its Subsidiaries to merge or consolidate, with or into any other business organization (other than mergers or consolidations of (a) a Subsidiary which is not a Borrower into another Subsidiary or into Borrower or (b) a Borrower into another Borrower), or acquire, or permit any of its Subsidiaries to acquire, all or substantially all of the capital stock or property of another Person except where (i) the cash consideration paid in respect of such transactions does not in the aggregate exceed \$1,000,000 during any fiscal year, (ii) no Event of Default has occurred, is continuing or would exist after giving effect to such transactions, (iii) such transactions do not result in a Change in Control, and (iv) Borrower is the surviving entity.

7.10 Taxes. Borrower and its Subsidiaries shall pay when due all taxes, fees or other charges of any nature whatsoever (together with any related interest or penalties) now or hereafter imposed or assessed against Borrower, Agent, Lender (in the case of Agent and

Lender, solely to the extent constituting present or future stamp or documentary taxes or any other excise or property taxes, charges or similar levies arising from any payment made hereunder or under any other Loan Document or from the execution, delivery or enforcement of, or otherwise with respect to, this Agreement or any other Loan Document but excluding taxes on Agent's or Lender's net income) or the Collateral or upon Borrower's ownership, possession, use, operation or disposition thereof or upon Borrower's rents, receipts or earnings arising therefrom. Borrower shall file on or before the due date therefor all personal property tax returns in respect of the Collateral. Notwithstanding the foregoing, Borrower may contest, in good faith and by appropriate proceedings, taxes for which Borrower maintains adequate reserves therefor in accordance with GAAP.

7.11 Corporate Changes. Neither Borrower nor any Subsidiary shall change its corporate name, legal form or jurisdiction of formation without twenty (20) days' prior written notice to Agent. Neither Borrower nor any Subsidiary shall suffer a Change in Control. Neither Borrower nor any Subsidiary shall relocate its chief executive office or its principal place of business unless: (i) it has provided prior written notice to Agent; and (ii) in the case of Borrower or any Domestic Subsidiary, such relocation shall be within the continental United States. Neither Borrower nor any Subsidiary shall relocate any item of Collateral (other than (x) Permitted Transfers, (y) relocations of Collateral having an aggregate value of up to \$150,000 in any fiscal year, and (z) relocations of Collateral from a location described on Exhibit C to another location described on Exhibit C) unless (i) it has provided prompt written notice to Agent, (ii) in the case of Borrower or any Domestic Subsidiary, such relocation is within the continental United States and, (iii) if such relocation is to a third party bailee, it has delivered a bailee agreement in form and substance reasonably acceptable to Agent.

7.12 Deposit Accounts. Neither Borrower nor any Domestic Subsidiary shall maintain any Deposit Accounts, or accounts holding Investment Property, except with respect to which Agent has an Account Control Agreement (other than Deposit Accounts identified on Exhibit E (i) holding cash or cash equivalents securing obligations permitted under clause (vii) of the definition of Permitted Indebtedness and (ii) holding health savings/flexible spending plan deposits).

7.13 Borrower shall notify Agent of each Subsidiary formed or acquired subsequent to the Closing Date and, within 15 days of formation, shall cause any such newly formed or acquired Domestic Subsidiary to execute and deliver to Agent a Joinder Agreement and cause any such newly formed or acquired Foreign Subsidiary to execute and deliver to Agent a guaranty and appropriate guaranty security documents.

7.14 Borrower shall not permit the Foreign Subsidiaries (including without limitation any Guarantor) to hold more than \$5,000,000 USD in cash at any given time.

7.15 Notification of Event of Default. Borrower shall notify Agent promptly of the occurrence of any Event of Default.

7.16 Post-Closing Conditions.

(a) On or before March 1, 2015, Borrower shall cause Guarantor to deliver to Agent the fully executed Guaranty and the Guarantor Security Documents.

(b) On or before March 1, 2015, Borrower shall complete the dissolution of its Netherlands Subsidiary Dynavax International, B.V.

(c) Borrower shall use its commercially reasonable efforts to deliver or cause to be delivered the documents listed on Schedule 7.16 on or before the corresponding dates set forth on Schedule 7.16.

SECTION 8. RIGHT TO INVEST

8.1 Lender or its assignee or nominee shall have the right, in its discretion, to participate in any Subsequent Financing in an aggregate amount of up to \$1,500,000 (that is, a maximum amount of \$1,500,000 with respect to all Subsequent Financings collectively) on the same terms, conditions and pricing afforded to others participating in any such Subsequent Financing.

SECTION 9. EVENTS OF DEFAULT

The occurrence of any one or more of the following events shall be an Event of Default:

9.1 **Payments.** Borrower fails to pay any amount due under this Agreement or any of the other Loan Documents on the due date; provided, however, that an Event of Default shall not occur on account of a failure to pay due solely to an administrative or operational error of Agent in auto-debiting Borrower's account, or of any depository institution that is crediting by ACH or wiring such payment if Borrower had the funds to make the payment when due and makes the payment within three (3) days following Borrower's knowledge of such failure to pay; or

9.2 **Covenants.** Borrower breaches or defaults in the performance of any covenant or Secured Obligation under this Agreement, or any of the other Loan Documents or any other agreement among Borrower, Agent and Lender, and (a) with respect to a default under any covenant under this Agreement (other than under Sections 6, 7.4, 7.5, 7.6, 7.7, 7.8, 7.9, 7.14, 7.15 and 7.16), any other Loan Document or any other agreement among Borrower, Agent and Lender, such default continues for more than ten (10) days after the earlier of the date on which (i) Agent or Lender has given notice of such default to Borrower and (ii) Borrower has actual knowledge of such default or (b) with respect to a default under any of Sections 6, 7.4, 7.5, 7.6, 7.7, 7.8, 7.9, 7.14, 7.15 and 7.16, the occurrence of such default; or

9.3 **Material Adverse Effect.** A circumstance has occurred that would reasonably be expected to have a Material Adverse Effect; or

9.4 **Representations.** Any representation or warranty made by Borrower in any Loan Document shall have been false or misleading in any material respect when made; or

9.5 **Insolvency.** (A) Borrower (i) shall make an assignment for the benefit of creditors; or (ii) shall be unable to pay its debts as they become due, or be unable to pay or

perform under the Loan Documents, or shall become insolvent; or (iii) shall file a voluntary petition in bankruptcy; or (iv) shall file any petition, answer, or document seeking for itself any reorganization, arrangement, composition, readjustment, liquidation, dissolution or similar relief under any present or future statute, law or regulation pertinent to such circumstances; or (v) shall seek or consent to or acquiesce in the appointment of any trustee, receiver, or liquidator of Borrower or of all or any substantial part (i.e., 33-1/3% or more) of the assets or property of Borrower; or (vi) shall cease operations of its business as its business has normally been conducted, or terminate substantially all of its employees; or (vii) Borrower or its directors or majority shareholders shall take any action initiating any of the foregoing actions described in clauses (i) through (vi); or (B) either (i) thirty (30) days shall have expired after the commencement of an involuntary action against Borrower seeking reorganization, arrangement, composition, readjustment, liquidation, dissolution or similar relief under any present or future statute, law or regulation, without such action being dismissed or all orders or proceedings thereunder affecting the operations or the business of Borrower being stayed; or (ii) a stay of any such order or proceedings shall thereafter be set aside and the action setting it aside shall not be timely appealed; or (iii) Borrower shall file any answer admitting or not contesting the material allegations of a petition filed against Borrower in any such proceedings; or (iv) the court in which such proceedings are pending shall enter a decree or order granting the relief sought in any such proceedings; or (v) thirty (30) days shall have expired after the appointment, without the consent or acquiescence of Borrower, of any trustee, receiver or liquidator of Borrower or of all or any substantial part of the properties of Borrower without such appointment being vacated; or

9.6 Attachments; Judgments. Any portion of Borrower's assets is attached or seized, or a levy is filed against any such assets, or a judgment or judgments is/are entered for the payment of money, individually or in the aggregate, of at least \$500,000 (in the case of judgments, in excess of amounts covered by independent third party insurance as to which liability has been accepted by such insurance carrier as of the date of such entry of judgment) and such attachment, seizure, levy or judgment remains unsatisfied, unvacated or unstayed for a period of ten (10) days after the entry thereof, or Borrower is enjoined or in any way prevented by court order from conducting any part of its business; or

9.7 Settlements. The execution by Borrower of any agreement obligating Borrower to pay in any fiscal year any amounts in excess of \$500,000 in the aggregate not otherwise covered by insurance in settlement of any litigation, claims or disputes, or the payment by Borrower in any fiscal year of such uninsured settlement amounts in excess of \$500,000; or

9.8 Other Obligations. The occurrence of any default under any agreement or obligation of Borrower involving any Indebtedness in excess of \$250,000, or the occurrence of any default under any agreement or obligation of Borrower that could reasonably be expected to have a Material Adverse Effect.

9.9 Guaranty. If the any guaranty of the Secured Obligations, including without limitation the Guaranty, ceases for any reason to be in full force and effect, or if any guarantor thereof, including without limitation Guarantor, fails to perform any obligation under such guaranty or under any of the security documents applicable thereto, including

without limitation the Guarantor Security Documents, or any event of default occurs under such guaranty or such guarantor security documents or any guarantor revokes or purports to revoke its guaranty, or any material misrepresentation or material misstatement exists now or hereafter in any warranty or representation set forth any guaranty or the applicable guarantor security documents or in any certificate delivered to Agent in connection with such guaranty or such guarantor security documents, or if any of the circumstances described in Sections 9.3 through 9.8 occur with respect to any guarantor.

SECTION 10. REMEDIES

10.1 General. Upon and during the continuance of any one or more Events of Default, (i) Agent may, at its option, accelerate and demand payment of all or any part of the Secured Obligations together with a Prepayment Charge and declare them to be immediately due and payable (provided, that upon the occurrence of an Event of Default of the type described in Section 9.5, all of the Secured Obligations shall automatically be accelerated and made due and payable, in each case without any further notice or act), (ii) Agent may, at its option, sign and file in Borrower's name any and all collateral assignments, notices, control agreements, security agreements and other documents it deems necessary or appropriate to perfect or protect the repayment of the Secured Obligations, and in furtherance thereof, Borrower hereby grants Agent an irrevocable power of attorney coupled with an interest, and (iii) Agent may notify any of Borrower's account debtors to make payment directly to Agent, compromise the amount of any such account on Borrower's behalf and endorse Agent's name without recourse on any such payment for deposit directly to Agent's account. Agent may exercise all rights and remedies with respect to the Collateral under the Loan Documents or otherwise available to it under the UCC and other applicable law, including the right to release, hold, sell, lease, liquidate, collect, realize upon, or otherwise dispose of all or any part of the Collateral and the right to occupy, utilize, process and commingle the Collateral. All Agent's rights and remedies shall be cumulative and not exclusive. Notwithstanding anything contained herein to the contrary, Agent agrees not to deliver any notice of exclusive control, any entitlement order, or other directions or instructions pursuant to any control agreement or similar agreement providing control of any Collateral unless an Event of Default has occurred and is continuing.

10.2 Collection; Foreclosure. Upon the occurrence and during the continuance of any Event of Default, Agent may, at any time or from time to time, apply, collect, liquidate, sell in one or more sales, lease or otherwise dispose of, any or all of the Collateral, in its then condition or following any commercially reasonable preparation or processing, in such order as Agent may elect. Any such sale may be made either at public or private sale at its place of business or elsewhere. Borrower agrees that any such public or private sale may occur upon ten (10) calendar days' prior written notice to Borrower. Agent may require Borrower to assemble the Collateral and make it available to Agent at a place designated by Agent that is reasonably convenient to Agent and Borrower. The proceeds of any sale, disposition or other realization upon all or any part of the Collateral shall be applied by Agent in the following order of priorities:

First, to Agent and Lender in an amount sufficient to pay in full Agent's and Lender's costs and professionals' and advisors' fees and expenses as described in Section 11.11;

Second, to Lender in an amount equal to the then unpaid amount of the Secured Obligations (including principal, interest, and the Default Rate interest), in such order and priority as Agent may choose in its sole discretion; and

Finally, after the full, final, and indefeasible payment in Cash of all of the Secured Obligations, to any creditor holding a junior Lien on the Collateral, or to Borrower or its representatives or as a court of competent jurisdiction may direct.

Agent shall be deemed to have acted reasonably in the custody, preservation and disposition of any of the Collateral if it complies with the obligations of a secured party under the UCC.

10.3 No Waiver. Agent shall be under no obligation to marshal any of the Collateral for the benefit of Borrower or any other Person, and Borrower expressly waives all rights, if any, to require Agent to marshal any Collateral.

10.4 Cumulative Remedies. The rights, powers and remedies of Agent hereunder shall be in addition to all rights, powers and remedies given by statute or rule of law and are cumulative. The exercise of any one or more of the rights, powers and remedies provided herein shall not be construed as a waiver of or election of remedies with respect to any other rights, powers and remedies of Agent.

SECTION 11. MISCELLANEOUS

11.1 Severability. Whenever possible, each provision of this Agreement shall be interpreted in such manner as to be effective and valid under applicable law, but if any provision of this Agreement shall be prohibited by or invalid under such law, such provision shall be ineffective only to the extent and duration of such prohibition or invalidity, without invalidating the remainder of such provision or the remaining provisions of this Agreement.

11.2 Notice. Except as otherwise provided herein, any notice, demand, request, consent, approval, declaration, service of process or other communication (including the delivery of Financial Statements) that is required, contemplated, or permitted under the Loan Documents or with respect to the subject matter hereof shall be in writing, and shall be deemed to have been validly served, given, delivered, and received upon the earlier of: (i) the day of transmission by facsimile or hand delivery or delivery by an overnight express service or overnight mail delivery service; or (ii) the third calendar day after deposit in the United States mails, with proper first class postage prepaid, in each case addressed to the party to be notified as follows:

(a) If to Agent:

HERCULES TECHNOLOGY GROWTH CAPITAL, INC.
Legal Department
Attention: Chief Legal Officer and Paul Edwards
400 Hamilton Avenue, Suite 310

Palo Alto, CA 94301
Facsimile: 650-473-9194
Telephone: 650-289-3060

(b) If to Lender:

HERCULES TECHNOLOGY GROWTH CAPITAL, INC.
Legal Department
Attention: Chief Legal Officer and Paul Edwards
400 Hamilton Avenue, Suite 310
Palo Alto, CA 94301
Facsimile: 650-473-9194
Telephone: 650-289-3060

(c) If to Borrower:

DYNAVAX TECHNOLOGIES CORPORATION

Attention: Chief Business Officer and Principal Financial Officer
2929 Seventh Street, Suite 100
Berkeley, CA 94710
Facsimile: (510) 848-1327
Telephone: (510) 848-5100

or to such other address as each party may designate for itself by like notice.

11.3 Entire Agreement; Amendments.

(a) This Agreement and the other Loan Documents constitute the entire agreement and understanding of the parties hereto in respect of the subject matter hereof and thereof, and supersede and replace in their entirety any prior proposals, term sheets, non-disclosure or confidentiality agreements, letters, negotiations or other documents or agreements, whether written or oral, with respect to the subject matter hereof or thereof (including Agent's revised proposal letter dated November 27, 2014 and accepted by Borrower on December 1, 2014).

(b) Neither this Agreement, any other Loan Document, nor any terms hereof or thereof may be amended, supplemented or modified except in accordance with the provisions of this Section 11.3(b). The Required Lenders and Borrower party to the relevant Loan Document may, or, with the written consent of the Required Lenders, the Agent and the Borrower party to the relevant Loan Document may, from time to time, (i) enter into written amendments, supplements or modifications hereto and to the other Loan Documents for the purpose of adding any provisions to this Agreement or the other Loan Documents or changing in any manner the rights of the Lenders or of the Borrower hereunder or thereunder or (ii) waive, on such terms and conditions as the Required Lenders or the Agent, as the case may be, may specify in such instrument, any of the requirements of this Agreement or the other Loan Documents or any default or Event of Default and its consequences; provided, however, that no such waiver and no such amendment, supplement or modification shall (A) forgive the principal amount or extend

the final scheduled date of maturity of any Loan, extend the scheduled date of any amortization payment in respect of any Term Loan, reduce the stated rate of any interest or fee payable hereunder) or extend the scheduled date of any payment thereof, in each case without the written consent of each Lender directly affected thereby; (B) eliminate or reduce the voting rights of any Lender under this Section 11.3(b) without the written consent of such Lender; (C) reduce any percentage specified in the definition of Required Lenders, consent to the assignment or transfer by the Borrower of any of its rights and obligations under this Agreement and the other Loan Documents, release all or substantially all of the Collateral or release a Borrower from its obligations under the Loan Documents, in each case without the written consent of all Lenders; or (D) amend, modify or waive any provision of Section 11.17 without the written consent of the Agent. Any such waiver and any such amendment, supplement or modification shall apply equally to each Lender and shall be binding upon Borrower, the Lender, the Agent and all future holders of the Loans.

11.4 No Strict Construction. The parties hereto have participated jointly in the negotiation and drafting of this Agreement. In the event an ambiguity or question of intent or interpretation arises, this Agreement shall be construed as if drafted jointly by the parties hereto and no presumption or burden of proof shall arise favoring or disfavoring any party by virtue of the authorship of any provisions of this Agreement.

11.5 No Waiver. The powers conferred upon Agent and Lender by this Agreement are solely to protect its rights hereunder and under the other Loan Documents and its interest in the Collateral and shall not impose any duty upon Agent or Lender to exercise any such powers. No omission or delay by Agent or Lender at any time to enforce any right or remedy reserved to it, or to require performance of any of the terms, covenants or provisions hereof by Borrower at any time designated, shall be a waiver of any such right or remedy to which Agent or Lender is entitled, nor shall it in any way affect the right of Agent or Lender to enforce such provisions thereafter.

11.6 Survival. All agreements, representations and warranties contained in this Agreement and the other Loan Documents or in any document delivered pursuant hereto or thereto shall be for the benefit of Agent and Lender and shall survive the execution and delivery of this Agreement. The indemnity obligations of Borrower in Section 6.3 shall survive until the statute of limitations with respect to such claim or cause of action Agent or Lender may have in connection with such indemnity obligations shall have run. The Lender's right to invest in Section 8.1 shall survive the termination of this Agreement, but in no event later than the closing of a Change of Control.

11.7 Successors and Assigns. The provisions of this Agreement and the other Loan Documents shall inure to the benefit of and be binding on Borrower and its permitted assigns (if any). Borrower shall not assign its obligations under this Agreement or any of the other Loan Documents without Agent's express prior written consent, and any such attempted assignment shall be void and of no effect. Agent and Lender may assign, transfer, or endorse its rights hereunder and under the other Loan Documents without prior notice to Borrower, and all of such rights shall inure to the benefit of Agent's and Lender's successors and assigns.

11.8 Governing Law. This Agreement and the other Loan Documents have been negotiated and delivered to Agent and Lender in the State of California, and shall have been accepted by Agent and Lender in the State of California. Payment to Agent and Lender by Borrower of the Secured Obligations is due in the State of California. This Agreement and the other Loan Documents shall be governed by, and construed and enforced in accordance with, the laws of the State of California, excluding conflict of laws principles that would cause the application of laws of any other jurisdiction.

11.9 Consent to Jurisdiction and Venue. All judicial proceedings (to the extent that the reference requirement of Section 11.10 is not applicable) arising in or under or related to this Agreement or any of the other Loan Documents may be brought in any state or federal court located in the State of California. By execution and delivery of this Agreement, each party hereto generally and unconditionally: (a) consents to nonexclusive personal jurisdiction in Santa Clara County, State of California; (b) waives any objection as to jurisdiction or venue in Santa Clara County, State of California; (c) agrees not to assert any defense based on lack of jurisdiction or venue in the aforesaid courts; and (d) irrevocably agrees to be bound by any judgment rendered thereby in connection with this Agreement or the other Loan Documents. Service of process on any party hereto in any action arising out of or relating to this Agreement shall be effective if given in accordance with the requirements for notice set forth in Section 11.2, and shall be deemed effective and received as set forth in Section 11.2. Nothing herein shall affect the right to serve process in any other manner permitted by law or shall limit the right of either party to bring proceedings in the courts of any other jurisdiction.

11.10 Mutual Waiver of Jury Trial / Judicial Reference.

(a) Because disputes arising in connection with complex financial transactions are most quickly and economically resolved by an experienced and expert Person and the parties wish applicable state and federal laws to apply (rather than arbitration rules), the parties desire that their disputes be resolved by a judge applying such applicable laws. EACH OF BORROWER, AGENT AND LENDER SPECIFICALLY WAIVES ANY RIGHT IT MAY HAVE TO TRIAL BY JURY OF ANY CAUSE OF ACTION, CLAIM, CROSS-CLAIM, COUNTERCLAIM, THIRD PARTY CLAIM OR ANY OTHER CLAIM (COLLECTIVELY, "CLAIMS") ASSERTED BY BORROWER AGAINST AGENT, LENDER OR THEIR RESPECTIVE ASSIGNEE OR BY AGENT, LENDER OR THEIR RESPECTIVE ASSIGNEE AGAINST BORROWER. This waiver extends to all such Claims, including Claims that involve Persons other than Agent, Borrower and Lender; Claims that arise out of or are in any way connected to the relationship among Borrower, Agent and Lender; and any Claims for damages, breach of contract, tort, specific performance, or any equitable or legal relief of any kind, arising out of this Agreement or any other Loan Document.

(b) If the waiver of jury trial set forth in Section 11.10(a) is ineffective or unenforceable, the parties agree that all Claims shall be resolved by reference to a private judge sitting without a jury, pursuant to Code of Civil Procedure Section 638, before a mutually acceptable referee or, if the parties cannot agree, a referee selected by the Presiding Judge of the Santa Clara County, California. Such proceeding shall be

conducted in Santa Clara County, California, with California rules of evidence and discovery applicable to such proceeding.

(c) In the event Claims are to be resolved by judicial reference, either party may seek from a court identified in Section 11.9, any prejudgment order, writ or other relief and have such prejudgment order, writ or other relief enforced to the fullest extent permitted by law notwithstanding that all Claims are otherwise subject to resolution by judicial reference.

11.11 Professional Fees. Borrower promises to pay Agent's and Lender's fees and expenses that are reasonable, documented (with redactions) and necessary to finalize the loan documentation, including but not limited to reasonable attorneys fees, UCC searches, filing costs, and other miscellaneous expenses; provided, however, that Agent and Lender shall use best efforts to keep such fees of Agent's U.S. counsel and expenses below \$40,000. In addition, Borrower promises to pay any and all reasonable and documented (with redactions) attorneys' and other professionals' fees and expenses (including fees and expenses of in-house counsel) incurred by Agent and Lender after the Closing Date in connection with or related to: (a) the Loan; (b) the administration, collection, or enforcement of the Loan; (c) the amendment or modification of the Loan Documents; (d) any waiver, consent, release, or termination under the Loan Documents; (e) the protection, preservation, audit, field exam, sale, lease, liquidation, or disposition of Collateral or the exercise of remedies with respect to the Collateral; (f) any legal, litigation, administrative, arbitration, or out of court proceeding in connection with or related to Borrower or the Collateral, and any appeal or review thereof, in each case that constitutes a Liability for which Borrower is obligated to indemnify an Indemnified Person under Section 6.3; and (g) any bankruptcy, restructuring, reorganization, assignment for the benefit of creditors, workout, foreclosure, or other action related to Borrower, the Collateral, the Loan Documents, including representing Agent or Lender in any adversary proceeding or contested matter commenced or continued by or on behalf of Borrower's estate, and any appeal or review thereof. Notwithstanding anything to the contrary, Agent and Lender shall provide to Borrower in advance documentation (including hourly rate and number of hours, but excluding detailed time entries) setting forth all such fees and expenses under this Section 11.11 for which Agent and Lender seek reimbursement from Borrower. Borrower shall have a reasonable period to review each such request. If Borrower has not objected in writing to any such fees or expenses within such period, then Agent and Lender may initiate a debit entry to Borrower's account in accordance with the ACH Authorization.

11.12 Confidentiality. Agent and Lender acknowledge that certain items of Collateral and information provided to Agent and Lender by Borrower are confidential and proprietary information of Borrower, if and to the extent such information either (x) is marked as confidential by Borrower at the time of disclosure, or (y) should reasonably be understood to be confidential (the "Confidential Information"). Accordingly, Agent and Lender agree that any Confidential Information it may obtain shall not be disclosed to any other Person or entity in any manner whatsoever, in whole or in part, without the prior written consent of Borrower, except that Agent and Lender may disclose any such information: (a) to its own directors, officers, employees, accountants, counsel and other professional advisors and to its affiliates if Agent or Lender in their sole discretion

the Loan Documents and the Secured Obligations shall be deemed, without any further action or documentation, to have been revived and reinstated except to the extent of the full, final, and indefeasible payment to Agent or Lender in Cash.

11.15 Counterparts. This Agreement and any amendments, waivers, consents or supplements hereto may be executed in any number of counterparts, and by different parties hereto in separate counterparts, each of which when so delivered shall be deemed an original, but all of which counterparts shall constitute but one and the same instrument.

11.16 No Third Party Beneficiaries. No provisions of the Loan Documents are intended, nor will be interpreted, to provide or create any third-party beneficiary rights or any other rights of any kind in any Person other than Agent, Lender and Borrower unless specifically provided otherwise herein, and, except as otherwise so provided, all provisions of the Loan Documents will be personal and solely among Agent, the Lender and the Borrower.

11.17 Agency.

(a) Lender hereby irrevocably appoints Hercules Technology Growth Capital, Inc. to act on its behalf as the Agent hereunder and under the other Loan Documents and authorizes the Agent to take such actions on its behalf and to exercise such powers as are delegated to the Agent by the terms hereof or thereof, together with such actions and powers as are reasonably incidental thereto.

(b) Lender agrees to indemnify the Agent in its capacity as such (to the extent not reimbursed by Borrower and without limiting the obligation of Borrower to do so), according to its respective Term Commitment percentages (based upon the total outstanding Term Commitments) in effect on the date on which indemnification is sought under this Section 11.17, from and against any and all liabilities, obligations, losses, damages, penalties, actions, judgments, suits, costs, expenses or disbursements of any kind whatsoever that may at any time be imposed on, incurred by or asserted against the Agent in any way relating to or arising out of, this Agreement, any of the other Loan Documents or any documents contemplated by or referred to herein or therein or the transactions contemplated hereby or thereby or any action taken or omitted by the Agent under or in connection with any of the foregoing; The agreements in this Section shall survive the payment of the Loans and all other amounts payable hereunder.

(c) Agent in Its Individual Capacity. The Person serving as the Agent hereunder shall have the same rights and powers in its capacity as a Lender as any other Lender and may exercise the same as though it were not the Agent and the term "Lender" shall, unless otherwise expressly indicated or unless the context otherwise requires, include each such Person serving as Agent hereunder in its individual capacity.

(d) Exculpatory Provisions. The Agent shall have no duties or obligations except those expressly set forth herein and in the other Loan Documents. Without limiting the generality of the foregoing, the Agent shall not:

- (i) be subject to any fiduciary or other implied duties, regardless of whether any default or any Event of Default has occurred and is continuing;
- (ii) have any duty to take any discretionary action or exercise any discretionary powers, except discretionary rights and powers expressly contemplated hereby or by the other Loan Documents that the Agent is required to exercise as directed in writing by the Lender, provided that the Agent shall not be required to take any action that, in its opinion or the opinion of its counsel, may expose the Agent to liability or that is contrary to any Loan Document or applicable law; and
- (iii) except as expressly set forth herein and in the other Loan Documents, have any duty to disclose, and the Agent shall not be liable for the failure to disclose, any information relating to the Borrower or any of its affiliates that is communicated to or obtained by any Person serving as the Agent or any of its affiliates in any capacity.

(e) The Agent shall not be liable for any action taken or not taken by it (i) with the consent or at the request of the Lender or as the Agent shall believe in good faith shall be necessary, under the circumstances or (ii) in the absence of its own gross negligence or willful misconduct.

(f) The Agent shall not be responsible for or have any duty to ascertain or inquire into (i) any statement, warranty or representation made in or in connection with this Agreement or any other Loan Document, (ii) the contents of any certificate, report or other document delivered hereunder or thereunder or in connection herewith or therewith, (iii) the performance or observance of any of the covenants, agreements or other terms or conditions set forth herein or therein or the occurrence of any default or Event of Default, (iv) the validity, enforceability, effectiveness or genuineness of this Agreement, any other Loan Document or any other agreement, instrument or document or (v) the satisfaction of any condition set forth in Section 4 or elsewhere herein, other than to confirm receipt of items expressly required to be delivered to the Agent.

(g) Reliance by Agent. Agent may rely, and shall be fully protected in acting, or refraining to act, upon, any resolution, statement, certificate, instrument, opinion, report, notice, request, consent, order, bond or other paper or document that it has no reason to believe to be other than genuine and to have been signed or presented by the proper party or parties or, in the case of cables, telecopies and telexes, to have been sent by the proper party or parties. In the absence of its gross negligence or willful misconduct, Agent may conclusively rely, as to the truth of the statements and the correctness of the opinions expressed therein, upon any certificates or opinions furnished to Agent and conforming to the requirements of the Loan Agreement or any of the other Loan Documents. Agent may consult with counsel, and any opinion or legal advice of such counsel shall be full and complete authorization and protection in respect of any action taken, not taken or suffered by Agent hereunder or under any Loan Documents in accordance therewith. Agent shall have the right at any time to seek instructions concerning the administration of the Collateral from any court of competent jurisdiction.

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EXHIBIT A

ADVANCE REQUEST

To: Agent: _____ Date: _____, 201_

Hercules Technology Growth Capital, Inc. (the "Agent")
400 Hamilton Avenue, Suite 310
Palo Alto, CA 94301
Facsimile: 650-473-9194
Attn:

Dynavax Technologies Corporation ("Borrower") hereby requests from Hercules Technology Growth Capital, Inc. ("Lender") an Advance in the amount of _____ Dollars (\$ _____) on _____, 201_ (the "Advance Date") pursuant to the Loan and Security Agreement among Borrower, Agent and Lender (the "Agreement"). Capitalized words and other terms used but not otherwise defined herein are used with the same meanings as defined in the Agreement.

Please:

(a) Issue a check payable to Borrower _____

or

(b) Wire Funds to Borrower's account _____

Bank: _____
Address: _____
ABA Number: _____
Account Number: _____
Account Name: _____

Borrower represents that the conditions precedent to the Advance set forth in the Agreement are satisfied and shall be satisfied upon the making of such Advance, including but not limited to: (i) that no event that has had or could reasonably be expected to have a Material Adverse Effect has occurred and is continuing; (ii) that the representations and warranties set forth in the Agreement are and shall be true and correct in all material respects on and as of the Advance Date with the same effect as though made on and as of such date, except to the extent such representations and warranties expressly relate to an earlier date; (iii) that Borrower is in compliance with all the terms and provisions set forth in each Loan Document on its part to be observed or performed; and (iv) that as of the Advance Date, no fact or condition exists that would (or would, with the passage of time, the giving of notice, or both) constitute an Event of Default under the Loan Documents. Borrower understands and acknowledges that Agent has the right to review the financial information supporting this representation and, based upon such review in its reasonable discretion, Lender may decline to fund the requested Advance.

Borrower hereby represents that Borrower's corporate status and locations have not changed since the date of the Agreement or, if the Attachment to this Advance Request is completed, are as set forth in the Attachment to this Advance Request.

Borrower agrees to notify Agent promptly before the funding of the Loan if any of the matters which have been represented above shall not be true and correct on the Advance Date and if Agent has received no such notice before the Advance Date then the statements set forth above shall be deemed to have been made and shall be deemed to be true and correct as of the Advance Date.

Executed as of [], 20[].

BORROWER: DYNAVAX TECHNOLOGIES CORPORATION

BY: _____
TITLE: _____
PRINT NAME: _____

ATTACHMENT TO ADVANCE REQUEST

Dated: _____

Borrower hereby represents and warrants to Agent that Borrower's current name and organizational status is as follows:

Name:	Dynavax Technologies Corporation
Type of organization:	Corporation
State of organization:	Delaware
Organization file number:	3302804

Borrower hereby represents and warrants to Agent that the street addresses, cities, states and postal codes of its current locations are as follows:

EXHIBIT B

SECURED TERM PROMISSORY NOTE

\$[],000,000

Advance Date: ____ __, 20[]

Maturity Date: _____, 20[]

FOR VALUE RECEIVED, Dynavax Technologies Corporation, a Delaware corporation, (the "Borrower") hereby promises to pay to the order of Hercules Technology Growth Capital, Inc., a Maryland corporation or the holder of this Note (the "Lender") at 400 Hamilton Avenue, Suite 310, Palo Alto, CA 94301 or such other place of payment as the holder of this Secured Term Promissory Note (this "Promissory Note") may specify from time to time in writing, in lawful money of the United States of America, the principal amount of [] Million Dollars (\$[],000,000) or such other principal amount as Lender has advanced to Borrower, together with interest at the Term Loan Interest Rate as such term is defined in that certain Loan and Security Agreement dated December 23, 2014, by and among Borrower, Hercules Technology Growth Capital, Inc., a Maryland corporation (the "Agent") and the several banks and other financial institutions or entities from time to time party thereto as lender (as the same may from time to time be amended, modified or supplemented in accordance with its terms, the "Loan Agreement"). The Term Loan Interest Rate may be a floating or a fixed rate subject to Section 2.2(c) of the Loan Agreement.

This Promissory Note is the Term Note referred to in, and is executed and delivered in connection with, the Loan Agreement, and is entitled to the benefit and security of the Loan Agreement and the other Loan Documents (as defined in the Loan Agreement), to which reference is made for a statement of all of the terms and conditions thereof. All payments shall be made in accordance with the Loan Agreement. All terms defined in the Loan Agreement shall have the same definitions when used herein, unless otherwise defined herein. An Event of Default under the Loan Agreement shall constitute a default under this Promissory Note.

Borrower waives presentment and demand for payment, notice of dishonor, protest and notice of protest under the UCC or any applicable law. Borrower agrees to make all payments under this Promissory Note without setoff, recoupment or deduction and regardless of any counterclaim or defense. This Promissory Note has been negotiated and delivered to Lender and is payable in the State of California. This Promissory Note shall be governed by and construed and enforced in accordance with, the laws of the State of California, excluding any conflicts of law rules or principles that would cause the application of the laws of any other jurisdiction.

BORROWER: DYNAVAX TECHNOLOGIES CORPORATION

By:

Title:

EXHIBIT C

NAME, LOCATIONS, AND OTHER INFORMATION FOR BORROWER

1. Borrower represents and warrants to Agent that Borrower's current name and organizational status as of the Closing Date is as follows:

Name: Dynavax Technologies Corporation

Type of organization: Corporation

State of organization: Delaware

Organization file number: 3302804

2. Borrower represents and warrants to Agent that for five (5) years prior to the Closing Date, Borrower did not do business under any other name or organization or form except the following:

Name:

Used during dates of:

Type of Organization:

State of organization:

Organization file Number:

3. Borrower's fiscal year ends on December 31.

4. Borrower's federal employer tax identification number is: 33-0728374.

5. Borrower represents and warrants to Agent that its chief executive office is located at 2929 Seventh Street, Suite 100, Berkeley, CA 94710.

EXHIBIT D

BORROWER'S PATENTS, TRADEMARKS, COPYRIGHTS AND LICENSES

Copyrights: none

Patents: See attached file (Dynavax Case List October 2014)

Trademarks: See attached file (Quarterly Trademark Status Report as of November 12, 2014)

Material Inbound Licenses:

- (1) License Agreement dated as of June 26, 2007 between Coley Pharmaceutical Group, Inc. and Borrower.
- (2) Research Collaboration and License Agreement dated as of September 1, 2006 between AstraZeneca AB and Borrower.

EXHIBIT E

BORROWER'S DEPOSIT ACCOUNTS AND INVESTMENT ACCOUNTS

<u>Institution Name and Address</u>	<u>Account Number</u>	<u>Average Balance in Account</u>	<u>Name of Account Owner</u>
XXXXXX Bank XXXXXX XXXXXX, XXXXX XXXXX 800-XXX-XXXX	XXXXXX	XXXXXX	Dynavax Technologies Corporation
XXXXXX Bank XXXXXX XXXXXX, XXXXX XXXXX XXX-XXX-XXXX 800-XXX-XXXX	XXXXXX	XXXXXX	Dynavax Technologies Corporation
XXXXXX Bank XXXXXX XXXXXX XXXXXX XXXXXX XXXXXX XXX XXX-XXXX	XXXXXX	XXXXXX	Rhein Biotech GmbH

XXXXXX Bank XXXXXX XXXXXX XXXXXX XXXXXX XXXXXX XXXXXX +XX XX XXX XXXX	XXXXXX	XXXXXX	Dynavax International, B.V.
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EXHIBIT F

COMPLIANCE CERTIFICATE

Hercules Technology Growth Capital, Inc. (as "Agent")
400 Hamilton Avenue, Suite 310
Palo Alto, CA 94301

Reference is made to that certain Loan and Security Agreement dated December 23, 2014 and all ancillary documents entered into in connection with such Loan and Security Agreement all as may be amended from time to time, (hereinafter referred to collectively as the "Loan Agreement") by and among Hercules Technology Growth Capital, Inc. (the "Agent"), the several banks and other financial institutions or entities from time to time party thereto (collectively, the "Lender") and Hercules Technology Growth Capital, Inc., as agent for the Lender (the "Agent") and Dynavax Technologies Corporation (the "Company") as Borrower. All capitalized terms not defined herein shall have the same meaning as defined in the Loan Agreement.

The undersigned is an Officer of the Company, knowledgeable of all Company financial matters, and is authorized to provide certification of information regarding the Company; hereby certifies that in accordance with the terms and conditions of the Loan Agreement, the Company is in compliance for the period ending _____ of all covenants, conditions and terms contained therein and hereby reaffirms that all representations and warranties contained therein are true and correct on and as of the date of this Compliance Certificate with the same effect as though made on and as of such date, except to the extent such representations and warranties expressly relate to an earlier date, after giving effect in all cases to any standard(s) of materiality contained in the Loan Agreement as to such representations and warranties. Attached are the required documents supporting the above certification. The undersigned further certifies that these are prepared in accordance with GAAP (except for the absence of footnotes with respect to unaudited financial statement and subject to normal year end adjustments) and are consistent from one period to the next except as explained below.

REPORTING REQUIREMENT	REQUIRED	CHECK IF ATTACHED
Interim Financial Statements	Monthly within 30 days	
Interim Financial Statements	Quarterly within 45 days	
Audited Financial Statements	FYE within 90 days	

Very Truly Yours,

DYNAVAX
TECHNOLO
CORPORAT

By: _____

Name: _____

Its: _____

EXHIBIT G

FORM OF JOINDER AGREEMENT

This Joinder Agreement (the "Joinder Agreement") is made and dated as of [], 20[], and is entered into by and between _____, a _____ corporation ("Subsidiary"), and HERCULES TECHNOLOGY GROWTH CAPITAL, INC., a Maryland corporation (as "Agent").

RECITALS

A. Subsidiary's Affiliate, Dynavax Technologies Corporation ("Company") has entered into that certain Loan and Security Agreement dated December 23, 2014, with the several banks and other financial institutions or entities from time to time party thereto as lender (collectively, the "Lender") and the Agent, as such agreement may be amended (the "Loan Agreement"), together with the other agreements executed and delivered in connection therewith;

B. Subsidiary acknowledges and agrees that it will benefit both directly and indirectly from Company's execution of the Loan Agreement and the other agreements executed and delivered in connection therewith;

AGREEMENT

NOW THEREFORE, Subsidiary and Agent agree as follows:

1. The recitals set forth above are incorporated into and made part of this Joinder Agreement. Capitalized terms not defined herein shall have the meaning provided in the Loan Agreement.
2. By signing this Joinder Agreement, Subsidiary shall be bound by the terms and conditions of the Loan Agreement the same as if it were the Borrower (as defined in the Loan Agreement) under the Loan Agreement, mutatis mutandis, provided however, that (a) with respect to (i) Section 5.1 of the Loan Agreement, Subsidiary represents that it is an entity duly organized, legally existing and in good standing under the laws of [], (b) neither Agent nor Lender shall have any duties, responsibilities or obligations to Subsidiary arising under or related to the Loan Agreement or the other agreements executed and delivered in connection therewith, (c) that if Subsidiary is covered by Company's insurance, Subsidiary shall not be required to maintain separate insurance or comply with the provisions of Sections 6.1 and 6.2 of the Loan Agreement, and (d) that as long as Company satisfies the requirements of Section 7.1 of the Loan Agreement, Subsidiary shall not have to provide Agent separate Financial Statements. To the extent that Agent or Lender has any duties, responsibilities or obligations arising under or related to the Loan Agreement or the other agreements executed and delivered in connection therewith, those duties, responsibilities or obligations shall flow only to Company and not to Subsidiary or any other Person or entity. By way of example (and not an exclusive list): (i) Agent's providing notice to Company in accordance with the Loan Agreement or as otherwise agreed among Company, Agent and Lender shall be deemed provided to Subsidiary; (ii) a Lender's providing an Advance to Company shall be deemed an Advance to Subsidiary; and (iii) Subsidiary shall have no right to request an Advance or make any other demand on Lender.

3. Subsidiary agrees not to certificate its equity securities without Agent's prior written consent, which consent may be conditioned on the delivery of such equity securities to Agent in order to perfect Agent's security interest in such equity securities.
4. Subsidiary acknowledges that it benefits, both directly and indirectly, from the Loan Agreement, and hereby waives, for itself and on behalf of any and all successors in interest (including without limitation any assignee for the benefit of creditors, receiver, bankruptcy trustee or itself as debtor-in-possession under any bankruptcy proceeding) to the fullest extent provided by law, any and all claims, rights or defenses to the enforcement of this Joinder Agreement on the basis that (a) it failed to receive adequate consideration for the execution and delivery of this Joinder Agreement or (b) its obligations under this Joinder Agreement are avoidable as a fraudulent conveyance.

[REMAINDER OF PAGE INTENTIONALLY LEFT BLANK]

SUBSIDIARY:

_____.

By:
Name:
Title:

Address:
Telephone: _____
Facsimile: _____

AGENT:

HERCULES TECHNOLOGY GROWTH CAPITAL, INC.

By: _____
Name: _____
Title: _____

Address:
400 Hamilton Ave., Suite 310
Palo Alto, CA 94301
Facsimile: 650-473-9194
Telephone: 650-289-3060

EXHIBIT H

ACH DEBIT AUTHORIZATION AGREEMENT

Hercules Technology Growth Capital, Inc.
400 Hamilton Avenue, Suite 310
Palo Alto, CA 94301

Re: Loan and Security Agreement dated December 23, 2014 (the "Agreement") by and among Dynavax Technologies Corporation ("Borrower") and Hercules Technology Growth Capital, Inc., as agent ("Company") and the lenders party thereto (collectively, the "Lender")

In connection with the above referenced Agreement, the Borrower hereby authorizes the Company to initiate debit entries for (i) the periodic payments due under the Agreement and (ii) out-of-pocket legal fees and costs incurred by Agent or Lender pursuant to Section 11.11 of the Agreement to the Borrower's account indicated below, after application of the Commitment Fee in the case of such non-legal fees and costs incurred through the Closing Date. The Borrower authorizes the depository institution named below to debit to such account.

DEPOSITORY NAME	BRANCH
CITY	STATE AND ZIP CODE
TRANSIT/ABA NUMBER	ACCOUNT NUMBER

This authority will remain in full force and effect so long as any amounts are due under the Agreement.

DYNAVAX TECHNOLOGIES CORPORATION

By: _____

Date: _____

SCHEDULE 1.1

COMMITMENTS

LENDER	TERM COMMITMENT
HERCULES TECHNOLOGY GROWTH CAPITAL, INC.	\$40,000,000
TOTAL COMMITMENTS	\$40,000,000

SCHEDULE 7.16

POST-CLOSING ITEMS

On or before the time frames set forth below (or such later date agreed to by the Agent in its sole discretion in writing or as may be waived by the Agent in its sole discretion in writing), the Borrower shall use commercially reasonable efforts to execute and deliver to the Agent each of the following items and/or take the actions described below, in each case, to the Agent's reasonable satisfaction:

1. On or before January 31, 2015, a consent of landlord in form and substance reasonably satisfactory to Agent with the landlord of the premises leased by Borrower at 2929 Seventh Street, Berkeley, CA 94710.
2. On or before January 31, 2015, a bailee acknowledgment in form and substance reasonably satisfactory to Agent from Baxter BioPharma Solutions, the bailee in possession of Borrower's manufacturing equipment located at 927 S. Curry Pike, Bloomington, IN 47403.
3. On or before January 31, 2015, Borrower shall deliver to Agent or Agent's custodian, as requested by Agent, possession of the original note issued by Rhein Biotech GmbH to Borrower on April 21, 2006 in the amount of Euros 3,664,807.98.
4. On or before December 29, 2014, Borrower shall deliver to Agent a fully executed Account Control Agreement with respect to Borrower's assets invested with Capital Advisors Group as the Investment Manager and State Street Bank and Trust Company as the Securities Intermediary.
5. On or before December 31, 2014, Borrower shall deliver to Agent a fully executed Deposit Account Control Agreement with respect to Borrower's deposit accounts held with Silicon Valley Bank.

	For the Year Ended December 31,				
	2014	2013	2012	2011	2010
	(In thousands)				
Earnings					
Loss from continuing operations before income taxes	\$ (90,722)	\$ (66,720)	\$ (69,949)	\$ (48,597)	\$ (57,308)
Fixed charges	438	509	2,795	2,420	2,341
Amount attributable to noncontrolling interest in Symphony Dynamo, Inc.	-	-	-	-	-
Earnings, as defined	<u>\$ (90,284)</u>	<u>\$ (66,211)</u>	<u>\$ (67,154)</u>	<u>\$ (46,177)</u>	<u>\$ (54,967)</u>
Fixed charges:					
Interest expense	\$ (35)	\$ -	\$ 2,351	\$ 1,957	\$ 1,654
Estimated interest component of rent expenses	473	509	444	463	687
Total fixed charges	<u>\$ 438</u>	<u>\$ 509</u>	<u>\$ 2,795</u>	<u>\$ 2,420</u>	<u>\$ 2,341</u>
Preferred stock deemed dividend					
Total fixed charges and preferred dividend	<u>\$ 438</u>	<u>\$ 8,978</u>	<u>\$ 2,795</u>	<u>\$ 2,420</u>	<u>\$ 2,341</u>
Deficiency of earnings available to cover fixed charges and preferred stock dividends⁽¹⁾	<u>\$ (90,722)</u>	<u>(75,189)</u>	<u>(69,949)</u>	<u>(48,597)</u>	<u>(57,308)</u>

(1): Adjusted earnings, as described above, were insufficient to cover fixed charges in each year.

List of Subsidiaries

Rhein Biotech GmbH

Dynavax International, B.V.

Consent of Independent Registered Public Accounting Firm

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

- (1) Registration Statements (Form S-3 Nos. 333-175645, 333-191610 and 333-200083) of Dynavax Technologies Corporation and in the related Prospectuses,
- (2) Registration Statement (Form S-3/A No. 333-191610) of Dynavax Technologies Corporation and in the related Prospectus, and
- (3) Registration Statements (Form S-8 Nos. 333-113220, 333-136345, 333-145094, 333-152819, 333-157741, 333-164255, 333-171552, 333-190313 and 333-197838) pertaining to the 1997 Equity Incentive Plan, the 2004 Stock Incentive Plan, the 2004 Employee Stock Purchase Plan, the 2010 Employment Inducement Award Plan and/or the 2011 Equity Incentive Plan of Dynavax Technologies Corporation; of our reports dated March 5, 2015, with respect to the consolidated financial statements of Dynavax Technologies Corporation and the effectiveness of internal control over financial reporting of Dynavax Technologies Corporation included in this Annual Report (Form 10-K) of Dynavax Technologies Corporation for the year ended December 31, 2014.

/s/ Ernst & Young LLP

Redwood City, California
March 5, 2015

Rule 13a-14(a) Certification of Chief Executive Officer

CERTIFICATIONS

I, Eddie Gray, certify that:

1. I have reviewed this annual report on Form 10-K of Dynavax Technologies Corporation (the “registrant”);
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant’s other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - a) designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b) designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - c) evaluated the effectiveness of the registrant’s disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d) disclosed in this report any change in the registrant’s internal control over financial reporting that occurred during the registrant’s most recent fiscal quarter (the registrant’s fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant’s internal control over financial reporting; and
5. The registrant’s other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant’s auditors and the audit committee of the registrant’s board of directors (or persons performing the equivalent functions):
 - a) all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant’s ability to record, process, summarize and report financial information; and
 - b) any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant’s internal control over financial reporting.

By: _____ /s/ EDDIE GRAY
Eddie Gray
Chief Executive Officer
(Principal Executive Officer)

Date: March 5, 2015

**Certification Pursuant to Section 1350 of Chapter 63
of Title 18 of the United States Code**

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), I, Eddie Gray, Chief Executive Officer of Dynavax Technologies Corporation (the "Company"), hereby certify that, to the best of my knowledge:

(i) The Company's Annual Report on Form 10-K for the period ended December 31, 2014 (the "Annual Report"), to which this Certificate is attached as Exhibit 32.1, fully complies with the requirements of Section 13(a) or Section 15(d) of the Exchange Act; and

(ii) The information contained in the Annual Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

In Witness Whereof, the undersigned have set his hand hereto as of the 5th day of March, 2015.

By: _____ /s/ EDDIE GRAY

Eddie Gray
Chief Executive Officer
(Principal Executive Officer)

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

**Certification Pursuant to Section 1350 of Chapter 63
of Title 18 of the United States Code**

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), I, Michael Ostrach, Principal Financial Officer of Dynavax Technologies Corporation (the "Company"), hereby certify that, to the best of my knowledge:

(i) The Company's Annual Report on Form 10-K for the period ended December 31, 2014 (the "Annual Report"), to which this Certificate is attached as Exhibit 32.2, fully complies with the requirements of Section 13(a) or Section 15(d) of the Exchange Act; and

(ii) The information contained in the Annual Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

In Witness Whereof, the undersigned have set his hand hereto as of the 5th day of March, 2015.

By: _____ /s/ MICHAEL OSTRACH

Michael Ostrach
Chief Financial Officer
(Principal Financial Officer)

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