UNITED STATES
SECURITIES AND EXCHANGE COMMISSION

WASHINGTON, D.C. 20549

FORM 10-K

(Mark One)

☒ **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**
For the Fiscal Year Ended December 31, 2017
Or
☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

Commission File Number: 001-35798

HUMANIGEN, INC.

(Exact name of registrant as specified in its charter)

Delaware	**2834**	**77-0557236**
(State or other jurisdiction of incorporation or organization)	(Primary Standard Industrial Classification Code Number)	(I.R.S. Employer Identification No.)

1000 Marina Boulevard, Ste. 250
Brisbane, CA 94005
(Address of Principal Executive Offices) (Zip Code)

(650) 243-3100
(Registrant's Telephone Number, Including Area Code)

Securities registered pursuant to Section 12(b) of the Act:
None.

Securities registered pursuant to Section 12(g) of the Act:
Common Stock, $0.001 par value.

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

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

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

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

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Annual Report on Form 10-K or any amendment to this Annual Report on 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 definitions of "large accelerated filer," "accelerated filer," "smaller reporting company" and "emerging growth company" in Rule 12b-2 of the Exchange Act.

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

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

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

Indicate by check mark whether the registrant has filed all documents and reports required to be filed by Section 12, 13 or 15(d) of the Securities Exchange Act of 1934 subsequent to the distribution of securities under a plan confirmed by a court. Yes ☒ No ☐

The aggregate market value of the registrant's voting stock held by non-affiliates as of June 30, 2017, was approximately $11,552,504 based on the closing price of $1.90 of the Common Stock of the registrant as reported on the OTCQB Venture Market operated by OTC Markets Group, Inc. on such date. As of March 23, 2018, there were 109,207,786 shares of the registrant's Common Stock, par value $0.001 per share, outstanding.

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SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This Annual Report on Form 10-K contains statements that discuss future events or expectations, projections of results of operations or financial condition, trends in our business, business prospects and strategies and other "forward-looking" information. In some cases, you can identify "forward-looking statements" by words like "may," "will," "should," "expects," "plans," "anticipates," "believes," "estimates," "predicts," "intends," "potential" or "continue" or the negative of those words and other comparable words. These statements may relate to, among other things, our expectations regarding the scope, progress, expansion, and costs of researching, developing and commercializing our product candidates; our opportunity to benefit from various regulatory incentives; expectations for our financial results, revenue, operating expenses and other financial measures in future periods; and the adequacy of our sources of liquidity to satisfy our working capital needs, capital expenditures, and other liquidity requirements. Actual events or results may differ materially due to known and unknown risks, uncertainties and other factors such as:

- *our lack of revenues, history of operating losses, bankruptcy, limited cash reserves and ability to obtain additional capital to develop and commercialize our product candidates, including the additional capital which will be necessary to complete the clinical trials that we have initiated or plan to initiate, and continue as a going concern;*
- *the effect on our stock price and the significant dilution to the share ownership of our existing stockholders that has resulted from conversion of the term loans into equity of the company or that may result in the future upon additional issuances of our equity securities;*
- *our ability to execute our new strategy and business plan focused on developing our proprietary monoclonal antibody portfolio;*
- *our ability to list our common stock on a national securities exchange, whether through a new listing or by completing a reverse merger or other strategic transaction;*
- *the success, progress, timing and costs of our efforts to evaluate or consummate various strategic alternatives if in the best interests of our stockholders;*
- *the potential timing and outcomes of clinical studies of lenzilumab, ifabotuzumab or any other product candidates and the uncertainties inherent in clinical testing;*
- *our ability to timely source adequate supply of our development products from third-party manufacturers on which we depend;*
- *the potential, if any, for future development of any of our present or future products;*
- *our ability to successfully progress, partner or complete further development of our programs;*
- *our ability to identify and develop additional products;*
- *our ability to attain market exclusivity or to protect our intellectual property;*
- *our ability to reach agreement with a partner to effect a successful commercialization of any of our product candidates;*
- *the outcome of pending or future litigation;*
- *the ability of the Black Horse Entities (as defined below) to exert control over all matters of the Company, including their ability to control elections of directors, amendments of our organizational documents, or approval of any merger, sale of assets, or other major corporate transaction;*
- *competition; and*
- *changes in the regulatory landscape that may prevent us from pursuing or realizing any of the expected benefits from the various regulatory incentives, or the imposition of regulations that affect our products.*

These are only some of the factors that may affect the forward-looking statements contained in this annual report. For a discussion identifying additional important factors that could cause actual results to vary materially from those anticipated in the forward-looking statements, see "Management's Discussion and Analysis of Financial Condition and Results of Operations" and "Risk Factors" in this Annual Report on Form 10-K. You should review these risk factors for a more complete understanding of the risks associated with an investment in our securities. However, we operate in a competitive and rapidly changing environment and new risks and uncertainties emerge, are identified or become apparent from time to time. It is not possible for us to predict all risks and uncertainties that could have an impact on the forward-looking statements contained in this annual report. You should be aware that the forward-looking statements contained in this annual report are based on our current views and assumptions. We undertake no obligation to revise or update any forward-looking statements made in this annual report to reflect events or circumstances after the date hereof or to reflect new information or the occurrence of unanticipated events, except as required by law. The forward-looking statements in this annual report are intended to be subject to protection afforded by the safe harbor for forward-looking statements contained in the Private Securities Litigation Reform Act of 1995.

PART I

ITEM 1. BUSINESS

Overview

We are a biopharmaceutical company pursuing cutting-edge science to develop our proprietary monoclonal antibodies for immunotherapy and oncology treatments. Our lead product candidate is lenzilumab (formerly known as KB003). We have begun work with leading key opinion leaders in the chimeric antigen receptor T-cell, or CAR-T, therapy field to advance lenzilumab into phase 1b/2 trials for the prevention of neurotoxicity and potentially cytokine release syndrome, or CRS, associated with CAR-T therapy. There are currently no FDA-approved products for the prevention or treatment of neurotoxicity or prevention of CRS associated with CAR-T therapy. Additionally, lenzilumab is currently in a phase 1 trial for the treatment of chronic myelomonocytic leukemia, or CMML, and potentially subsequent trials for the treatment of juvenile myelomonocytic leukemia, or JMML, both of which are rare hematologic cancers with high unmet medical need. We are exploring partnering opportunities to enable development of ifabotuzumab (another of our proprietary monoclonal antibodies, formerly known as KB004), as a potential CAR construct and for the potential treatment of certain rare solid and hematologic cancers and other serious diseases. With a focus on preventing serious and potentially life-threatening side-effects associated with CAR-T therapy and other high-unmet-need conditions for which there are no FDA-approved therapies, we also believe we have the opportunity to benefit from various regulatory incentives, such as orphan drug exclusivity, breakthrough therapy designation, fast track designation and accelerated approval.

We were incorporated on March 15, 2000 in California and reincorporated as a Delaware corporation in September 2001 under the name KaloBios Pharmaceuticals, Inc. We completed our initial public offering in January 2013. Effective August 7, 2017, we changed our legal name to Humanigen, Inc.

We have undergone a significant transformation since December 2015. As a result of challenges facing us at the time, on December 29, 2015, we filed a voluntary petition for bankruptcy protection under Chapter 11 of Title 11 of the U.S. Bankruptcy Code. On June 30, 2016, our Second Amended Plan of Reorganization, dated May 9, 2016, as amended (the "Plan"), became effective and we emerged from our Chapter 11 bankruptcy proceedings. For further information on our bankruptcy and emergence from bankruptcy, see "Bankruptcy."

From the time of our emergence from bankruptcy to August 29, 2017, our lead product candidate was benznidazole for the treatment of Chagas disease, a parasitic illness that can lead to serious and potentially life-threatening long-term heart, intestinal and neurological problems. On June 30, 2016, we acquired certain worldwide rights to benznidazole from Savant Neglected Diseases, LLC, or Savant, and until August 29, 2017, we were primarily focused on the development necessary to seek and obtain approval by the United States Food and Drug Administration, or FDA, for benznidazole and the subsequent commercialization, if approved. According to FDA-issued guidance, benznidazole is eligible for review pursuant to a 505(b)(2) regulatory pathway as a potential treatment for Chagas disease and, if it became the first FDA-approved treatment for Chagas disease, we would have been eligible to receive a Priority Review Voucher, or PRV.

However, on August 29, 2017, the FDA announced it had granted accelerated and conditional approval of a benznidazole therapy manufactured by Chemo Research, S.L., or Chemo, for the treatment of Chagas disease and had awarded that manufacturer a neglected tropical disease PRV. Chemo's benznidazole also received Orphan Drug designation. As a result of FDA's actions and because we no longer expected to be eligible to receive a PRV with our own benznidazole candidate for the treatment of Chagas disease, we immediately ceased development for benznidazole and began assessing a full range of options with respect to our benznidazole assets and development program. We also began an accelerated scientific assessment of emerging new possibilities for our monoclonal antibody assets and development programs, including potential prophylaxis of CAR-T-related toxicities as the first CAR-T products began receiving approval for marketing in the US.

On December 21, 2017, we reached an agreement with our Term Loan Lenders (as defined below) on a series of transactions, including the transfer and assignment of all of our assets related to benznidazole to an affiliate of one of the Term Loan Lenders, providing for, among other things, the satisfaction and extinguishment of our outstanding obligations under our Term Loan Credit Agreement (as defined below). We refer to these transactions herein as the "Restructuring Transactions." On February 27, 2018, we completed the Restructuring Transactions. For further information regarding the Restructuring Transactions, see "The Restructuring Transactions."

Since the FDA's August 29, 2017 announcement relating to benznidazole, we have shifted our primary focus toward developing our proprietary monoclonal antibody portfolio, which comprises lenzilumab and ifabotuzumab, for use in addressing serious and potentially life-threatening unmet needs in oncology. Both of these product candidates are in the early stage of development and will require substantial time, expenses, clinical development, testing, and regulatory approval prior to commercialization. Furthermore, neither of these product candidates has advanced into a pivotal registration study and it may be years before such a study is initiated, if at all.

Lenzilumab is a recombinant monoclonal antibody, or mAb, that neutralizes soluble granulocyte-macrophage colony-stimulating factor, or GM-CSF, a critical cytokine in the inflammatory cascade associated with CAR-T-related side effects and in the growth of certain hematologic malignancies, solid tumors and other serious conditions. We expect to study lenzilumab's potential in reducing adverse events associated with CAR-T therapy. We have begun to explore lenzilumab's effectiveness in preventing or ameliorating neurotoxicity associated with CAR-T therapy, and potentially CRS. In addition, we continue dosing in a Phase 1 clinical trial in patients with CMML to identify the maximum tolerated dose, or MTD, or recommended Phase 2 dose of lenzilumab and to assess lenzilumab's safety, pharmacokinetics, and clinical activity. We have fully enrolled the total 12 patients in the 200, 400 and 600 mg dose cohorts of our CMML trial, and are currently evaluating subjects in the highest dose cohort of 600 mg for continuing accrual. We also plan to review preliminary safety and efficacy results and anticipate completion of the ad hoc interim analysis in the first half of 2018. We may also use the interim data from the lenzilumab CMML Phase 1 study to determine the feasibility of rapidly commencing a Phase 1 study in JMML patients, or to explore progressing the CMML development program. JMML is a rare pediatric cancer, is associated with poor outcomes and a very high unmet medical need for which there are no FDA-approved therapies.

Ifabotuzumab is an anti-Ephrin Type-A receptor 3, or EphA3, mAb that has the potential to offer a novel approach to treating solid tumors and hematologic malignancies, serious pulmonary conditions and as a CAR construct. Ifabotuzumab, to our knowledge, is the only anti-EphA3 compound in development. EphA3 is aberrantly expressed on the surface of tumor cells and stroma cells in certain cancers. We have completed the Phase 1 dose escalation portion of a Phase 1/2 clinical trial in ifabotuzumab in multiple hematologic malignancies for which the preliminary results were published in the journal Leukemia Research in 2016. An investigator-sponsored Phase 0/1 radiolabeled imaging trial of ifabotuzumab in glioblastoma multiforme, a particularly aggressive and deadly form of brain cancer, has begun at the Olivia-Newton John Cancer Institute in Melbourne, Australia. We are currently exploring partnering opportunities to enable further development of ifabotuzumab.

Lenzilumab and ifabotuzumab were each developed with our proprietary, patent-protected Humaneered® technology, which consists of methods for converting antibodies (typically murine) into engineered, high-affinity antibodies designed for human therapeutic use, typically for chronic conditions.

Our Strategy

We are a biopharmaceutical company pursuing cutting-edge science to develop our proprietary monoclonal antibodies for immunotherapy and oncology treatments. We plan to achieve our objectives through the following strategies, which we believe reflect an innovative and responsible business model:

- ***Develop lenzilumab for the prevention and treatment of serious and potentially life-threatening CAR-T-related side effects.*** Lenzilumab is a Humaneered recombinant monoclonal antibody that neutralizes soluble GM-CSF, a critical cytokine involved in the development of serious side-effects associated with CAR-T therapy. GM-CSF is an upstream driver in the paths of multiple diseases. Recent science shows that GM-CSF is the key initiator of inflammatory side-effects, neurotoxicity and CRS, associated with groundbreaking CAR-T cancer therapy. Lenzilumab has shown a favorable safety profile to date and has been studied in more than 100 human subjects in clinical studies - one Phase 1 and two Phase 2 clinical trials - in either healthy adults or adults with various diseases. We also have completed Phase 1 and Phase 1/2 clinical trials in 76 patients with lenzilumab's chimeric precursor, KB002. The lenzilumab Phase 2 studies included patients with severe asthma and the run-in safety portion of a clinical trial in patients with rheumatoid arthritis. The severe asthma study demonstrated efficacy in patients with eosinophilic asthma, but we did not continue the programs due to strategic considerations and decisions. Pre-clinical animal model work assessing lenzilumab in CAR-T toxicities is being completed. We, in conjunction with leading key opinion leaders are designing a Phase 1b/2 study to explore lenzilumab as a prophylactic treatment to minimize neurotoxicity associated with CAR-T therapy.

- ***Development of lenzilumab for the treatment of CMML and JMML***. In July 2016, we initiated dosing in a Phase 1 clinical trial in patients with CMML to identify the maximum tolerated dose ("MTD") or recommended Phase 2 dose of lenzilumab and to assess lenzilumab's safety, pharmacokinetics, and clinical activity. Further, we may initiate a study of lenzilumab in JMML, a rare pediatric form of leukemia, where the primary treatment alternative, in patients who would qualify, would be a bone marrow stem cell transplant. We believe that both CMML and JMML would qualify as orphan conditions, and we intend to seek orphan designation for lenzilumab for both of these conditions. The mechanism of action of lenzilumab may also prove to be of value in multiple other autoimmune rare and orphan conditions. If FDA agrees that JMML is a rare pediatric disease and qualifies for priority review, we may receive a PRV if lenzilumab is approved by FDA for use in JMML. In addition, we may seek breakthrough therapy status which, if granted, would confer various benefits, including a fast track pathway, or separately we may submit for a fast track pathway if breakthrough therapy status is not granted.

- ***Partner ifabotuzumab for the treatment of rare adult and pediatric solid tumors and hematologic cancers and serious pulmonary conditions and as a CAR construct.*** Consistent with our strategic focus, we are now evaluating opportunities to partner ifabotuzumab in rare solid tumors like glioblastoma, pediatric cancers and certain rare hematologic cancer indications. Serious pulmonary conditions also could be a target, according to early data. We believe that some of these conditions would qualify for orphan designation, and ifabotuzumab may receive orphan designation for these conditions. In addition, we are exploring various other opportunities in the oncology field that would utilize ifabotuzumab as the basis of the therapy. These include developing a CAR construct, which could be used as a therapeutic CAR-T therapy; developing bi-specific antibody constructs including ifabotuzumab; utilizing ifabotuzumab as part of a radiopharmaceuticals therapeutic approach; and utilizing ifabotuzumab as part of an Antibody Drug Conjugate, or ADC. We are in discussions with various parties related to these additional opportunities which leverage ifabotuzumab as a platform monoclonal antibody.

Lenzilumab

Overview and Mechanism of Action

Lenzilumab, previously referred to as KB003, is a recombinant antibody designed to target and neutralize human GM-CSF, a central actor in leukocyte differentiation, autoimmunity and inflammation. We used our proprietary and patented Humaneered antibody development platform to develop lenzilumab. There is extensive evidence linking GM-CSF expression to serious and potentially life-threatening side-effects in CAR-T therapy. Our primary focus for lenzilumab is exploring its potential to prevent and ameliorate CAR-T-related neurotoxicity and CRS. We are also developing lenzilumab for use in patients with CMML and are assessing plans to investigate its potential use in patients with JMML. In CAR-T related side effects, GM-CSF initiates a signaling cascade of inflammation that results in the trafficking and recruitment of myeloid cells to the tumor site. These myeloid cells produce the cytokines observed in neurotoxicity and CRS, perpetuating the inflammatory cascade. Peer-reviewed publications in leading journals by well-recognized clinical experts have shown that GM-CSF is a biomarker present in patients who suffer serious neurotoxicity as a side-effect of CAR-T therapy. The GM-CSF receptor is expressed on myeloblasts and other progenitor cells, and binding results in differentiation and maturation into monocytes. GM-CSF is an important part of an inflammatory cascade that stimulates white blood cells (granulocytes, including eosinophils, neutrophils, and macrophages) and maintains them in an active state during infection. However, excessive GM-CSF may be involved in tissue damage associated with inflammatory diseases. The results of anti-GM-CSF in ex-vivo studies suggest lenzilumab has potential in preventing neurotoxicity associated with CAR-T therapy and certain oncology conditions, including CMML and JMML, as well as asthma, RA and other arthritides.

Lenzilumab is a Humaneered version of KB002, a low picomolar affinity, novel chimeric mAb that we licensed from Ludwig Institute for Cancer Research, or LICR. Data from our single-dose, Phase 1 and Phase 1/2 clinical trials with KB002 supported our clinical trials with lenzilumab. In these studies, KB002 appeared to be well tolerated. Lenzilumab targets the same binding site as KB002 and has been shown to be functionally similar and appeared generally safe in previous clinical trials. See "Intellectual Property" *Ludwig Institute for Cancer Research* for further information on our license with LICR.

Development Program

We believe that a strong scientific rationale exists for lenzilumab to play an important role in making CAR-T therapy safer, more effective and more routine. CAR-T cell therapy is currently limited by the risk of life-threatening neurotoxicity and CRS. Both Kymriah® and Yescarta® carry black box warnings in their labels for neurotoxicity and CRS. In the case of more severe neurotoxicity and/or CRS, patients may need to be treated on the Intensive Care Unit, or ICU, in the hospital. Because of the seriousness of these cases, which can affect between approximately 30 – 50 percent of patients receiving CAR-T, physicians planning to administer CAR-T may have to reserve an ICU bed for patients prior to treatment. This can create a significant bottleneck in relation to the hospital's ability to administer CAR-T. Side effects associated with CAR-T may limit the number of patients that can be treated with CAR-T and also the dosage that can be safely administered affecting efficacy. We believe higher doses of CAR-T may be more efficacious but can also be associated with a greater risk of side-effects.

Actemra (tocilizumab) is an IL-6 receptor antagonist that was recently approved by the FDA for the treatment of severe life-threatening CRS based on a retrospective analysis of pooled outcome data from CAR-T clinical trials of 45 pediatric and adult patients treated with Actemra with or without high-dose corticosteroids. There were no prospective, randomized controlled trials conducted to evaluate the safety and efficacy of tocilizumab for the treatment of severe CRS. Moreover, clinical experience has proven that tocilizumab is not effective for the treatment of neurotoxicity and cases of CRS refractory to tocilizumab have been reported underscoring the need for additional, more effective management strategies to prevent the onset of CAR-T induced neurotoxicity and CRS. It is important to note that tocilizumab is not approved for the prevention of CRS nor for the prevention or treatment of neurotoxicity. Studies have shown that administering tocilizumab prophylactically increases the number of patients who suffer serious neurotoxicity compared with those patients not receiving tocilizumab prophylactically. Further, tocilizumab is not approved for the treatment of mild or moderate cases of CRS.

Lenzilumab is in development to specifically address this unmet need and robust scientific rationale exists to support GM-CSF neutralization as a validated target in this setting. In December 2017, we held a scientific advisory board with leading key opinion leaders in the CAR-T field to validate the scientific rationale of studying lenzilumab's anti-GM-CSF mechanism to stop CAR-T-related toxicity. Based on feedback received from the advisory board, we created our lenzilumab development plan to study prevention of the onset of CAR-T-induced neurotoxicity while maintaining or improving CAR-T expansion, persistence and anti-tumor response and potentially reducing the need or duration for ICU stay. To that end, we started preclinical work using validated CRS animal models at the Mayo Clinic. In addition we have begun work with leading key opinion leaders, including MD Anderson Cancer Center, to advance lenzilumab into phase 1b/2 trials for the prevention of neurotoxicity and potentially CRS associated with CAR-T therapy. We expect this trial to start in the summer of 2018. We have benchmarked the studies undertaken in the CAR-T space and regulatory strategies employed and intend to leverage this knowledge in our clinical development and regulatory plans.

We also believe lenzilumab has potential as a therapy for CMML, a rare form of hematologic cancer with no FDA-approved treatment options and a three-year overall survival rate of 20% and median overall survival of 20 months, and JMML, a rare pediatric form of leukemia. CMML is a clonal stem cell disorder of which monocytosis is a key feature. CMML has features of MDS, including abnormal, dysplastic bone marrow cells; cytopenia; transfusion dependence; and myeloproliferative neoplasms, including overproduction of white blood cells, organomegaly such as splenomegaly and hepatomegaly and extramedullary disease. Approximately 15% to 20% of CMML cases progress to acute myeloid leukemia, or AML. According to the American Cancer Society, approximately 1,100 individuals in the US are newly diagnosed annually with CMML, with the majority of these new patients being age 60 or older. These patients are typically unsuitable for stem cell transplants. Preclinical studies have shown lenzilumab can cause apoptosis in CMML cells by depriving them of GM-CSF. In July 2016, we initiated dosing in a Phase 1 clinical trial in patients with CMML to identify the MTD or recommended Phase 2 dose of lenzilumab and to assess lenzilumab's safety, pharmacokinetics, and clinical activity. The study has fully enrolled 12 patients. Depending on the results of the CMML study, we also intend to investigate the potential treatment of JMML, a rarer disease, with lenzilumab. There are approximately 420 new cases of JMML annually in the US and the disease mostly affects children aged four and younger. We believe that lenzilumab may be eligible for a rare pediatric disease priority review voucher if approved for JMML. We also believe lenzilumab in CMML or JMML could qualify for orphan drug designation and potentially several other FDA incentives.

An IND for a Phase 1/2 CMML monotherapy study of lenzilumab is in effect. In July 2016, we began to enroll patients in a multicenter, open-label, repeat-dose, Phase 1 study consisting of a dose escalation phase and a dose expansion phase to evaluate the safety, pharmacokinetics, and clinical activity of lenzilumab in patients with previously-treated CMML who are no longer responsive to previous treatment. The primary endpoint of this study is the safety of lenzilumab, as measured by the number of participants with adverse events, at various doses in order to determine a recommended Phase 2 dose. The secondary endpoint is the clinical activity of lenzilumab, as measured by changes in spleen size, blood and bone marrow measurements of disease, clinical symptoms and other measures.

Previous clinical studies of lenzilumab include a repeat-dose, Phase 2 clinical trial of lenzilumab in RA with the inclusion of a safety run-in portion. On completing the safety run-in portion of this trial, which showed lenzilumab to be well tolerated with no clinically significant adverse events, we reassessed the increasingly competitive RA market and chose to redirect our study of lenzilumab to severe asthma patients inadequately controlled by corticosteroids. Results from a subsequent randomized, double-blinded, placebo-controlled, repeat dose, intravenous Phase 2 clinical trial of asthma, revealed that the primary endpoint was not met, although a significant effect was shown in certain pre-specified subgroups, such as those with eosinophilic asthma. As a result of a strategic shift by the company, we terminated development of lenzilumab in severe asthma.

Ifabotuzumab

Ifabotuzumab is a Humaneered mAb in which the carbohydrate chains lack fucose, thereby enhancing the targeted cell-killing activity of the antibody. In 2006, we entered into a license agreement with LICR pursuant to which LICR granted to us certain exclusive rights to the ifabotuzumab prototype and EphA3 intellectual property.

Ifabotuzumab binds to the EphA3 receptor, which plays an important role in cell positioning and tissue organization during fetal development, but is not thought to play a significant role in healthy adults. EphA3 is a tyrosine kinase receptor aberrantly expressed on the tumor cell surface in a number of hematologic malignancies and solid tumors, and is also expressed on the stem cell compartment. This compartment includes malignant stem cells, the vasculature that feeds them, and the stromal cells that protect them. EphA3 expression has been documented in a number of tumor types, including AML, chronic myelogenous leukemia, chronic lymphocytic leukemia, MDS, myelofibrosis, multiple myeloma, melanoma, breast cancer, non-small cell lung cancer, colorectal cancer, gastric cancer, renal cancer, glioblastoma, and prostate cancer. Publications related to certain cancers have indicated that EphA3 tumor cell expression correlates with cancer growth and a poor prognosis. EphA3 is overexpressed in GBM and, in particular, in the most aggressive mesenchymal subtype. Importantly, EphA3 is highly expressed on the tumor-initiating cell population in glioma and appears critically involved in maintaining tumor cells in a less differentiated state by modulating mitogen-activated protein kinase signaling. EphA3 knockdown or depletion of EphA3-positive tumor cells may reduce tumorigenic potential to a degree comparable to treatment with a therapeutic radiolabelled EphA3-specific monoclonal antibody. Thus, EphA3 may emerge as a functional, targetable receptor in GBM as well as certain lymphomas and leukemias.

Anti-EphA3 treatment has shown encouraging preclinical results in multiple experiment types, including patient primary tumor cell assays, colony forming assays, and xenograft mouse models. Upon binding to EphA3, ifabotuzumab causes cell killing to occur either through antibody-dependent, cell-mediated cytotoxicity, or ADCC, or through direct apoptosis, and in the case of tumor neovasculature, through cell rounding and blood vessel disruption. Given the differential expression pattern of EphA3, ifabotuzumab may have the potential to kill cancer cells and the tumor stem cell microenvironment, providing for long-term responses while sparing normal cells. By developing ifabotuzumab as the backbone for a next generation CAR construct, we may have the ability to target both the tumor and tumor vasculature in a novel manner and build on the experience with current second generation CD19 CAR-T cell therapies. An investigator-sponsored Phase 0/1 radiolabeled imaging trial of ifabotuzumab in glioblastoma multiforme, a particularly aggressive and deadly form of brain cancer, has begun at the Olivia-Newton John Cancer Institute in Melbourne, Australia. On December 5, 2017, the first patient received ifabotuzumab in a trial that, according to the investigators, will seek to confirm the safety of ifabotuzumab and potentially determine the best dose to effectively penetrate brain tumors. Currently, three patients have received ifabotuzumab in this study and the investigators expect approximately 12 patients to participate in the trial, for which eligibility criteria are recurrent GBM and receipt of only one type of chemotherapy for disease recurrence. Consistent with our new strategic focus, we are now evaluating wider opportunities to partner ifabotuzumab. We are in early discussions with separate and various parties to leverage the unique features of ifabotuzumab to:

- Construct a CAR product to potentially be used as CAR-T therapy;
- Develop bi-specific antibodies; and
- Form part of a radiopharmaceutical therapeutic.

Prior to our bankruptcy, we were conducting a Phase 1/2 trial of ifabotuzumab in multiple hematologic malignancies. The most common adverse event attributed to ifabotuzumab in our previous trial was infusion reactions (chills, fever, nausea, hypertension, and rapid heart rate) which is an expected safety finding based on the mechanism of action. The majority of infusion reactions were mild-to-moderate in severity and resolved with temporary stoppage of infusion and/or use of medications to treat symptoms. In 2014, we completed the Phase 1 dose escalation portion of our study, primarily treating patients with AML as well as patients with MDS and myelofibrosis. We suspended enrollment in that study due to the bankruptcy filing in December 2015.

Our Humaneered Technology

Our proprietary and patented Humaneered technology platform is a method for converting existing antibodies (typically murine) into engineered, high-affinity human antibodies designed for therapeutic use, particularly for chronic conditions. We have developed or in-licensed targets or research (mouse) antibodies, typically from academic institutions, and then applied our Humaneered technology to them. Lenzilumab and ifabotuzumab are both Humaneered antibodies or antibody fragments. Together, our Humaneered antibodies have been tested clinically in more than 200 patients with no evidence of serious immunogenicity. We believe our Humaneered antibodies are closer to human antibodies than chimeric or conventionally humanized antibodies, are prone to being rejected less and may bind better to the target. Specifically, our Humaneered technology generates an antibody from an existing antibody with the required specificity as a starting point and, we believe, provides the following:

- retention of identical target epitope specificity of the starting antibody and frequent generation of higher affinity antibodies;
- very-near-to-human germ line sequence, which we believe means our Humaneered antibodies are less likely to induce an inappropriate immune response in broad patient populations when used chronically than chimeric or conventionally humanized antibodies, which has proven to be the case in clinical studies;

- antibodies with physiochemical properties that facilitate process development and formulation (lack of aggregation at high concentration);
- high solubility;
- high antibody expression yields; and
- an optimized antibody processing time of three to six months.

In March 2007, we granted Novartis a non-exclusive license to our proprietary Humaneered technology after applying this technology to several antibodies for them. Under the license agreement, Novartis is able to develop antibodies to create its own therapeutics. In each case, we demonstrated the robustness and versatility of the technology by creating Humaneered antibodies with increased affinity. As we are focused on progressing our current portfolio of antibodies through clinical development and out-licensing, we are not currently dedicating additional resources to the research of additional Humaneered antibodies.

Intellectual Property

Licensing and Collaborations

Savant Agreement

On June 30, 2016, we entered into an Agreement for the Manufacture, Development and Commercialization of Benznidazole for Human Use, or the MDC Agreement, with Savant, pursuant to which we acquired certain worldwide rights relating to benznidazole, including certain regulatory and non-intellectual property assets related to benznidazole , any product containing benznidazole and an exclusive license for certain intellectual property assets, including know-how and processes, relating to benznidazole. Savant retains the right to use the licensed intellectual property for veterinary uses. The MDC Agreement provides that we may jointly conduct development activities with Savant with respect to any product containing benznidazole, while we will be solely responsible for commercializing the product. As described above, we are no longer performing any work in respect of benznidazole.

As required by the MDC Agreement, we made payments to Savant totaling $2.7 million, consisting of the remaining portion of an initial payment (excluding a previously paid deposit of $0.5 million) in the amount of $2.5 million, an initial monthly joint development program cost payment of $0.1 million, and reimbursement of $0.1 million of Savant's legal fees. The MDC Agreement provided for regulatory and other milestone payments of up to $21 million if we received approval from FDA and from other non-US regulatory agencies and certain other contingent payments. Additionally, we would pay Savant royalties in the mid-teens on any net sales of any benznidazole product on a product-by-product and country-by-country basis, which royalty will be reduced to the high single digits in the United States if a PRV was not granted subsequent to regulatory approval of any benznidazole product. The MDC Agreement also provided that Savant is entitled to a portion of the amount we would receive upon the sale, if any, of a PRV regarding any benznidazole product. In addition, we also entered into a security agreement pursuant to which we granted Savant a continuing senior security interest in the assets and rights acquired by us pursuant to the MDC Agreement and certain future assets developed from those acquired assets. On August 29, 2017 we ceased development for benznidazole and do not anticipate further obligations under the MDC.

In July 2017, we commenced litigation against Savant alleging that Savant breached the MDC Agreement and seeking a declaratory judgement. Savant has asserted counterclaims for breaches of contract under the MDC Agreement and the Security Agreement. The dispute primarily concerns our right under the MDC Agreement to offset certain costs incurred by us in excess of the agreed upon budget against payments due Savant. The aggregate cost overages as of December 31, 2017 that we assert are Savant's responsibility total approximately $3.4 million, net of a $0.5 million deductible. We assert that we are entitled to offset $2 million in milestone payments due Savant against the cost overages, such that as of December 31, 2017, Savant owed us approximately $1.4 million in cost overages.

The Ludwig Institute for Cancer Research

In May 2004, we entered into a license agreement with the Ludwig Institute for Cancer Research, or LICR, pursuant to which LICR granted to us an exclusive license under intellectual property rights and materials related to chimeric anti-GM-CSF antibodies that formed the basis for the lenzilumab development program. Under the agreement, we were granted an exclusive license to develop antibodies related to LICR's antibodies against GM-CSF. We are responsible for using commercially reasonable efforts to research, develop, and sell lenzilumab. We pay LICR a quarterly license fee and are obligated to pay to LICR a royalty from 1.5% to 3% of net sales of licensed products, subject to certain potential offsets and deductions. Our royalty obligation applies on a country-by-country and licensed product-by-licensed product basis, and will begin on the first commercial sale of a licensed product in a given country and end on the later of the expiration of the last to expire patent covering a licensed product in a given country (which in the United States, is currently expected in 2024) or 10 years from first commercial sale of such licensed product in the country. We must also pay to LICR a certain percentage of sublicensing revenue received by us. Aggregate payments made to LICR under this license through December 31, 2017 amounted to $1.7 million.

Other Material License Agreements

Novartis

In April 2007, we entered into an agreement with Novartis granting a non-exclusive license to our proprietary Humaneered technology for use at Novartis' research sites to develop human antibodies for therapeutic indications. Under the agreement, Novartis was excluded from using the technology against certain targets until March 2012. In accordance with the terms of the agreement, Novartis paid us $30 million and we transferred the know-how related to making Humaneered antibodies to enable Novartis to internally make its own antibodies. This agreement will remain in effect until the expiration of the last to expire licensed patent, which is currently expected to expire in 2025 in the United States.

LICR and ifabotuzumab

In 2006, we entered into a license agreement with LICR pursuant to which LICR granted to us certain exclusive rights to the ifabotuzumab prototype and EphA3-related intellectual property. Under the agreement, we obtained rights to develop and commercialize products made through use of licensed patents and any improvements thereto, including human or Humaneered antibodies that bind to or modulate EphA3. We paid LICR an upfront option fee of $0.05 million and a further $0.05 million upon our exercise of the option for the exclusive license outlined above. We are responsible for contingent milestone payments of less than $2.5 million and royalties of 3% of net sales subject to certain potential offsets and deductions. In addition, we are obligated to pay to LICR a percentage of certain payments we receive from any sublicensee in consideration for a sublicense. Our royalty obligation exists on a country-by-country and licensed product-by-licensed product basis, which will begin on the first commercial sale and end on the later of the expiration of the last to expire patent covering such licensed product in such country, which in the United States is currently expected in 2031, or 10 years from first commercial sale of such licensed product in such country. Aggregate payments made to LICR under this license through December 31, 2017 amounted to $0.6 million.

BioWa and Lonza

In October 2010, we entered into a license agreement with BioWa, Inc., or BioWa, and Lonza Sales AG, or Lonza, pursuant to which BioWa and Lonza granted us a non-exclusive, royalty-bearing, sub-licensable license under certain know-how and patents related to antibody expression and antibody-dependent cellular cytotoxicity enhancing technology using BioWa and Lonza's Potelligent® CHOK1SV technology. This technology is used to enhance the cell killing capabilities of antibodies and is currently used by us in connection with our development of ifabotuzumab. Under this agreement, we owe annual license fees, milestone payments in connection with certain regulatory and sales milestones and royalties in the low single digits on net sales of products developed under the agreement. The agreement expires upon the expiration of royalty payment obligations under the agreement, is terminable at will by us upon written notice, is terminable by BioWa and Lonza if we challenge or otherwise oppose any licensed patents under the agreement, and is terminable by either party upon the occurrence of an uncured material breach or insolvency. Three of the United States patents that we license from BioWa, Inc. are the subject of ongoing litigation in U.S. District Court for the Northern District of California, in which BioWa alleges infringement of its patents. The defendant in that case has asserted, among its counterclaims, that the patents are invalid. The defendants also petitioned the United States Patent and Trademark Office for *inter partes review* on the validity of the same three patents, but that request has been denied. The litigation continues with a trial set to begin in June 2018.

Patents and Trade Secrets

We use a combination of patent, trade secret and other intellectual property protections to protect our product candidates. We will be able to protect our product candidates from unauthorized use by third parties only to the extent they are covered by valid and enforceable patents or to the extent our technology is effectively maintained as trade secrets. Patent and trade secrets are an important element of our business. Our success will depend in part on our ability to obtain, maintain, defend and enforce patent rights for and to extend the life of patents covering lenzilumab and ifabotuzumab and our Humaneered technology, to preserve trade secrets and proprietary know how, and to operate without infringing the patents and proprietary rights of third parties. We actively seek patent protection, if available, in the United States and select foreign countries for the technology we develop. We have 60 registered patents, including 18 registered in the U.S. and 42 registered in foreign countries. Of the 60 registered patents, 41 are owned by us, 5 are owned jointly with a third party, and 17 are exclusively licensed from a third party. We also have 17 patent applications pending globally.

Using our Humaneered technology, we developed and own a composition of matter patent covering lenzilumab and related anti-GM CSF antibodies that provide patent protection through April 2029 and have additional pending patents in the United States and a number of foreign countries covering various methods of treatment, including in the CAR-T space. We also have current and pending patent applications in the United States and selected foreign countries for anti-EphA3 antibodies and their use, and we developed and own an issued U.S. composition of matter patent covering ifabotuzumab and related anti-EphA3 antibodies, which is currently expected to expire in 2030. The patents to our Humaneered technology cover methods of producing human antibodies that are very specific for target antigens using only a small region from mouse antibodies.

We cannot be certain that any of our pending patent applications, or those of our licensors, will result in issued patents. In addition, because the patent positions of biopharmaceutical companies are highly uncertain and involve complex legal and factual questions, the patents we own and license, or any further patents we may own or license, may not prevent other companies from developing similar or therapeutically equivalent products. Patents also will not protect our products if competitors devise ways of making or using these products without legally infringing our patents. In recent years, several companies have been extremely aggressive in challenging patents covering pharmaceutical products, and the challenges have often been successful. We cannot be assured that our patents will not be challenged by third parties or that we will be successful in any defense we undertake. Failure to successfully defend a patent challenge could materially and adversely affect our business.

In addition, changes in patent laws, rules or regulations or in their interpretations by the courts may materially diminish the value of our intellectual property or narrow the scope of our patent protection, which could have a material adverse effect on our business and financial condition.

We also rely on trade secrets, technical know-how and continuing innovation to develop and maintain our competitive position. We seek to protect our proprietary information by requiring our employees, consultants, contractors, outside scientific collaborators and other advisors to execute non-disclosure and confidentiality agreements and our employees to execute assignment of invention agreements to us on commencement of their employment. Agreements with our employees also prevent them from bringing any proprietary rights of third parties to us. We also require confidentiality or material transfer agreements from third parties that receive our confidential data or materials.

Research and Development

We have previously dedicated a significant portion of our resources to our efforts to develop our product candidates, particularly lenzilumab and our former lead product candidate, benznidazole. We incurred research and development expenses of $11.2 million and $10.4 million during the years ended December 31, 2017 and 2016, respectively. We anticipate that a significant portion of our operating expenses will continue to be related to clinical development in 2018 as we focus on the development of lenzilumab and ifabotuzumab. We do not currently plan to devote significant or any resources to pure research activities.

Manufacturing

We outsource basic development activities, including the development of formulation prototypes, and have adopted a manufacturing strategy of contracting with third parties for the manufacture of drug substance and product. Additional contract manufacturers are used to fill, label, package, and distribute investigational drug products. This allows us to maintain a more flexible infrastructure while focusing our expertise on developing our products.

Sales and Marketing

We do not currently have the sales and marketing infrastructure in place that would be necessary to sell and market products. As our drug candidates progress, while we may build the infrastructure that would be needed to successfully market and sell any successful drug candidate on our own, we currently anticipate seeking strategic alliances and partnerships with third parties. The establishment of a sales and marketing operation can be expensive, complicated and time consuming and could delay any product candidate launch.

Competition

We compete in an industry characterized by rapidly advancing technologies, intense competition, a changing regulatory and legislative landscape and a strong emphasis on the benefits of intellectual property protection and regulatory exclusivities. Our competitors include pharmaceutical companies, other biotechnology companies, academic institutions, government agencies and other private and public research organizations. We compete with these parties for therapies for neglected and rare diseases and in recruiting highly qualified personnel. Our product candidates, if successfully developed and approved, may compete with established therapies, with new treatments that may be introduced by our competitors, including competitors relying to a large extent on our drug approvals or on our biologics approvals, or with generic copies of our product approved by FDA under an abbreviated new drug application, or ANDA, referencing our drug products. Many of our potential competitors have substantially greater scientific, research, and product development capabilities, as well as greater financial, marketing, sales and human resources capabilities than we do.

In addition, many specialized biotechnology firms have formed collaborations with large, established companies to support the research, development and commercialization of products that may be competitive with ours. Accordingly, our competitors may be more successful with respect to their products than we may be in developing, commercializing, and achieving widespread market acceptance for our products. In addition, our competitors' products may be more effective or more effectively marketed and sold than any treatment we or our development partners may commercialize and may render our product candidates obsolete or non-competitive before we can recover the expenses related to developing and supporting the commercialization of any of our product candidates. Developments by competitors may render our product candidates obsolete or noncompetitive. After one of our product candidates is approved, FDA may also approve a generic version with the same dosage form, safety, strength, route of administration, quality, performance characteristics and intended use as our product. These generic equivalents would be less costly to bring to market and could generally be offered at lower prices, thereby limiting our ability to gain or retain market share.

The acquisition or licensing of pharmaceutical products is also very competitive, and a number of more established companies, which have acknowledged strategies to in-license or acquire products, may have competitive advantages as may other emerging companies taking similar or different approaches to product acquisitions. The more established companies may have a competitive advantage over us due to their size, cash flows, institutional experience and historical corporate reputation.

Lenzilumab and CAR-T-related toxicities competition

Two significant ongoing concerns for clinicians and FDA regarding CAR-T therapy are neurologic toxicity (NT) and CRS. Both Kymriah and Yescarta carry black box warnings in their labels for NT and CRS.

There are no approved therapies for the prevention of CAR-T-induced NT and CRS. The CAR-T-cell-therapy-associated TOXicity (CARTOX) Working Group of the FDA currently recommends intensive monitoring, accurate grading and aggressive supportive care, with anti-IL-6 therapy (Genentech's Actemra, tocilizumab, IL-6-receptor monoclonal antibody that blocks IL-6) and/or corticosteroids. These treatments are reserved for severe cases of CRS to reduce the morbidity and mortality associated with CAR-T cell therapy. Since corticosteroids suppress T-cell function and/or induce T-cell apoptosis, they limit the effectiveness of CAR-T cell therapy; thus use of corticosteroids is limited to only severe cases of CRS refractory to Actemra and severe cases of NT without concurrent CRS. Actemra has been found to be not effective in the prevention or management of CAR-T-induced NT. In fact, serum IL-6 levels have been shown to increase shortly after administration of Actemra which may increase passive diffusion of IL-6 into the CNS and thereby may increase the risk of NT.

FDA approval of Actemra, with or without high dose corticosteroids, for the management of severe cases of CRS was announced in conjunction with approval of Kymriah solely as part of its Risk Evaluation and Mitigation Strategy (REMS) program based on a retrospective analysis of 45 patients across CAR-T clinical trials despite the lack of an IND, NDA or conduct of a prospective trial of Actemra in this setting. Tocilizumab is not approved for the prevention of CRS nor for the prevention or treatment of NT. Tocilizumab is also not approved for the treatment of mild or moderate cases of CRS.

There are no alternative options, to our knowledge, in clinical stage development at this time for the prevention or management of these CAR-T-induced toxicities. Several experimental approaches are in development in an effort to bring forward next-generation, potentially safer CAR constructs, including introducing suicide genes into CAR-T cells using herpes simplex virus thymidine kinase (HSV-TK) or inducible caspase-9 (iCasp9) genes with "ON / OFF" switches, RNA-guided DNA targeting technology such as CRISPR/Cas9 system or other epitope-based / gene-editing technology. However, these are all still in early stage development.

Lenzilumab and CMML/JMML Competition

Stem cell transplant is the only current way to treat and potentially cure patients with CMML or JMML. Typically, adult patients with CMML who are unsuitable for stem cell transplants are frequently treated with injectable formulations of Celgene's Vidaza® (azacitidine) or Otsuka America Pharmaceutical's Dacogen® (decitabine), both of which are available as generic formulations. Given the potential of lenzilumab to also improve constitutional symptoms of patients with CMML or JMML, combination therapy with azacitidine or decitabine may be warranted. Some patients with high white blood cell counts are treated with hydroxyurea, which was introduced in the 1960s and is available in generic formulations and under the brand names Droxia® and Hydrea®. There are also several compounds in various stages of development for the treatment of CMML alone or in combination with azacitidine or decitabine, including Celgene's CC-486 (oral azacitidine) and Revlimid® (lenalidomide), Novartis and Glaxosmithkline's Promacta® (eltrombopag), Novartis' Farydak® (panobinostat), Astex Pharmaceutical's ASTX727, Incyte Corporation and Novartis' Jafaki® (ruxolitinib), Millenium Pharmaceuticals's pevonedistat, Stemline Therapeutics' SL-401 and Kura Oncology's tipifarnib, amongst others.

Ifabotuzumab Competition

Glioblastoma (GBM) is the most common primary brain cancer. Standard treatment involves surgical resection, followed by radiation and temozolomide chemotherapy. Avastin®, lomustine and carmustine are also used to treat recurrent brain cancer. Numerous drugs are under development for GBM and other brain tumors. Therapy is rarely curative due to the infiltrative nature of these tumors and their resistance to radiation and chemotherapy. Immunotherapy with genetically modified T cells expressing chimeric antigen receptors (CARs) targeting interleukin IL-13Rα2, epidermal growth factor receptor variant III (EGFRvIII), or human epidermal growth factor receptor 2 (HER2) has shown promise for the treatment of gliomas in preclinical models. But targeting IL-13Rα2 and EGFRvIII is associated with the development of antigen loss variants.

Government Regulation

Drug Development and Approval in the U.S.

As a biopharmaceutical company operating in the United States, we are subject to extensive regulation by FDA and by other federal, state, and local regulatory agencies. FDA regulates our products under the United States Federal Food and Cosmetic Act, or FDCA, the Public Health Service Act, or the PHSA, and their implementing regulations. Under the FDCA, new drugs marketed in the United States generally must be FDA-approved under an NDA. Under the PHSA, an FDA-approved BLA is required to market a biological product, or biologic, in the United States. These laws and regulations set forth, among other things, requirements for preclinical and clinical testing, development, approval, labeling, manufacture, storage, record keeping, reporting, distribution, import, export, advertising, and promotion of our products and product candidates.

Applications Relying on the Applicant's Clinical Data

The approval process for a full NDA under Section 505(b)(1) of the FDCA, containing full reports of investigations of safety and effectiveness for the product, and BLAs under the PHSA require the conduct of extensive studies and the submission of large amounts of data by the applicant. The drug development process for these applications will generally include the following phases:

Preclinical Testing. Before testing any compound in human subjects in the United States, a company must generate extensive preclinical data. Preclinical testing generally includes laboratory evaluation of product chemistry and formulation, as well as toxicological and pharmacological studies in several animal species to assess the quality and safety of the product. Animal studies must be performed in compliance with FDA's Good Laboratory Practice, or GLP, regulations and the United States Department of Agriculture's Animal Welfare Act.

IND Application. Human clinical trials in the United States cannot commence until an IND application is submitted and becomes effective. A company must submit preclinical testing results to FDA as part of the IND, and FDA must evaluate whether there is an adequate basis for testing the drug in initial clinical studies in human volunteers. Unless FDA raises concerns, the IND becomes effective 30 days following its receipt by FDA. Once human clinical trials have commenced, FDA may stop the clinical trials by placing them on "clinical hold" because of concerns about the safety of the product being tested, or for other reasons.

Clinical Trials. Clinical trials involve the administration of the drug to healthy human volunteers or to patients, under the supervision of a qualified investigator. The conduct of clinical trials is subject to extensive regulation, including compliance with FDA's bioresearch monitoring regulations and Good Clinical Practice, or GCP, requirements, which establish standards for conducting, recording data from, and reporting the results of clinical trials. GCP requirements are intended to assure that the data and reported results are credible and accurate, and that the rights, safety, and well-being of study participants are protected.

Clinical trials must be conducted under protocols that detail the study objectives, parameters for monitoring safety, and the efficacy criteria, if any, to be evaluated. Each protocol is submitted to FDA as part of the IND. In addition, each clinical trial must be reviewed, approved, and conducted under the auspices of an Institutional Review Board, or IRB, at the institution conducting the clinical trial. Companies sponsoring the clinical trials, investigators, and IRBs also must comply with regulations and guidelines for obtaining informed consent from the study subjects, complying with the protocol and investigational plan, adequately monitoring the clinical trial, and timely reporting of adverse events. Foreign studies conducted under an IND must meet the same requirements that apply to studies being conducted in the United States. Data from a foreign study not conducted under an IND may be submitted in support of an NDA or BLA if the study was conducted in accordance with GCP and FDA is able to validate the data. A study sponsor is required to publicly post certain details about active clinical trials and clinical trial results on the government website clinicaltrials.gov.

Human clinical trials are typically conducted in three sequential phases, although the phases may overlap with one another:

- Phase 1 clinical trials include the initial administration of the investigational drug to humans, typically to a small group of healthy human subjects, but occasionally to a group of patients with the targeted disease or disorder. Phase 1 clinical trials generally are intended to determine the metabolism and pharmacologic actions of the drug, the side effects associated with increasing doses, and, if possible, to gain early evidence of effectiveness.

- Phase 2 clinical trials generally are controlled studies that involve a relatively small sample of the intended patient population, and are designed to develop data regarding the product's effectiveness, to determine dose response and the optimal dose range, and to gather additional information relating to safety and potential adverse effects.

- Phase 3 clinical trials are conducted after preliminary evidence of effectiveness has been obtained and are intended to gather additional information about safety and effectiveness necessary to evaluate the drug's overall risk-benefit profile, and to provide a basis for physician labeling. Generally, Phase 3 clinical development programs consist of expanded, large-scale studies of patients with the target disease or disorder to obtain statistical evidence of the efficacy and safety of the drug at the proposed dosing regimen, or with the safety, purity, and potency of a biological product.

The sponsoring company, FDA, or the IRB may suspend or terminate a clinical trial at any time on various grounds, including a finding that the subjects are being exposed to an unacceptable health risk. Further, success in early-stage clinical trials does not assure success in later-stage clinical trials. Data obtained from clinical activities are not always conclusive and may be subject to alternative interpretations that could delay, limit, or prevent regulatory approval.

NDA/BLA Submission and Review

After completing clinical testing of an investigational drug or biologic product, a sponsor must prepare and submit an NDA or BLA for review and approval by FDA. NDAs and BLAs are comprehensive, multi-volume applications that include, among other things, the results of preclinical and clinical studies, information about the product's composition, and the sponsor's plans for manufacturing, packaging, and labeling the product. When an NDA or BLA is submitted, FDA conducts a preliminary review to determine whether the application is sufficiently complete to be accepted for filing. If it is not, FDA may refuse to file the application and may request additional information, in which case the application must be resubmitted with the supplemental information and review of the application is delayed.

FDA performance goals, which are target dates and other aspirational measures of agency performance to which the agency, Congressional representatives, and industry agree through negotiations that occur every five years, generally provide for action on NDA and BLA applications within 10 months of submission or 10 months from acceptance for filing for an NDA involving a new molecular entity or for an original BLA. FDA is not expected to meet those target dates for all applications, however, and the deadline may be extended in certain circumstances, such as when the applicant submits new data late in the review period. In practice, the review process is often significantly extended by FDA requests for additional information or clarification. In some circumstances, FDA can expedite the review of new drugs and biologics deemed to qualify for priority review, such as those intended to treat serious or life threatening conditions that demonstrate the potential to address unmet medical needs. In those cases, the targeted action date is six months from submission, or for drugs constituting new molecular entities and biologics constituting original biological products, six months from the date that FDA accepts the application for filing.

As part of its review, FDA may refer an NDA or BLA to an advisory committee for evaluation and a recommendation as to whether the application should be approved. Although FDA is not bound by the recommendation of an advisory committee, the agency usually has followed such recommendations. FDA may also determine that a Risk Evaluation and Mitigation Strategy, or REMS, is necessary to ensure that the benefits of a new product outweigh its risks, and that the product can therefore be approved. A REMS may include various elements, ranging from a medication guide or patient package insert to limitations on who may prescribe or dispense the drug, depending on what FDA considers necessary for the safe use of the drug. Under the Pediatric Research Equity Act, NDAs and BLAs must include an assessment, generally based on clinical study data, of the safety and effectiveness of the subject drug or biological product in relevant pediatric populations, unless the requirement is waived or deferred. Receiving orphan drug designation from FDA is one situation where such a requirement may be waived.

After review of an NDA or BLA, FDA may determine that the product cannot be approved, or may determine that it can only be approved if the applicant cures deficiencies in the application, in which case the agency endeavors to provide the applicant with a complete list of the deficiencies in correspondence known as a Complete Response Letter, or CRL. A CRL may request additional information, including additional preclinical or clinical data. Even if such additional information and data are submitted, FDA may decide that the NDA still does not meet the standards for approval. Data from clinical trials are not always conclusive and FDA may interpret data differently than the sponsor interprets them. Additionally, as a condition of approval, FDA may impose restrictions that could affect the commercial success of a drug or require post-approval commitments, including the completion within a specified time period of additional clinical studies, which often are referred to as “Phase 4” studies or “post-marketing requirements.” Obtaining regulatory approval often takes a number of years, involves the expenditure of substantial resources, and depends on a number of factors, including the severity of the disease in question, the availability of alternative treatments, and the risks and benefits demonstrated in clinical trials.

Post-approval modifications to the drug or biologic product, such as changes in indications, labeling, or manufacturing processes or facilities, may require a sponsor to develop additional data or conduct additional preclinical or clinical trials. The proposed changes would need to be submitted in a new or supplemental NDA or BLA, which would then require FDA approval.

Regulatory Exclusivities

Biologics Price Competition and Innovation Act

In 2010, the Biologics Price Competition and Innovation Act, or BPCIA, was enacted, creating an abbreviated approval pathway for biologic products that are biosimilar to, and possibly interchangeable with, reference biological products licensed under a BLA. The BPCIA also provides innovator manufacturers of original reference biological products 12 years of exclusive use before biosimilar versions can be licensed in the United States. This means that FDA may not approve an application for a biosimilar version of a reference biological product until 12 years after the date of approval of the reference biological product (with a potential six-month extension of exclusivity if certain pediatric studies are conducted and the results reported to FDA), although a biosimilar application may be submitted four years after the date of licensure of the reference biological product. Additionally, the BPCIA establishes procedures by which the biosimilar applicant must provide information about its application and product to the reference product sponsor, and by which information about potentially relevant patents is shared and litigation over patents may proceed in advance of approval, although the interpretation of those procedures has been subject to litigation and appears to continue to evolve. The BPCIA also provides a period of exclusivity for the first biosimilar to be determined by FDA to be interchangeable with the reference product.

FDA approved the first biosimilar product under the BPCIA in 2015, and the agency continues to refine the procedures and standards it will apply in implementing this approval pathway. FDA has released guidance documents interpreting specific aspects of the BPCIA in each of the last four years.

Orphan Drug Designation

The Orphan Drug Act provides incentives for the development of drugs and biological products intended to treat rare diseases or conditions. Rare diseases and conditions generally are those affecting less than 200,000 individuals in the United States, but also include diseases or conditions affecting more than 200,000 individuals in the United States if there is no reasonable expectation that the cost of developing and making available in the United States a drug for such disease or condition will be recovered from sales in the United States of such drug.

If a sponsor demonstrates that a drug, including a biological product, is intended to treat a rare disease or condition, and meets certain other criteria, FDA grants orphan drug designation to the drug for that use. FDA may grant multiple orphan designations for the same drug for the same indication being developed by multiple different companies, until that drug is approved. The first drug approved with an orphan drug designated indication is granted seven years of orphan drug exclusivity for that indication. During that period, FDA generally may not approve any other application for the same drug for the same indication, although there are exceptions, most notably when the later product is shown to be clinically superior to the product with exclusivity. FDA can also revoke a product's orphan drug exclusivity under certain circumstances, including when the holder of the approved orphan drug application is unable to assure the availability of sufficient quantities of the drug to meet patient needs.

A sponsor of a product application that has received an orphan drug designation is also granted tax incentives for clinical research undertaken to support the application. In addition, FDA will typically coordinate with the sponsor on research study design for an orphan drug and may exercise its discretion to grant marketing approval on the basis of more limited product safety and efficacy data than would ordinarily be required, based on the limited size of the applicable patient population.

Expedited Programs for Serious Conditions

FDA has implemented a number of expedited programs to help ensure that therapies for serious or life-threatening conditions, and for which there is unmet medical need, are approved and available to patients as soon as it can be concluded that the therapies' benefits justify their risks. Among these programs are the following:

Fast Track Designation

FDA may designate a product for fast track review if it is intended, whether alone or in combination with one or more other drugs, for the treatment of a serious or life-threatening disease or condition and where non-clinical or clinical data demonstrates the potential to address unmet medical need for such a disease or condition. A product can also receive fast track review if it is designated as a Qualified Infectious Disease Product, or QIDP, or receives breakthrough therapy designation.

For fast track products, sponsors may have greater interactions with FDA and FDA may initiate review of sections of a fast track product's NDA before the application is complete, also referred to as a 'rolling review'. This rolling review may be available if FDA determines, after preliminary evaluation of clinical data submitted by the sponsor, that a fast track product may be effective. The sponsor must also provide, and FDA must approve, a schedule for the submission of the remaining information and the sponsor must pay applicable user fees. Furthermore, FDA's time period goal for reviewing a fast track application does not begin until the last section of the complete NDA is submitted. Finally, the fast track designation may be withdrawn by FDA if FDA believes that the designation is no longer supported by data emerging in the clinical trial process.

Breakthrough Therapy Designation

A product may be designated as a breakthrough therapy if it is intended, either alone or in combination with one or more other drugs, to treat a serious or life-threatening disease or condition and preliminary clinical evidence indicates that the product may demonstrate substantial improvement over existing therapies on one or more clinically significant endpoints, such as substantial treatment effects observed early in clinical development. The designation includes all of the features of fast track designation, as well as more intensive FDA interaction and guidance. FDA may take certain actions with respect to breakthrough therapies, including holding meetings with the sponsor throughout the development process; providing timely advice to the product sponsor regarding development and approval; involving more senior staff in the review process; assigning a cross-disciplinary project lead for the review team; and taking other steps to design efficient clinical trials.

Accelerated Approval

Under the accelerated approval pathway, FDA may approve a drug or biologic based on a surrogate endpoint that is reasonably likely to predict clinical benefit; qualifying products must target a serious or life-threatening illness and provide meaningful therapeutic benefit to patients over existing treatments. In clinical trials, a surrogate endpoint is a measurement of laboratory or clinical signs of a disease or condition that substitutes for a direct measurement of how a patient feels, functions, or survives. Surrogate endpoints can often be measured more easily or more rapidly than clinical endpoints. A product candidate approved on this basis is subject to rigorous post-marketing compliance requirements, including the completion of Phase 4 or post-approval clinical trials to confirm the effect on the clinical endpoint. Failure to conduct required post-approval studies, or to confirm a clinical benefit during post-marketing studies, would allow FDA to withdraw the drug from the market on an expedited basis. All promotional materials for drug candidates approved under accelerated regulations are subject to prior review by FDA.

Priority Review

FDA may designate a product for priority review if it is a drug that treats a serious condition and, if approved, would provide a significant improvement in safety or effectiveness. FDA generally determines, on a case-by-case basis, whether the proposed drug represents a significant improvement in safety and effectiveness when compared with other available therapies. Significant improvement may be illustrated by evidence of increased effectiveness in the treatment of a condition, elimination or substantial reduction of a treatment-limiting drug reaction, documented enhancement of patient compliance that may lead to improvement in serious outcomes, and evidence of safety and effectiveness in a new subpopulation. A priority designation is intended to direct overall attention and resources to the evaluation of such applications, and will shorten FDA's goal for taking action on a marketing application from the standard ten months to a target of an accelerated six months.

Created in 2012 under the *Food and Drug Administration Safety and Innovation Act,* or FDASIA, and extended with the *21st Century Cures Act* in 2016, FDA is authorized under section 529 of the FDCA to grant a PRV to NDA or BLA sponsors who receive approval for a product to treat a rare pediatric disease, defined as a disease that affects fewer than 200,000 individuals in the U.S., and where more than 50% of the patients affected are aged from birth to 18 years. We believe that lenzilumab or other future product candidates that we may develop or acquire may qualify for a PRV under this program.

The PRV program allows the voucher holder to obtain priority review for a product application that would otherwise not receive priority review, shortening FDA's target review period to a targeted six months following acceptance of filing of the NDA, or four months shorter than the standard review period. The voucher may be used by the sponsor who receives it, or it may be sold to another sponsor for use in that sponsor's own marketing application. The sponsor who uses the voucher is required to pay additional user fees on top of the standard user fee for reviewing an NDA or BLA.

Regenerative Medicine Advanced Therapy Designation

Recently, through the 21st Century Cures Act, or Cures Act, Congress also established another expedited program, called a Regenerative Medicine Advanced Therapy, or RMAT, designation. The Cures Act directs the FDA to facilitate an efficient development program for and expedite review of RMATs. To qualify for this program, the product must be a cell therapy, therapeutic tissue engineering product, human cell and tissue product, or a combination of such products, and not a product solely regulated as a human cell and tissue product. The product must be intended to treat, modify, reverse, or cure a serious or life-threatening disease or condition, and preliminary clinical evidence must indicate that the product has the potential to address an unmet need for such disease or condition. Advantages of the RMAT designation include all the benefits of the Fast Track and breakthrough therapy designation programs, including early interactions with the FDA. These early interactions may be used to discuss potential surrogate or intermediate endpoints to support accelerated approval.

Employees

As of December 31, 2017, we had approximately 6 full time equivalents performing various functions, including 4 full time employees, with the remainder consisting of consultants performing mainly regulatory and clinical development functions. None of our employees are represented by labor unions or covered by collective bargaining agreements. We consider our relationship with our employees to be good.

Bankruptcy

In January 2015, shortly after announcing that our Phase 2 clinical trial of a former drug candidate had not met its primary or secondary endpoints, we implemented a cost reduction plan that primarily consisted of workforce reductions. On November 5, 2015, as part of a further effort to reduce operating costs, we announced a restructuring plan that would reduce our workforce and change the focus of our development programs. The restructuring plan provided that we would pursue strategic alternatives, such as our potential sale or a sale of our assets or further restructuring efforts. On November 13, 2015, we announced that after discussions of various strategic alternatives, we concluded that it was unlikely that a viable transaction could be reached within the timeframe allowed by our then-limited cash resources.

On November 18, 2015, an outside investor group acquired a majority of our outstanding shares and one of the investors was appointed our Chief Executive Officer and Chairman. In December 2015, we issued and sold shares of common stock to investors in a private placement, whom we refer to as the PIPE Investors. Shortly thereafter, on December 17, 2015, our then-Chief Executive Officer and Chairman was arrested on charges of securities fraud, securities fraud conspiracy and wire fraud conspiracy, unrelated to our Company. This individual was immediately terminated as our Chief Executive Officer and resigned from our board of directors. Three other directors and our Interim Chief Financial Officer resigned between December 17 and December 28, 2015. Our independent registered accounting firm also resigned on December 8, 2015. Finally, in December 2015, three putative class action lawsuits were filed against us and certain of the PIPE Investors threatened litigation against us for return of the funds they paid in the private placement.

As a result of these events and other challenges facing us at the time, on December 29, 2015, we filed a voluntary petition for bankruptcy protection under Chapter 11 of the U.S. Bankruptcy Code. The filing was made in the United States Bankruptcy Court for the District of Delaware, or the Bankruptcy Court (Case No. 15-12628 (LSS)). During the pendency of our bankruptcy proceedings, we entered into a Debtor-in-Possession Credit and Security Agreement, or the Credit Agreement, with a group of lenders, or the DIP Lenders, pursuant to which we received $3 million for working capital, bankruptcy-related costs, costs related to our plan of reorganization, payment of certain fees to the lenders and other costs associated with the ordinary course of business. On April 1, 2016, we also entered into a Securities Purchase Agreement, or the SPA, with the DIP Lenders. The SPA provided for the sale of our common stock, with share amounts subject to calculation as provided in the SPA, in respect of exit financing in the amount of $11 million to be received upon the Effective Date of the Plan, as defined below. These transactions were approved by the Bankruptcy Court.

On May 9, 2016, we filed with the Bankruptcy Court a Second Amended Plan of Reorganization, or the Plan, and related amended disclosure statement pursuant to Chapter 11 of the Bankruptcy Code. On June 16, 2016, the Bankruptcy Court entered an order confirming the Plan.

On June 30, 2016 (the "Effective Date"), the Plan became effective and we emerged from our Chapter 11 bankruptcy proceedings. In connection with the emergence, we entered into the MDC Agreement with Savant, pursuant to which we acquired certain worldwide rights relating to benznidazole. On the Effective Date, pursuant to the SPA and in repayment of our obligations under the Credit Agreement, we issued an aggregate of 9,497,515 shares of our common stock to the DIP Lenders. In accordance with the Plan, we also distributed cash payments and issued, or became obligated to issue, promissory notes and shares of our common stock to certain other parties.

Restructuring Transactions

On December 1, 2017, our obligations matured under the Credit and Security Agreement dated December 21, 2016, as amended on March 21, 2017 and on July 8, 2017 (the "Term Loan Credit Agreement") with Black Horse Capital Master Fund Ltd., as administrative agent and lender ("BHCMF"), Black Horse Capital LP, as a lender ("BHC"), Cheval Holdings, Ltd., as a lender ("Cheval" and collectively with BHCMF and BHC, the "Black Horse Entities") and Nomis Bay LTD, as a lender ("Nomis" and, together with the Black Horse Entities, the "Term Loan Lenders").

On December 21, 2017, we entered into a Securities Purchase and Loan Satisfaction Agreement (the "Purchase Agreement") and a Forbearance and Loan Modification Agreement (the "Forbearance Agreement" and, together with the Purchase Agreement, the "Restructuring Agreements"), each with the Term Loan Lenders, in connection with a series of transactions providing for, among other things, the satisfaction and extinguishment of our outstanding obligations under the Term Loan Credit Agreement and the infusion of $3.0 million of new capital. As of February 27, 2018, the date the Restructuring Transactions were completed, the aggregate amount of our obligations under the Term Loan Credit Agreement, including the Bridge Loan, the Claims Advances extended by Nomis Bay (each as discussed below) and all accrued interest and fees, approximated $18.4 million (the "Term Loans").

On February 27, 2018 (the "Restructuring Effective Date"), the Restructuring Transactions were completed in accordance with the Restructuring Agreements. As a result, on the Restructuring Effective Date, we: (i) in exchange for the satisfaction and extinguishment of the entire $18.4 million balance of the Term Loans, including the Bridge Loan, the Claims Advances extended by Nomis Bay (each as discussed below) and all accrued interest and fees, (a) issued to the Term Loan Lenders an aggregate of 59,786,848 shares of our common stock (the "New Lender Shares"), and (b) transferred and assigned to an entity owned 70% by Nomis Bay and 30% by us (the "JV Entity"), all of our assets related to benznidazole (the "Benz Assets"), our former drug candidate, capable of being so assigned; and (ii) issued to Cheval an aggregate of 32,028,669 shares of our common stock (the "New Black Horse Shares" and, collectively with the New Lender Shares, the "New Common Shares") for total consideration of $3.0 million (collectively, the "Restructuring Transactions"), $1.5 million of which we received on December 22, 2017 in the form of a bridge loan (the "Bridge Loan").

On the Restructuring Effective Date, the aggregate amount of the Term Loans that were deemed to be satisfied and extinguished (i) previously owed to the Black Horse Entities, including the Bridge Loan and all accrued interest and fees, approximated $9.9 million, and (ii) previously owed to Nomis Bay, including certain advances previously extended to us by Nomis Bay totaling $0.1 million (the "Claims Advances") and all accrued interest and fees, approximated $8.5 million. In addition, on the Restructuring Effective Date, (i) each of the Term Loan Credit Agreement, all promissory notes issued thereunder and the Intellectual Property Security Agreement, dated as of December 21, 2016, by and between us and the Term Loan Lenders, were terminated and are of no further force or effect, and (ii) and all security interests of the Black Horse Entities and Nomis Bay in our assets were released. Although the Term Loans were satisfied and extinguished, if the JV Entity (at the election of Nomis Bay) elects to keep the Benz Assets after the Restructuring Effective Date, Nomis Bay will be obligated to pay or cause the JV Entity to pay $0.3 million in legal fees and expenses owed by us to our litigation counsel, which remain unpaid in our Accounts payable.

Upon completion of the Restructuring Transactions, Nomis Bay held 33,573,530 of our common stock, or approximately 31.4% of our outstanding common stock, and the Black Horse Entities collectively held 66,870,851 shares of our common stock, or approximately 62.6% of our outstanding common stock. Accordingly, the completion of the Restructuring Transactions on the Restructuring Effective Date resulted in a change in control of our company, as the Black Horse Entities and their affiliates owning more than a majority of our outstanding common stock. Dr. Dale Chappell, a member of our board of directors from June 30, 2016 until November 10, 2017, controls the Black Horse Entities and accordingly, will be able to exert control over matters of our company and will be able to determine all matters of our company requiring stockholder approval.

Available Information

Our principal offices are located at 1000 Marina Boulevard, Suite 250, Brisbane, CA 94005-1878, and our telephone number is (650) 243-3100. Our website address is www. humanigen.com. Our common stock is currently traded on the OTCQB Venture Market. We operate in a single segment.

Our website and the information contained on, or that can be accessed through, the website will not be deemed to be incorporated by reference in, and are not considered part of, this Annual Report on Form 10-K. Our Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K and amendments to reports filed or furnished pursuant to Sections 13(a) and 15(d) of the Securities Exchange Act of 1934, as amended, are available free of charge on the Investor Relations portion of our web site at www.humanigen.com as soon as reasonably practicable after we electronically file such material with, or furnish it to, the SEC.

ITEM 1A. RISK FACTORS

Risks Related to Our Business and Industry

We have a history of operating losses, we expect to continue to incur losses, and we may never become profitable.

We have incurred net losses each year since our inception except for the year ended December 31, 2007. For the fiscal year ended December 31, 2017 we incurred a net loss of $21.9 million, and we have an accumulated deficit of $262.5 million as of December 31, 2017. Furthermore, on December 29, 2015, we filed a voluntary petition for bankruptcy protection under the Bankruptcy Code. On June 30, 2016, our Second Amended Plan of Reorganization, or the Plan, dated May 9, 2016, as amended, became effective and we emerged from our Chapter 11 bankruptcy proceedings. See "Bankruptcy" in Item 1 of this Annual Report and see "Risks Related to Our Bankruptcy" below for further information on our bankruptcy and emergence from bankruptcy.

To date, we have only recognized revenue from payments for funded research and development and for license or collaboration fees. We expect to make substantial expenditures and incur additional operating losses in the future to further develop and commercialize our product candidates. Our accumulated deficit is expected to increase significantly as we continue our development and clinical trial efforts. Our ability to achieve and sustain profitability depends on obtaining regulatory approvals for and successfully commercializing our product candidates, either alone or with third parties. We do not currently have the required approvals to market any of our product candidates and we may never receive them. We may not be profitable even if we or any future development partners succeed in commercializing any of our product candidates. Because of the numerous risks and uncertainties associated with developing and commercializing our product candidates, we are unable to predict the extent of any future losses or when we will become profitable, if at all.

We will need substantial additional capital to develop and commercialize our product candidates and to continue as a going concern, and our access to capital funding is uncertain.

Despite completing the Restructuring Transactions, we will require substantial additional capital to continue as a going concern and to support our business efforts, including obtaining regulatory approvals for lenzilumab or other product candidates, clinical trials and other studies, and, if approved, the commercialization of our product candidates. The amount of capital we will require and the timing of our need for additional capital will depend on many factors, including:

- the type, number, timing, progress, costs, and results of the product candidate development programs that we are pursuing or may choose to pursue in the future;
- the scope, progress, expansion, costs, and results of our pre-clinical and clinical trials;
- the timing of and costs involved in obtaining regulatory approvals;
- our ability to re-list our common stock on a national securities exchange, whether through a new listing or by completing a strategic transaction;
- our ability to establish and maintain development partnering arrangements and any associated funding;
- the emergence of competing products or technologies and other adverse market developments;
- the costs of maintaining, expanding, and protecting our intellectual property portfolio, including potential litigation costs and liabilities;
- the resources we devote to marketing, and, if approved, commercializing our product candidates;
- the scope, progress, expansion and costs of manufacturing our product candidates; and
- the costs associated with being a public company.

We will need to seek additional financing from a number of sources, including, but not limited to, the sale of equity or debt securities, strategic collaborations, and licensing of our product candidates. Additional funding may not be available to us on a timely basis or at acceptable terms, if at all. Our ability to access capital when needed is not assured and, if not achieved on a timely basis, would materially harm our business, financial condition and results of operations. If adequate funds are not available, we may be required to delay, reduce the scope of, or eliminate one or more of our development programs. We may also be required to sell or license to others our technologies, product candidates, or development programs that we would have preferred to develop and commercialize ourselves and on less than favorable terms, if at all. If in the best interests of our stockholders, we may also find it appropriate to enter into a strategic transaction that could result in, among other things, a sale, merger, consolidation or business combination.

If management is unsuccessful in efforts to raise additional capital, based on our current levels of operating expenses, our current capital is not expected to be sufficient to fund our operations for the next twelve months. These conditions raise substantial doubt about our ability to continue as a going concern.

Our auditor has expressed substantial doubt about our ability to continue as a going concern and absent additional financing we may be unable to remain a going concern.

If we are unsuccessful in our efforts to raise additional capital, including in the immediate future, based on our current levels of operating expenses, our current capital is not expected to be sufficient to fund our operations for the next twelve months. These conditions raise substantial doubt about our ability to continue as a going concern. The Report of Independent Registered Public Accounting Firm at the beginning of the Consolidated Financial Statements included in Part II, Item 8, "Financial Statements and Supplementary Data" of this Annual Report on Form 10-K includes an explanatory paragraph about our ability to continue as a going concern.

The Consolidated Financial Statements for the year ended December 31, 2017 were prepared on the basis of a going concern, which contemplates that we will be able to realize our assets and discharge liabilities in the normal course of business. Our ability to meet our liabilities and to continue as a going concern is dependent upon the availability of future funding. The financial statements do not include any adjustments that might be necessary if we are unable to continue as a going concern.

In addition, our current financial situation, and the presence of the explanatory paragraph about our ability to continue as a going concern, could also make it more difficult to raise the capital necessary to address our current needs.

We are exploring strategic alternatives, but there can be no assurance that we will be successful in identifying or completing any strategic alternative or that any such strategic alternative will yield additional value for our stockholders.

We have an ongoing review of strategic alternatives to ensure our current structure optimizes our ability to execute our strategic plan and to maximize stockholder value. The review of strategic alternatives could result in, among other things, a sale, merger, consolidation or business combination, asset divestiture, partnering, licensing or other collaboration agreements, or potential acquisitions or recapitalizations, in one or more transactions, or continuing to operate with our current business plan and strategy. There can be no assurance that the exploration of strategic alternatives will result in the identification or consummation of any transaction.

In addition, we may incur substantial expenses associated with identifying and evaluating potential strategic alternatives. The process of exploring strategic alternatives may be time consuming and disruptive to our business operations and if we are unable to effectively manage the process, our business, financial condition and results of operations could be adversely affected. We also cannot assure that any potential transaction or other strategic alternative, if identified, evaluated and consummated, will provide greater value to our stockholders than that reflected in our current stock price. Any potential transaction would be dependent upon a number of factors that may be beyond our control, including, among other factors, market conditions, industry trends, the interest of third parties in our business and the availability of financing to potential buyers on reasonable terms.

Our business is solely dependent on the success of our current product candidates, lenzilumab and ifabotuzumab. We cannot be certain that we will be able to obtain regulatory approval for, or successfully commercialize, any of our product candidates.

We have a limited pipeline of product candidates and are not conducting active research at this time for discovery of new molecules or antibodies. We are currently dependent on the successful continued development and regulatory approval of our current product candidates for our future business success. Since the FDA's August 29, 2017 announcement relating to benznidazole, our primary focus has shifted to investing our time and financial resources in the development of lenzilumab and ifabotuzumab. We will need to successfully enroll and complete clinical trials of lenzilumab and ifabotuzumab, and potentially obtain regulatory approval to market these products. The future clinical, regulatory and commercial success of our product candidates is subject to a number of risks, including the following:

- we may not be able to enroll adequate numbers of eligible patients in the clinical trials we propose to conduct;
- we may not have sufficient financial and other resources to complete the clinical trials;
- we may not be able to provide acceptable evidence of safety and efficacy for our product candidates;
- the results of our clinical trials may not meet the level of statistical or clinical significance, or product safety, required by FDA for marketing approval;
- we may not be able to obtain, maintain and enforce our patents and other intellectual property rights; and
- we may not be able to obtain and maintain commercial manufacturing arrangements with third-party manufacturers or establish commercial-scale manufacturing capabilities.

Furthermore, even if we do receive regulatory approval to market any of our product candidates, any such approval may be subject to limitations on the indicated uses for which we may market the product. If any of our product candidates are unsuccessful, that could have a substantial negative impact on our business.

Accordingly, even if we are able to obtain the requisite financing to continue to fund our development programs, we cannot assure you that our product candidates will be successfully developed or commercialized. If we or any future development partners are unable to develop, or obtain regulatory approval for or, if approved, successfully commercialize, one or more of our product candidates, we may not be able to generate sufficient revenue to continue our business.

Our product candidates are at an early stage of development and may not be successfully developed or commercialized.

Our product candidates are in the early stage of development and will require substantial clinical development, testing, and regulatory approval prior to commercialization. None of our product candidates have advanced into a pivotal study and it may be years before such a study is initiated, if at all. Of the large number of drugs in development, only a small percentage successfully complete FDA regulatory approval process and are commercialized. We have discontinued the development of prior product candidates after they failed to meet clinical endpoints in non-pivotal trials. Accordingly, even if we are able to obtain the requisite financing to continue to fund our development programs, we cannot assure you that our product candidates will be successfully developed or commercialized. If we or any future development partners are unable to develop, or obtain regulatory approval for or, if approved, successfully commercialize, one or more of our product candidates, we may not be able to generate sufficient revenue to continue our business.

Our business could target benefits from various regulatory incentives, such as orphan drug exclusivity, breakthrough therapy designation, fast track designation, and priority review, but we may not ultimately qualify for or benefit from these arrangements.

We may seek various regulatory incentives, such as orphan drug exclusivity, breakthrough therapy designation, fast track designation, accelerated approval, priority review and PRVs, where available, that provide for certain periods of exclusivity, expedited review and/or other benefits, and we may also seek similar designations elsewhere in the world. Often, regulatory agencies have broad discretion in determining whether or not products qualify for such regulatory incentives and benefits. We cannot guarantee that we will be able to receive orphan drug or NCE status from FDA or equivalent regulatory designations elsewhere. We also cannot guarantee that we will obtain breakthrough therapy or fast track designation, which may provide certain potential benefits such as more frequent meetings with FDA to discuss the development plan, intensive guidance on an efficient drug development program, and potential eligibility for rolling review or priority review. Legislative developments in the U.S., including recent proposed legislation that would restrict eligibility for PRVs, may affect our ability to qualify for these programs in the future.

Even if we are successful in obtaining beneficial regulatory designations by FDA or other regulatory agency for our product candidates, such designations may not lead to faster development or regulatory review or approval, and it does not increase the likelihood that our product candidates will receive marketing approval. We may not be able to obtain or maintain such designations for our product candidates, and our competitors may obtain these designations for their product candidates, which could impact our ability to develop and commercialize our product candidates or compete with such competitors, which would adversely impact our business, financial condition or results of operations.

There is a limited amount of information about us upon which investors can evaluate our product candidates and business prospects, including because we have a limited operating history developing product candidates, have not yet successfully commercialized any products, have changed our strategy and our management team, and emerged from bankruptcy.

On August 29, 2017, we shifted our primary focus toward developing our proprietary monoclonal antibody portfolio, which comprises lenzilumab and ifabotuzumab, for use in addressing significant unmet needs in oncology and CAR-T therapy. Our relatively new team, new strategic business focus and limited operating history developing clinical-stage product candidates may make it difficult for us to succeed or for investors to be able to evaluate our business and prospects. In addition, as an early-stage clinical development company, we have limited experience in development activities, including conducting clinical trials, or seeking and obtaining regulatory approvals. We are also heavily dependent at this time on external consultants for scientific, clinical manufacturing and regulatory expertise. We have not yet demonstrated an ability to successfully overcome many of the risks and uncertainties frequently encountered by companies in the biopharmaceutical area. For example, to execute our business plan we will need to successfully:

- execute our product candidate development activities, including successfully completing our clinical trial programs;
- obtain required regulatory approvals for the development and commercialization of our product candidates;
- manage our spending as costs and expenses increase due to clinical trials, regulatory approvals, manufacturing and commercialization;
- secure substantial additional funding;
- develop and maintain successful strategic relationships;
- build and maintain a strong intellectual property portfolio;
- build and maintain appropriate clinical, sales, manufacturing, distribution, and marketing capabilities on our own or through third parties; and
- gain market acceptance and favorable reimbursement status for our product candidates.

If we are unsuccessful in accomplishing these objectives, we may not be able to develop product candidates, raise capital, expand our business, or continue our operations.

We have and may continue to experience delays in commencing or conducting our clinical trials, in receiving data from third parties or in the continuation or completion of clinical testing, which could result in increased costs to us and delay our ability to generate product candidate revenue.

Before we can initiate clinical trials in the United States for any new product candidates, we are required to submit the results of preclinical testing to FDA as part of an IND, along with other information including information about product candidate chemistry, manufacturing, and controls and our proposed clinical trial protocol. For our programs already underway, we are required to report or provide information to appropriate regulatory authorities in order to continue with our testing programs. If we are unable to make timely regulatory submissions for any of our programs, it will delay our plans for our clinical trials. If those third parties do not make the required data available to us, we will likely have to identify and contract with another third party, and/or develop all necessary preclinical and clinical data on our own, which will lead to significant delays and increase development costs of the product candidate. In addition, FDA may require us to conduct additional preclinical testing for any product candidate before it allows us to initiate clinical testing under any IND, which may lead to additional delays and increase the costs of our preclinical development. Moreover, despite the presence of an active IND for a product candidate, clinical trials can be delayed for a variety of reasons, including delays in:

- identifying, recruiting, and enrolling qualified subjects to participate in a clinical trial;
- identifying, recruiting, and training suitable clinical investigators;

- reaching agreement on acceptable terms with prospective contract research organizations, or CROs, and trial sites, the terms of which can be subject to extensive negotiation, may be subject to modification from time to time, and may vary significantly among different CROs and trial sites;
- obtaining and maintaining sufficient quantities of a product candidate for use in clinical trials, either as a result of transferring the manufacturing of a product candidate to another site or manufacturer, deferring ordering or production of product in order to conserve resources or mitigate risk, having product in inventory become no longer suitable for use in humans, or other reasons that reduce or delay availability of drug supply;
- obtaining and maintaining institutional review board, or IRB, or ethics committee approval to conduct a clinical trial at an existing or prospective site;
- retaining or replacing participants who have initiated a clinical trial but may withdraw due to adverse events from the therapy, insufficient efficacy, fatigue with the clinical trial process, or personal issues;
- developing any companion diagnostic necessary to ensure that the study enrolls the target population; or
- undergoing a clinical trial put on clinical hold at any time by FDA during product candidate development.

Once a clinical trial has begun, recruitment and enrollment of subjects may be slower than we anticipate. Numerous companies and institutions are conducting clinical studies in similar patient populations which can result in competition for qualified patients. In addition, clinical trials will take longer than we anticipate if we are required, or believe it is necessary, to enroll additional subjects. Clinical trials may also be delayed as a result of ambiguous or negative interim results. Further, a clinical trial may be suspended or terminated by us, an IRB, an ethics committee, or a data safety monitoring committee overseeing the clinical trial, any of our clinical trial sites with respect to that site, or FDA or other regulatory authorities, due to a number of factors, including:

- failure to conduct the clinical trial in accordance with regulatory requirements or our clinical protocols;
- inspection of the clinical trial operations or clinical trial site by FDA or other regulatory authorities;
- inability to provide timely supply of drug product;
- unforeseen safety issues, known safety issues that occur at a greater frequency or severity than we anticipate, or any determination that the clinical trial presents unacceptable health risks; or
- lack of adequate funding to continue the clinical trial.

Additionally, if any future development partners do not develop the licensed product candidates in the time and manner that we expect, or at all, the clinical development efforts related to these licensed product candidates could be delayed or terminated. In addition, our ability to enforce our partners' obligations under any future collaboration efforts may be limited due to time and resource constraints, competing corporate priorities of our future partners, and other factors.

Any delays in the commencement of our clinical trials may delay or preclude our ability to further develop or pursue regulatory approval for our product candidates. Changes in U.S. and foreign regulatory requirements and guidance also may occur and we may need to amend clinical trial protocols to reflect these changes. Amendments may require us to resubmit our clinical trial protocols to IRBs for re-examination, which may affect the costs, timing, and likelihood of a successful completion of a clinical trial. If we or any future development partners experience delays in the completion of, or if we or any future development partners must terminate, any clinical trial of any product candidate our ability to obtain regulatory approval for that product candidate will be delayed and the commercial prospects, if any, for the product candidate may suffer as a result. In addition, many of these factors may also ultimately lead to the denial of regulatory approval of a product candidate.

Our product candidates are subject to extensive regulation, compliance with which is costly and time consuming, may cause unanticipated delays, or may prevent the receipt of the required approvals to commercialize our product candidates.

The clinical development, approval, manufacturing, labeling, storage, record-keeping, advertising, promotion, import, export, marketing, and distribution of our product candidates are subject to extensive regulation by FDA in the United States and by comparable authorities in foreign markets. In the United States, we are not permitted to market our product candidates until we receive regulatory approval from FDA. The process of obtaining regulatory approval is expensive, often takes many years, and can vary substantially based upon the type, complexity, and novelty of the products involved, as well as the target indications. Approval policies or regulations may change and FDA has substantial discretion in the drug approval process, including the ability to delay, limit, or deny approval of a product candidate for many reasons. Despite the time and expense invested in clinical development of product candidates, regulatory approval is never guaranteed. FDA or other comparable foreign regulatory authorities can delay, limit, or deny approval of a product candidate for many reasons, including:

- such authorities may disagree with the design or implementation of our or any future development partners' clinical trials;
- we or any future development partners may be unable to demonstrate to the satisfaction of FDA or other regulatory authorities that a product candidate is safe and effective for any indication;
- such authorities may not accept clinical data from trials that are conducted at clinical facilities or in countries where the standard of care is potentially different from the United States;
- the results of clinical trials may not demonstrate the safety or efficacy required by such authorities for approval;
- we or any future development partners may be unable to demonstrate that a product candidate's clinical and other benefits outweigh its safety risks;
- such authorities may disagree with our interpretation of data from preclinical studies or clinical;
- such authorities may find deficiencies in the manufacturing processes or facilities of third-party manufacturers with which we or any future development partners contract for clinical and commercial supplies; or
- the approval policies or regulations of such authorities may significantly change in a manner rendering our or any future development partners' clinical data insufficient for approval.

With respect to foreign markets, approval procedures vary widely among countries and, in addition to the aforementioned risks, can involve additional product testing, administrative review periods, and agreements with pricing authorities. In addition, events raising questions about the safety of certain marketed pharmaceuticals may result in increased caution by FDA and comparable foreign regulatory authorities in reviewing new drugs based on safety, efficacy or other regulatory considerations and may result in significant delays in obtaining regulatory approvals. Any delay in obtaining, or inability to obtain, applicable regulatory approvals would prevent us, or any future development partners from commercializing our product candidates.

The results of preclinical studies and early clinical trials are not always predictive of future results. Any product candidate we or any future development partners advance into clinical trials may not have favorable results in later clinical trials, if any, or receive regulatory approval.

Drug development has substantial inherent risk. We or any future development partners will be required to demonstrate through adequate and well-controlled clinical trials that our product candidates are effective, with a favorable benefit-risk profile, for use in their target populations for their intended indications before we can seek regulatory approvals for their commercial sale. Drug development is a long, expensive and uncertain process, and delay or failure can occur at any stage of development, including after commencement of any of our clinical trials. Success in early clinical trials does not mean that later clinical trials will be successful because product candidates in later-stage clinical trials may fail to demonstrate sufficient safety or efficacy despite having progressed through initial clinical testing. In addition, serious adverse or undesirable side effects may emerge or be identified during later stages of development that were not observed in earlier stages. Furthermore, our future trials will need to demonstrate sufficient safety and efficacy for approval by regulatory authorities in larger patient populations. Companies frequently suffer significant setbacks in advanced clinical trials, even after earlier clinical trials have shown promising results. In addition, only a small percentage of drugs under development result in the submission of a New Drug Application or Biologic License Application, or BLA, to FDA and even fewer are approved for commercialization.

If we fail to attract and retain key management and clinical development personnel, or if the attention of such personnel is diverted, we may be unable to successfully manage our business and develop or commercialize our product candidates.

We will need to effectively manage our managerial, operational, financial, and other resources in order to successfully pursue our clinical development and commercialization efforts. As a company with a limited number of personnel, we are heavily affected by turnover and highly dependent on the expertise of the members of our senior management, in particular our Chief Executive Officer, Dr. Cameron Durrant. Furthermore, we rely on third party consultants for a variety of services. We cannot predict the impact of the loss of such individuals or the loss of services of any of our other senior management, should they occur, or the difficulty in replacing such individuals. Such losses could delay or prevent the further development and potential commercialization of our product candidates and, if we are not successful in finding suitable replacements, could harm our business.

In addition, at the closing of the Restructuring Transactions, Dr. Durrant entered into a consulting agreement with the JV Entity controlled by Nomis Bay pursuant to which Dr. Durrant agreed, for a period of up to two years, to furnish information and provide assistance to the JV Entity in connection with its exploration of potential claims versus third parties relating to the Benz Assets. Dr. Durrant is only required to provide these services to the extent that he can do so without (x) in his good faith, reasonable determination, materially adversely affecting his other business or employment obligations or (y) breaching any contractual arrangement relating to his other business or employment obligations. Nevertheless, performance of these consulting obligations could divert his attention away from our business, which could impair our ability to successfully pursue our strategy and our drug development programs.

Any product candidate we or any future development partner may advance into clinical trials may cause unacceptable adverse events or have other properties that may delay or prevent its regulatory approval or commercialization or limit its commercial potential.

Unacceptable adverse events caused by any of our product candidates that we advance into clinical trials could cause us or regulatory authorities to interrupt, delay, or halt clinical trials and could result in the denial of regulatory approval by FDA or other regulatory authorities for any or all targeted indications and markets. This in turn could prevent us from completing development or commercializing the affected product candidate and generating revenue from its sale.

We have not yet successfully completed testing of any of our product candidates for the treatment of the indications for which we intend to seek approval in humans, and we currently do not know the extent of adverse events, if any, that will be observed in individuals who receive any of our product candidates. If any of our product candidates cause unacceptable adverse events in clinical trials, we may not be able to obtain regulatory approval or commercialize such product candidates.

If our competitors develop treatments for the target indications of our product candidates that are approved more quickly, marketed more successfully or are demonstrated to be safer or more effective than our product candidates, or if FDA approves generic competitors to our products post-approval, our commercial opportunity will be reduced or eliminated.

We compete in an industry characterized by rapidly advancing technologies, intense competition, a changing regulatory and legislative landscape and a strong emphasis on the benefits of intellectual property protection and regulatory exclusivities. Our competitors include pharmaceutical companies, other biotechnology companies, academic institutions, government agencies and other private and public research organizations. We compete with these parties in immunotherapy and oncology treatments and in recruiting highly qualified personnel. Our product candidates, if successfully developed and approved, may compete with established therapies, with new treatments that may be introduced by our competitors, including competitors relying to a large extent on our drug approvals under section 505(b)(2) of the FDCA or on our biologics approvals under section 351(k) of the Public Health Service Act, or with generic copies of our products approved by FDA under an abbreviated new drug application, or ANDA, referencing our drug products. We believe that competitors are actively developing competing products to our product candidates. See “Competition” in Item 1 of this Annual Report for a discussion of competition with respect to our current product candidates.

Many of our competitors and potential competitors have substantially greater scientific, research, and product development capabilities, as well as greater financial, marketing, sales and human resources capabilities than we do. In addition, many specialized biotechnology firms have formed collaborations with large, established companies to support the research, development and commercialization of products that may be competitive with ours. Accordingly, our competitors may be more successful with respect to their products than we may be in developing, commercializing, and achieving widespread market acceptance for our products. If a competitor obtains approval for an orphan drug that is the same drug or the same biologic as one of our candidates before we do, we will be blocked from obtaining FDA approval for seven years from the date of the competitor's product, unless we can establish that our product is clinically superior to the previously-approved competitor's product or we can meet another exception, such as by showing that the competitor has failed to provide an adequate supply of its product to patients after approval. In addition, our competitors' products may be more effective or more effectively marketed and sold than any treatment we or our development partners may commercialize and may render our product candidates obsolete or non-competitive before we can recover the expenses related to developing and supporting the commercialization of any of our product candidates. Developments by competitors may render our product candidates obsolete or noncompetitive. After one of our product candidates is approved, FDA may also approve a generic version with the same dosage form, safety, strength, route of administration, quality, performance characteristics and intended use as our product. These generic equivalents would be less costly to bring to market and could generally be offered at lower prices, thereby limiting our ability to gain or retain market share.

The acquisition or licensing of pharmaceutical products is also very competitive, and a number of more established companies, which have acknowledged strategies to in-license or acquire products, may have competitive advantages as may other emerging companies taking similar or different approaches to product acquisitions. The more established companies may have a competitive advantage over us due to their size, cash flows, institutional experience and historical corporate reputation.

We are subject to a multitude of manufacturing risks, any of which could substantially increase our costs and limit supply of our products.

We are, and will for the foreseeable future continue to be, wholly dependent on third party contract manufacturers for the timely supply of adequate quantities of our products which meet or exceed requisite quality and production standards for use in clinical and nonclinical studies. Given the extensive risks, scope, complexity, cost, regulatory requirements and commitment of resources associated with developing the capabilities to manufacture one or more of our products, we have no present plan or intention of developing in-house manufacturing capabilities for nonclinical, clinical or commercial scale production, beyond our current supervision and management of our third-party contract manufacturers. In addition, in order to balance risk and conserve financial and human resources, we have and may continue from time to time to defer commitment to production of product, which could result in delays to the continued progress of our clinical and nonclinical testing.

In addition to the foregoing, the process of manufacturing our products is complex, highly regulated and subject to several risks, including but not limited to the following:

- We, and our contract manufacturers, must comply with FDA's current Good Manufacturing Practice, or cGMP, regulations and guidance. We, and our contract manufacturers, may encounter difficulties in achieving quality control and quality assurance and may experience shortages in qualified personnel. We, and our contract manufacturers, are subject to inspections by FDA and comparable agencies in other jurisdictions to confirm compliance with applicable regulatory requirements. Any failure to follow cGMP or other regulatory requirements or any delay, interruption or other issues that arise in the manufacture, fill-finish, packaging, or storage of our products as a result of a failure of our facilities or the facilities or operations of third parties to comply with regulatory requirements, or a failure to pass any regulatory authority inspection, could significantly impair our ability to develop and commercialize our products, including leading to significant delays in the availability of products for our clinical studies or the termination or hold on a clinical study, or the delay or prevention of a filing or approval of marketing applications for our product candidates. Significant noncompliance could also result in the imposition of sanctions, including injunctions, civil penalties, failure of regulatory authorities to grant marketing approvals for our product candidates, delays, suspension or withdrawal of approvals, license revocation, seizures or recalls of products, operating restrictions, adverse publicity, and criminal prosecutions, any of which could damage our reputation. If we are not able to maintain regulatory compliance, we may not be permitted to market our products and/or may be subject to product recalls, seizures, injunctions, or criminal prosecution. Any adverse developments affecting manufacturing operations for our products may result in shipment delays, inventory shortages, lot failures, product withdrawals or recalls, or other interruptions in the supply of our products. We may also have to take inventory write-offs and incur other charges and expenses for products that fail to meet specifications, undertake costly remediation efforts or seek more costly manufacturing alternatives.

- The manufacturing facilities in which our products are made could be adversely affected by equipment failures, plant closures, capacity constraints, competing customer priorities or changes in corporate strategy or priorities, process changes or failures, changes in business models or operations, materials or labor shortages, natural disasters, power failures and numerous other factors.

- We are wholly dependent upon third party CMOs for the timely supply of adequate quantities of requisite quality product for our nonclinical, clinical and, if approved by regulatory authorities, commercial scale production.

- The process of manufacturing biologics is extremely susceptible to product loss due to contamination, equipment failure or improper installation or operation of equipment, or vendor or operator error. Even minor deviations from normal manufacturing processes could result in reduced production yields, product defects and other supply disruptions. If microbial, viral or other contaminations are discovered in our products or in the manufacturing facilities in which our products are made, such manufacturing facilities may need to be closed for an extended period of time to investigate and remedy the contamination.

If any product candidate that we successfully develop does not achieve broad market acceptance among physicians, patients, healthcare payers and the medical community, the revenue that it generates may be limited.

Even if our product candidates receive regulatory approval, they may not gain market acceptance among physicians, patients, healthcare payers, and the medical community. Coverage and reimbursement of our product candidates by third-party payers, including government payers, generally is also necessary for commercial success. The degree of market acceptance of any approved product candidates will depend on a number of factors, including:

- the efficacy and safety as demonstrated in clinical trials;
- the clinical indications for which the product candidate is approved;
- acceptance by physicians, major operators of hospitals and clinics, and patients of the product candidate as a safe and effective treatment;
- the potential and perceived advantages of product candidates over alternative treatments;
- the safety of product candidates seen in a broader patient group, including its use outside the approved indications;
- the cost of treatment in relation to alternative treatments;
- the availability of adequate reimbursement and pricing by third parties and government authorities;
- relative convenience and ease of administration;
- the prevalence and severity of adverse events;
- the effectiveness of our sales and marketing efforts; and
- unfavorable publicity relating to the product candidate.

If any product candidate is approved but does not achieve an adequate level of acceptance by physicians, hospitals, healthcare payers, and patients, we may not generate sufficient revenue from that product candidate and may not become or remain profitable.

Reimbursement may be limited or unavailable in certain market segments for our product candidates, which could make it difficult for us to sell our product candidates profitably.

Market acceptance and sales of our product candidates will depend significantly on the availability of adequate insurance coverage and reimbursement from third-party payers for any of our product candidates and may be affected by existing and future health care reform measures. Government authorities and third-party payers, such as private health insurers and health maintenance organizations, decide which drugs they will pay for and establish reimbursement levels. Reimbursement by a third-party payer may depend upon a number of factors including the third-party payer's determination that use of a product candidate is:

- a covered benefit under its health plan;
- safe, effective, and medically necessary;
- appropriate for the specific patient;
- cost-effective; and
- neither experimental nor investigational.

Obtaining coverage and reimbursement approval for a product candidate from a government or other third-party payer is a time-consuming and costly process that could require us to provide supporting scientific, clinical, and cost effectiveness data for the use of our product candidates to the payer. We may not be able to provide data sufficient to gain acceptance with respect to coverage and reimbursement. We cannot be sure that coverage or adequate reimbursement will be available for any of our product candidates. Also, we cannot be sure that reimbursement amounts will not reduce the demand for, or the price of, our product candidates. If reimbursement is not available or is available only to limited levels or with restrictions, we may not be able to commercialize certain of our product candidates profitably, or at all, even if approved.

In the United States and in certain foreign jurisdictions, there have been a number of legislative and regulatory changes to the health care system that could affect our ability to sell our product candidates profitably. In particular, the Medicare Modernization Act of 2003 revised the payment methods for many product candidates under Medicare. This has resulted in lower rates of reimbursement. There have been numerous other federal and state initiatives designed to reduce payment for pharmaceuticals.

As a result of legislative proposals and the trend toward managed health care in the United States, third-party payers are increasingly attempting to contain health care costs by limiting both coverage and the level of reimbursement of new drugs. They may also refuse to provide coverage of approved product candidates for medical indications other than those for which FDA has granted market approvals. As a result, significant uncertainty exists as to whether and how much third-party payers will reimburse patients for their use of newly approved drugs, which in turn will put pressure on the pricing of drugs. We could be subject to pricing pressures in connection with the sale of our product candidates due to the trend toward managed health care, the increasing influence of health maintenance organizations, and additional legislative proposals as well as country, regional, or local healthcare budget limitations.

If we are unable to establish sales and marketing capabilities or fail to enter into agreements with third parties to market and sell any product candidates we may successfully develop, we may not be able to effectively market and sell any such product candidates.

We do not currently have the sales and marketing infrastructure in place that would be necessary to sell and market products. As our drug candidates progress, while we may build the infrastructure that would be needed to successfully market and sell any successful drug candidate, we currently anticipate seeking strategic alliances and partnerships with third parties, particularly for any drug candidates that we determine would require larger sales efforts. The establishment of a sales and marketing operation can be expensive and time consuming and could delay any product candidate launch.

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

We intend to seek approval to market our future product candidates in the United States and potentially in foreign jurisdictions. If we obtain approval in one or more foreign jurisdictions, we will be subject to rules and regulations in those jurisdictions relating to our product candidates. In some foreign countries, particularly in the European Union, the pricing of prescription pharmaceuticals and biologics is subject to governmental control. In these countries, pricing negotiations with governmental authorities can take considerable time after the receipt of marketing approval for a product candidate. If reimbursement of our future products is unavailable or limited in scope or amount, or if pricing is set at unsatisfactory levels, we may be unable to achieve or sustain profitability.

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

The use of our product candidates in clinical trials and the sale of any product candidates for which we may obtain marketing approval expose us to the risk of product liability claims. Product liability claims may be brought against us or any future development partners by participants enrolled in our clinical trials, patients, health care providers, or others using, administering, or selling our product candidates. If we cannot successfully defend ourselves against any such claims, or have insufficient insurance protection, we would incur substantial liabilities. Regardless of merit or eventual outcome, product liability claims may result in:

- withdrawal of clinical trial participants;
- termination of clinical trial sites or entire trial programs;
- costs of related litigation;
- substantial monetary awards to trial participants or other claimants;
- decreased demand for our product candidates and loss of revenue;
- impairment of our business reputation;
- diversion of management and scientific resources from our business operations; and
- the inability to commercialize our product candidates.

We have obtained limited product liability insurance coverage for our clinical trials domestically and in selected foreign countries where we are conducting clinical trials. As such, our insurance coverage may not reimburse us or may not be sufficient to reimburse us for any expenses or losses we may suffer. Moreover, insurance coverage is becoming increasingly expensive and in the future we may not be able to maintain insurance coverage at a reasonable cost or in sufficient amounts to protect us against losses due to product liability. We intend to expand our insurance coverage for product candidates to include the sale of commercial products if we obtain marketing approval for our product candidates in development; however, we may be unable to obtain commercially reasonable product liability insurance for any product candidates approved for marketing. Large judgments have been awarded in class action lawsuits based on drugs that had unanticipated side effects. A successful product liability claim or series of claims brought against us, particularly if judgments exceed our insurance coverage, could decrease our working capital and adversely affect our business.

Our insurance policies are expensive and protect us only from some business risks, which leaves us exposed to significant uninsured liabilities.

We do not carry insurance for all categories of risk that our business may encounter. Some of the policies we currently maintain include general liability, employment practices liability, property, auto, workers' compensation, products liability, and directors' and officers' insurance. We do not know, however, if we will be able to maintain existing insurance with adequate levels of coverage. Our recent history may result in an increase in premium costs or otherwise affect the terms of coverage available to us. Any significant, uninsured liability may require us to pay substantial amounts, which would adversely affect our working capital and results of operations.

Our employees may engage in misconduct or other improper activities, including noncompliance with regulatory standards, which could have a material adverse effect on our business.

We are exposed to the risk of employee fraud or other misconduct. Misconduct by employees could include intentional failures to comply with FDA regulations or similar regulations of comparable foreign regulatory authorities, failure to provide accurate information to FDA or comparable foreign regulatory authorities, failure to comply with manufacturing standards, failure to comply with federal and state healthcare fraud and abuse laws and regulations and similar laws and regulations established and enforced by comparable foreign regulatory authorities, failure to report financial information or data accurately, violations of anti-bribery laws, or failure to disclose unauthorized activities to us. In particular, sales, marketing and business arrangements in the healthcare industry are subject to extensive laws and regulations intended to prevent fraud, kickbacks, self-dealing and other abusive practices. These laws and regulations may restrict or prohibit a wide range of pricing, discounting, marketing and promotion, sales commission, customer incentive programs and other business arrangements. Employee misconduct could also involve the improper use of confidential information obtained in the course of our business, which could result in civil or criminal legal actions, regulatory sanctions, or serious harm to our reputation. We have adopted a Code of Business Conduct and Ethics and other corporate policies, but it is not always possible to identify and deter employee misconduct, and the precautions we take to detect and prevent this activity may not be effective in controlling unknown or unmanaged risks or losses or in protecting us from governmental investigations or other actions or lawsuits stemming from a failure to be in compliance with such laws or regulations. If any such actions are instituted against us, and we are not successful in defending ourselves or asserting our rights, those actions could have a significant impact on our business and results of operations, including the imposition of significant fines or other sanctions.

We may encounter difficulties in managing our growth and expanding our operations successfully.

As we seek to advance our product candidates through clinical trials we will need to expand our development, regulatory, manufacturing, marketing, and sales capabilities, and contract with third parties to provide these capabilities for us. As our operations expand we expect that we will need to manage additional relationships with various development partners, suppliers, and other third parties. Future growth will impose significant added responsibilities on members of management. Our future financial performance and our ability to commercialize our product candidates and to compete effectively will depend in part on our ability to manage any future growth effectively. To that end, we must be able to manage our development efforts and clinical trials effectively. We may not be able to accomplish these tasks and our failure to accomplish any of them could prevent us from successfully growing our company.

We and any future development partners, third-party manufacturers and suppliers use hazardous materials, and any claims relating to improper handling, storage, or disposal of these materials could be time consuming or costly.

We and any future development partners, third-party manufacturers and suppliers may use hazardous materials, including chemicals and biological agents and compounds that could be dangerous to human health and safety or the environment. Our operations and the operations of our development partner, third-party manufacturers and suppliers also produce hazardous waste products. Federal, state, and local laws and regulations govern the use, generation, manufacture, storage, handling, and disposal of these materials and wastes. Compliance with applicable environmental laws and regulations may be expensive and current or future environmental laws and regulations may impair our product development efforts. In addition, we cannot entirely eliminate the risk of accidental injury or contamination from these materials or wastes. We do not carry specific biological or hazardous waste insurance coverage and our property, casualty, and general liability insurance policies specifically exclude coverage for damages and fines arising from biological or hazardous waste exposure or contamination. Accordingly, in the event of contamination or injury we could be held liable for damages or be penalized with fines in an amount exceeding our resources, and our clinical trials or regulatory approvals could be suspended.

Our internal computer systems, or those of our future development partners, third-party clinical research organizations or other contractors or consultants, may fail or suffer security breaches, which could result in a material disruption of our product development programs.

Despite the implementation of security measures, our internal computer systems and those of our development partners, third-party clinical research organizations and other contractors and consultants are vulnerable to damage from computer viruses, unauthorized access, natural disasters, terrorism, war, and telecommunication and electrical failures. While we have not experienced any such system failure, accident, or security breach to date, if such an event were to occur and cause interruptions in our operations, it could result in a material disruption of our programs. For example, the loss of clinical trial data for any of our product candidates could result in delays in our regulatory approval efforts and significantly increase our costs to recover or reproduce the data. To the extent that any disruption or security breach results in a loss of or damage to our data or applications or other data or applications relating to our technology or product candidates, or inappropriate disclosure of confidential or proprietary information, we could incur liabilities and the further development of our product candidates could be delayed.

Healthcare reform measures, when implemented, could hinder or prevent our commercial success.

There have been, and likely will continue to be, legislative and regulatory proposals at the federal and state levels directed at broadening the availability of health care and containing or lowering the cost of health care. We cannot predict the initiatives that may be adopted in the future. The continuing efforts of the government, insurance companies, managed care organizations, and other payers of healthcare services to contain or reduce costs of health care may adversely affect:

- the demand for any drug products for which we may obtain regulatory approval;
- our ability to set a price that we believe is fair for our product candidates;
- our ability to generate revenue and achieve or maintain profitability;
- the level of taxes that we are required to pay; and
- the availability of capital.

We and any of our future development partners will be required to report to regulatory authorities if any of our approved products cause or contribute to adverse medical events, and any failure to do so would result in sanctions that would materially harm our business.

If we and any future development partners are successful in commercializing our products, FDA and foreign regulatory authorities would require that we and any future development partners report certain information about adverse medical events if those products may have caused or contributed to those adverse events. The timing of our obligation to report would be triggered by the date we become aware of the adverse event as well as the nature of the event. We and any future development partners may fail to report adverse events we become aware of within the prescribed timeframe. We and any future development partners may also fail to appreciate that we have become aware of a reportable adverse event, especially if it is not reported to us as an adverse event or if it is an adverse event that is unexpected or removed in time from the use of our products. If we and any future development partners fail to comply with our reporting obligations, FDA or a foreign regulatory authority could take action including criminal prosecution, the imposition of civil monetary penalties, seizure of our products, or delay in approval or clearance of future products.

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

With the enactment of the Biologics Price Competition and Innovation Act of 2009, or the BPCIA, as part of the Affordable Care Act, an abbreviated pathway for the approval of biosimilar and interchangeable biological products was created. The abbreviated regulatory pathway establishes legal authority for FDA to review and approve biosimilar biologics, including the possible designation of a biosimilar as ''interchangeable'' based on its similarity to an existing brand product. Under the BPCIA, an application for a biosimilar product cannot be approved by FDA until 12 years after the original branded product was approved under a BLA. The law is complex and is still being interpreted and implemented by FDA. As a result, its ultimate impact, implementation, and meaning are subject to uncertainty. While it is uncertain when such processes intended to implement BPCIA may be fully adopted by FDA, any such processes could have a material adverse effect on the future commercial prospects for our biological products.

We believe that any of our product candidates approved as biological products under a BLA should qualify for the 12-year period of exclusivity. However, there is a risk that FDA will not consider our product candidates to be reference products for competing products, potentially creating the opportunity for biosimilar competition sooner than anticipated. Moreover, the extent to which a biosimilar, once approved, will be substituted for any one of our reference products in a way that is similar to traditional generic substitution for non-biological products is not yet clear, and will depend on a number of marketplace and regulatory factors that are still developing. Finally, there is a risk that the 12-year exclusivity period could be reduced which could negatively affect our products.

In addition, foreign regulatory authorities may also provide for exclusivity periods for approved biological products. For example, biological products in Europe may be eligible for a 10-year period of exclusivity. However, biosimilar products have been approved under a sub-pathway of the centralized procedure since 2006. The pathway allows sponsors of a biosimilar product to seek and obtain regulatory approval based in part on the clinical trial data of an originator product to which the biosimilar product has been demonstrated to be ''similar.'' In many cases, this allows biosimilar products to be brought to market without conducting the full suite of clinical trials typically required of originators. It is unclear whether we and our development partner would face competition to our products in European markets sooner than anticipated.

We may in the future be subject to various U.S. federal and state laws pertaining to health care fraud and abuse, including anti-kickback, self-referral, false claims and fraud laws, and any violations by us of such laws could result in fines or other penalties.

If one or more of our product candidates is approved, we will likely be subject to the various U.S. federal and state laws intended to prevent health care fraud and abuse. The federal anti-kickback statute prohibits the offer, receipt, or payment of remuneration in exchange for or to induce the referral of patients or the use of products or services that would be paid for in whole or part by Medicare, Medicaid or other federal health care programs. Remuneration has been broadly defined to include anything of value, including cash, improper discounts, and free or reduced price items and services. Many states have similar laws that apply to their state health care programs as well as private payers. Violations of the anti-kickback laws can result in exclusion from federal health care programs and substantial civil and criminal penalties.

The False Claims Act imposes liability on persons who, among other things, present or cause to be presented false or fraudulent claims for payment by a federal health care program. The False Claims Act has been used to prosecute persons submitting claims for payment that are inaccurate or fraudulent, that are for services not provided as claimed, or for services that are not medically necessary. The False Claims includes a whistleblower provision that allows individuals to bring actions on behalf of the federal government and share a portion of the recovery of successful claims. If our marketing or other arrangements were determined to violate the False Claims Act or anti-kickback or related laws, then our revenue could be adversely affected, which would likely harm our business, financial condition, and results of operations.

State and federal authorities have aggressively targeted medical technology companies for alleged violations of these anti-fraud statutes, based on improper research or consulting contracts with doctors, certain marketing arrangements that rely on volume-based pricing, off-label marketing schemes, and other improper promotional practices. Companies targeted in such prosecutions have paid substantial fines in the hundreds of millions of dollars or more, have been forced to implement extensive corrective action plans or Corporate Integrity Agreements, and have often become subject to consent decrees severely restricting the manner in which they conduct their business. If we become the target of such an investigation or prosecution based on our contractual relationships with providers or institutions, or our marketing and promotional practices, we could face similar sanctions, which would materially harm our business.

Also, the Foreign Corrupt Practices Act and similar worldwide anti-bribery laws generally prohibit companies and their intermediaries from making improper payments to non-U.S. officials for the purpose of obtaining or retaining business. We cannot assure you that our internal control policies and procedures will protect us from reckless or negligent acts committed by our employees, future distributors, partners, collaborators or agents. Violations of these laws, or allegations of such violations, could result in fines, penalties, or prosecution and have a negative impact on our business, results of operations and reputation.

Legislative or regulatory healthcare reforms in the United States may make it more difficult and costly for us to obtain regulatory approval of our product candidates and to produce, market, and distribute our products after approval is obtained.

From time to time, legislation is drafted and introduced in Congress that could significantly change the statutory provisions governing the regulatory approval, manufacture, and marketing of regulated products or the reimbursement thereof. In addition, FDA regulations and guidance are often revised or reinterpreted by FDA in ways that may significantly affect our business and our products. Any new regulations or revisions or reinterpretations of existing regulations may impose additional costs or lengthen review times of our current product candidates or any future product candidates. We cannot determine what effect changes in regulations, statutes, legal interpretation or policies, when and if promulgated, enacted or adopted may have on our business in the future. Such changes could, among other things, require:

- changes to manufacturing methods;
- additional studies, including clinical studies;
- recall, replacement, or discontinuance of one or more of our products; and
- additional record-keeping.

Each of these would likely entail substantial time and cost and could materially harm our business and our financial results. In addition, delays in receipt of or failure to receive regulatory approvals for any future products would harm our business, financial condition, and results of operations.

Even if we are able to obtain regulatory approval for our product candidates, we will continue to be subject to ongoing and extensive regulatory requirements, and our failure to comply with these requirements could substantially harm our business.

If we receive regulatory approval for our product candidates, we will be subject to ongoing FDA obligations and continued regulatory oversight and review, such as continued safety reporting requirements, and we may also be subject to additional FDA post-marketing obligations. If we are not able to maintain regulatory compliance, we may not be permitted to market our product candidates and/or may be subject to product recalls or seizures.

If FDA approves any of our product candidates, the labeling, manufacturing, packaging, storage, distribution, export, adverse event reporting, storage, advertising, promotion and record-keeping for our products will be subject to extensive regulatory requirements. Violations of these regulatory requirements or the subsequent discovery of previously unknown problems with the products, including adverse events of unanticipated severity or frequency, may result in:

- the issuance of warning or untitled letters;
- requirements to conduct post-marking clinical trials;
- restrictions on the marketing and distribution of the product, including potential withdrawal of the product from the market;
- suspension of ongoing clinical trials;
- the issuance of product recalls, import and export restrictions, seizures, and detentions; and
- the issuance of injunctions, or imposition of other civil and/or criminal penalties.

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

We have incurred substantial losses during our history and do not expect to become profitable in the foreseeable future and may never achieve profitability. To the extent that we continue to generate taxable losses, unused losses will carry forward to offset future taxable income, if any, until such unused losses expire. We may be unable to use these losses to offset income before such unused losses expire. Under Section 382 of the Internal Revenue Code, if a corporation undergoes an ‘‘ownership change’’ (generally defined as a greater than 50% change (by value) in its equity ownership over a three-year period), the corporation’s ability to use its pre-change net operating loss carryforwards and other pre-change tax attributes to offset its post-change income may be limited. We have recently and in the past experienced ownership changes that have resulted in limitations on the use of a portion of our net operating loss carryforwards. On February 27, 2018, upon the closing of the Restructuring Transactions, we experienced an ownership change that may result in limitations on the use of a portion of our net operating losses. If we experience further ownership changes our ability to utilize our net operating loss carryforwards could be further limited.

Risks Related to Our Bankruptcy

Despite having emerged from bankruptcy, we cannot be certain that the residual effects of the bankruptcy proceedings will not adversely affect our operations going forward.

Because of the residual risks and uncertainties associated with Chapter 11 bankruptcy proceedings, the ultimate impact of events that occurred in connection with, or that may occur subsequent to, these proceedings will have on our reputation, business, financial condition and results of operations cannot be accurately predicted or quantified. Due to uncertainties, many risks exist, including the following:

- key business partners could terminate their relationships or require financial assurances or enhanced performance;
- the ability to renew existing contracts and negotiate favorable terms from suppliers, partners and others may be adversely affected;
- the ability to attract, motivate and/or retain key executives and employees may be adversely affected;
- employees may be distracted from performance of their duties or more easily attracted to other employment opportunities; and
- other costs of operations, including obtaining insurance, could be more expensive.

The occurrence of one or more of these events, or others related to our emergence from bankruptcy, could have a material and adverse effect on our operations, financial condition and reputation. We cannot assure you that having been subject to bankruptcy proceedings will not adversely affect our operations in the future.

Allowance of claims by the Bankruptcy Court could materially exceed our estimated liability and adversely affect our financial condition.

The reconciliation of certain proofs of claim filed against us in the Bankruptcy Case is ongoing. As of December 31, 2017, approximately $0.5 million in claims remain subject to review and reconciliation. As of December 31, 2017, we have recorded $0.06 million related to these claims in Accounts payable and Notes payable to vendors, which represents management’s best estimate of claims to be allowed by the Bankruptcy Court.

Despite management's best estimate of claims to be allowed by the Bankruptcy Court, we may be ultimately unsuccessful in our attempt to have certain proofs of claim that we believe are subject to objection or otherwise improperly filed to be disallowed, reduced or reclassified by the Bankruptcy Court. The allowance of claims by the Bankruptcy Court could materially exceed our estimated liability and adversely affect our business, financial condition, and results of operations. In addition, we may identify additional liabilities during this process that will need to be recorded or reclassified to liabilities subject to compromise. The resolution of such claims could result in material adjustments to our financial statements.

For additional information, see Note 2 to our Consolidated Financial Statements included in Part II, Item 8, "Financial Statements and Supplementary Data" of this Annual Report on Form 10-K.

Our actual financial results may vary significantly from the projections filed with the Bankruptcy Court and, as a result of our bankruptcy, our historical financial information is not comparable to future financial information.

In connection with the Plan, we were required to prepare projected financial information to demonstrate to the Bankruptcy Court the feasibility of the Plan and our ability to continue operations upon emergence from bankruptcy. These projections were limited by the information available to us as of the date they were prepared and reflected numerous assumptions concerning anticipated future performance and prevailing and anticipated market and economic conditions that were and continue to be beyond our control and that may not materialize. Projections are inherently subject to uncertainties and to a wide variety of significant business, economic and competitive risks. Therefore, variations from the projections may be material. These projections were prepared solely for the purpose of the bankruptcy proceedings, have not been incorporated into this report, have not been, and will not be, updated on an ongoing basis and should not be considered or relied upon by investors.

Additionally, as a result of the consummation of the Plan and the transactions contemplated thereby, our financial condition and results of operations from and after our emergence from bankruptcy may not be comparable to the financial condition or results of operations reflected in our historical financial statements.

Risks Related to Our Dependence on Third Parties

We rely on third parties to conduct our clinical trials. If these third parties do not meet our deadlines or otherwise conduct the trials as required, our clinical development programs could be delayed or unsuccessful and we may not be able to obtain regulatory approval for or commercialize our product candidates when expected or at all.

We do not have the ability to conduct all aspects of our preclinical testing or clinical trials ourselves. Therefore, the timing of the initiation and completion of these trials is uncertain and may occur on substantially different timing from our estimates. We also use CROs to conduct our clinical trials and rely on medical institutions, clinical investigators, CROs, and consultants to conduct our trials in accordance with our clinical protocols and regulatory requirements. Our CROs, investigators, and other third parties play a significant role in the conduct of these trials and subsequent collection and analysis of data.

There is no guarantee that any CROs, investigators, or other third parties on which we rely for administration and conduct of our clinical trials will devote adequate time and resources to such trials or perform as contractually required. If any of these third parties fails to meet expected deadlines, fails to adhere to our clinical protocols, or otherwise performs in a substandard manner, our clinical trials may be extended, delayed, or terminated. If any of our clinical trial sites terminates for any reason, we may experience the loss of follow-up information on subjects enrolled in our ongoing clinical trials unless we are able to transfer those subjects to another qualified clinical trial site. In addition, principal investigators for our clinical trials may serve as scientific advisors or consultants to us from time to time and may receive cash or equity compensation in connection with such services. If these relationships and any related compensation result in perceived or actual conflicts of interest, the integrity of the data generated at the applicable clinical trial site may be jeopardized.

We rely completely on third parties, most of which are sole source suppliers, to supply drug substance and manufacture drug product for our clinical trials and preclinical studies and intend to rely on other third parties to produce commercial supplies of product candidates, and our dependence on third parties could adversely impact our business.

We are completely dependent on third-party suppliers, most of which are sole source suppliers of the drug substance and drug product for our product candidates. We are continually evaluating potential alternate sources of supply but there can be no assurance that any such suppliers would be available, acceptable or successful. From time to time, we experience delays from our drug substance suppliers. To date, such delays have been manageable. However, if these third-party suppliers do not supply sufficient quantities for product candidates to us on a timely basis and in accordance with applicable specifications and other regulatory requirements, there could be a significant interruption of our supplies, which would adversely affect clinical development of the product candidate, including affecting our ability to enroll in and timely progress clinical trials. Furthermore, if any of our contract manufacturers cannot successfully manufacture material that conforms to our specifications and with regulatory requirements, we will not be able to secure and/or maintain regulatory approval, if any, for our product candidates.

We will also rely on our contract manufacturers to purchase from third-party suppliers the materials necessary to produce our product candidates for our anticipated clinical trials. There are a small number of suppliers for certain capital equipment and raw materials used to manufacture our product candidates. We do not have any control over the process or timing of the acquisition of these raw materials by our contract manufacturers. Moreover, we currently do not have agreements in place for the commercial production of these raw materials. Any significant delay in the supply of a product candidate or the raw material components thereof for an ongoing clinical trial could considerably delay completion of that clinical trial, product candidate testing, and potential regulatory approval of that product candidate.

We do not expect to have the resources or capacity to commercially manufacture any of our proposed product candidates if approved, and will likely continue to be dependent on third-party manufacturers. Our dependence on third parties to manufacture and supply us with clinical trial materials and any approved product candidates may adversely affect our ability to develop and commercialize our product candidates on a timely basis.

We may not be successful in establishing and maintaining additional development partnerships and licensing agreements, which could adversely affect our ability to develop and commercialize product candidates.

Part of our strategy is to enter into development partnerships and licensing agreements. We face significant competition in seeking appropriate partners and the negotiation process is time consuming and complex. Even if we are successful in securing a development partnership, we may not be able to continue it. For example, in 2017, we terminated certain of our licensing agreements for KB001-A, a discontinued drug candidate. We cannot predict the impact of that decision on the likelihood of our ability to enter into future partnerships for our programs. Moreover, we may not be successful in our efforts to establish a development partnership or other alternative arrangements for any of our other existing or future product candidates and programs because, among other reasons, our research and development pipeline may be insufficient, our product candidates and programs may be deemed to be at too early a stage of development for collaborative effort and/or third parties may not view our product candidates and programs as having the requisite potential to demonstrate safety and efficacy. Even if we are successful in our efforts to establish new development partnerships, the terms that we agree upon may not be favorable to us and we may not be able to maintain such development partnerships if, for example, development or approval of a product candidate is delayed or sales of an approved product candidate are disappointing. Any delay in entering into new development partnership agreements related to our product candidates could delay the development and commercialization of our product candidates and reduce their competitiveness if they reach the market.

Moreover, if we fail to establish and maintain additional development partnerships related to our product candidates:

- the development of our current or future product candidates may be terminated or delayed;
- our cash expenditures related to development of certain of our current or future product candidates would increase significantly and we may need to seek additional financing;
- we may be required to hire additional employees or otherwise develop expertise, such as sales and marketing expertise, for which we have not budgeted; and
- we will bear all of the risk related to the development of any such product candidates.

Our or any new partner's failure to develop, manufacture or effectively commercialize our product would result in a material adverse effect on our business and results of operations and would likely cause our stock price to decline.

Risks Related to Intellectual Property

If we fail to adequately protect or enforce our intellectual property rights or secure rights to patents of others, the value of our intellectual property rights would diminish, and our business and competitive position would suffer.

Our success, competitive position and future revenues will depend in part on our ability and the abilities of our licensors and licensees to obtain and maintain patent protection for our products, methods, processes and other technologies, to preserve our trade secrets, to prevent third parties from infringing on our proprietary rights and to operate without infringing the proprietary rights of third parties. We have an active patent protection program that includes filing patent applications on new compounds, formulations, delivery systems and methods of making and using products and prosecuting these patent applications in the United States and abroad. As patents issue, we also file continuation applications as appropriate. Although we have taken steps to build a strong patent portfolio, we cannot predict:

- the degree and range of protection any patents will afford us against competitors, including whether third parties find ways to invalidate or otherwise circumvent our licensed patents;
- if and when patents will issue in the United States or any other country;
- whether or not others will obtain patents claiming aspects similar to those covered by our licensed patents and patent applications;
- whether we will need to initiate litigation or administrative proceedings to protect our intellectual property rights, which may be costly whether we win or lose;
- whether any of our patents will be challenged by our competitors alleging invalidity or unenforceability and, if opposed or litigated, the outcome of any administrative or court action as to patent validity, enforceability or scope;
- whether a competitor will develop a similar compound that is outside the scope of protection afforded by a patent or whether the patent scope is inherent in the claims modified due to interpretation of claim scope by a court;
- whether there were activities previously undertaken by a licensor that could limit the scope, validity or enforceability of licensed patents and intellectual property; or
- whether a competitor will assert infringement of its patents or intellectual property, whether or not meritorious, and what the outcome of any related litigation or challenge may be.

Our success also depends upon the skills, knowledge and experience of our scientific and technical personnel, our consultants and advisors as well as our licensors, sublicensees and contractors. To help protect our proprietary know-how and our inventions for which patents may be unobtainable or difficult to obtain, we rely on trade secret protection and confidentiality agreements. To this end, we require all employees, consultants and board members to enter into agreements that prohibit the disclosure of confidential information and, where applicable, require disclosure and assignment to us of the ideas, developments, discoveries and inventions important to our business. These agreements may not provide adequate protection for our trade secrets, know-how or other proprietary information in the event of any unauthorized use or disclosure or the lawful development by others of such information. If any of our trade secrets, know-how or other proprietary information is disclosed, the value of our trade secrets, know-how and other proprietary rights would be significantly impaired, and our business and competitive position would suffer.

Due to legal and factual uncertainties regarding the scope and protection afforded by patents and other proprietary rights, we may not have meaningful protection from competition.

Our long-term success will substantially depend upon our ability to protect our proprietary technologies from infringement, misappropriation, discovery and duplication and avoid infringing the proprietary rights of others. Our patent rights, and the patent rights of biopharmaceutical companies in general, are highly uncertain and include complex legal and factual issues. These uncertainties also mean that any patents that we own or may obtain in the future could be subject to challenge, and even if not challenged, may not provide us with meaningful protection from competition. Patents already issued to us or our pending applications may become subject to dispute, and any dispute could be resolved against us.

If some or all of our or any licensor's patents expire or are invalidated or are found to be unenforceable, or if some or all of our patent applications do not result in issued patents or result in patents with narrow, overbroad, or unenforceable claims, or claims that are not supported in regard to written description or enablement by the specification, or if we are prevented from asserting that the claims of an issued patent cover a product of a third party, we may be subject to competition from third parties with products in the same class of products as our product candidates or products with the same active pharmaceutical ingredients as our product candidates, including in those jurisdictions in which we have no patent protection.

Our commercial success will depend in part on obtaining and maintaining patent and trade secret protection for our product candidates, as well as the methods for treating patients in the product indications using these product candidates. We will be able to protect our product candidates and the methods for treating patients in the applicable product indications using these product candidates from unauthorized use by third parties only to the extent that we or our exclusive licensor owns or controls such valid and enforceable patents or trade secrets.

Even if our product candidates and the methods for treating patients for prescribed indications using these product candidates are covered by valid and enforceable patents and have claims with sufficient scope, disclosure and support in the specification, the patents will provide protection only for a limited amount of time. Our and any licensor's ability to obtain patents can be highly uncertain and involve complex and in some cases unsettled legal issues and factual questions. Furthermore, different countries have different procedures for obtaining patents, and patents issued in different countries provide different degrees of protection against the use of a patented invention by others. Therefore, if the issuance to us or any licensor, in a given country, of a patent covering an invention is not followed by the issuance, in other countries, of patents covering the same invention, or if any judicial interpretation of the validity, enforceability, or scope of the claims in, or the utility, written description or enablement in, a patent issued in one country is not similar to the interpretation given to the corresponding patent issued in another country, our ability to protect our intellectual property in those countries may be limited. Changes in either patent laws or in interpretations of patent laws in the United States and other countries may materially diminish the value of our intellectual property or narrow the scope of our patent protection.

We may be subject to competition from third parties with products in the same class of products as our product candidates, or products with the same active pharmaceutical ingredients as our product candidates in those jurisdictions in which we have no patent protection. Even if patents are issued to us or any licensor regarding our product or methods of using them, those patents can be challenged by our competitors who can argue such patents are invalid or unenforceable on a variety of grounds, including lack of utility, lack sufficient written description or enablement, utility, or that the claims of the issued patents should be limited or narrowly construed. Patents also will not protect our product candidates if competitors devise ways of making or using these products without legally infringing our patents. The current U.S. regulatory environment may have the effect of encouraging companies to challenge branded drug patents or to create non-infringing versions of a patented product in order to facilitate the approval of abbreviated new drug applications for generic substitutes. These same types of incentives encourage competitors to submit new drug applications that rely on literature and clinical data not prepared for or by the drug sponsor, providing another less burdensome pathway to approval.

If we infringe the rights of third parties, we could be prevented from selling products and be forced to defend against litigation and pay damages.

There is a risk that we are infringing the proprietary rights of third parties because numerous United States and foreign issued patents and pending patent applications, which are owned by third parties, exist in the fields that are the focus of our development and manufacturing efforts. Others might have been the first to make the inventions covered by each of our or any licensor's pending patent applications and issued patents and/or might have been the first to file patent applications for these inventions. In addition, because patent applications take many months to publish and patent applications can take many years to issue, there may be currently pending applications, unknown to us or any licensor, which may later result in issued patents that cover the production, manufacture, synthesis, commercialization, formulation or use of our product candidates. In addition, the production, manufacture, synthesis, commercialization, formulation or use of our product candidates may infringe existing patents of which we are not aware. Defending ourselves against third-party claims, including litigation in particular, would be costly and time consuming and would divert management's attention from our business, which could lead to delays in our development or commercialization efforts. If third parties are successful in their claims, we might have to pay substantial damages or take other actions that are adverse to our business.

If our products, methods, processes and other technologies infringe the proprietary rights of other parties, we could incur substantial costs and may have to:

- obtain licenses, which may not be available on commercially reasonable terms, if at all;
- redesign our products or processes to avoid infringement, which may not be possible or could require substantial funds and time;
- stop using the subject matter claimed in patents held by others, which could cause us to lose the use of one or more of our drug candidates;
- pay damages royalties, or other amounts; or
- grant a cross license to our patents to another patent holder.

We expect that, as our drug candidates move further into clinical trials and commercialization and our public profile is raised, we will be more likely to be subject to such claims.

We may fail to comply with any of our obligations under existing agreements pursuant to which we license or have otherwise acquired rights or technology, which could result in the loss of rights or technology that are material to our business.

We are a party to technology licenses and have acquired certain assets and rights that are important to our business and we may enter into additional licenses or acquire additional assets and rights in the future. We currently hold licenses from LICR, BioWa, and Lonza. These licenses impose various commercial, contingent payments, royalty, insurance, indemnification, and other obligations on us. If we fail to comply with these obligations, the licensor may have the right to terminate the license or take back rights or assets, in which event we would lose valuable rights under our collaboration agreements, potential claims and our ability to develop product candidates.

We may be subject to claims that our consultants or independent contractors have wrongfully used or disclosed alleged trade secrets of their other clients or former employers to us.

As is common in the biotechnology and pharmaceutical industry, we engage the services of consultants to assist us in the development of our product candidates. Many of these consultants were previously employed at, or may have previously or may be currently providing consulting services to, other biotechnology or pharmaceutical companies including our competitors or potential competitors. We may become subject to claims that our company or a consultant inadvertently or otherwise used or disclosed trade secrets or other information proprietary to their former employers or their former or current clients. Litigation may be necessary to defend against these claims. Even if we are successful in defending against these claims, litigation could result in substantial costs and be a distraction to our management team.

We may not be able to protect our intellectual property rights throughout the world.

Filing, prosecuting and defending patents on product candidates in all countries throughout the world would be prohibitively expensive, and we intend to seek patent protection only in selected countries. Our intellectual property rights in some countries outside the United States can be less extensive than those in the United States. In addition, the laws of some foreign countries do not protect intellectual property rights to the same extent as federal and state laws in the United States. Consequently, we may not be able to prevent third parties from practicing our inventions in all countries outside the United States, or from selling or importing products made using our inventions in and into the United States or other jurisdictions. Competitors may use our technologies in jurisdictions where we have not obtained patent protection to develop their own products and further, may export otherwise infringing products to territories where we have patent protection, but enforcement is not as strong as that in the United States. These products may compete with our product candidates and our patents or other intellectual property rights may not be effective or sufficient to prevent them from competing.

Many companies have encountered significant problems in protecting and defending intellectual property rights in foreign jurisdictions. The legal systems of certain countries, particularly certain developing countries, do not favor the enforcement of patents and other intellectual property protection, particularly those relating to biopharmaceuticals, which could make it difficult for us to stop the infringement of our patents or marketing of competing products in violation of our proprietary rights generally. Proceedings to enforce our patent rights in foreign jurisdictions could result in substantial costs and divert our efforts and attention from other aspects of our business, could put our patents at risk of being invalidated or interpreted narrowly and our patent applications at risk of not issuing and could provoke third parties to assert claims against us. We may not prevail in any lawsuits that we initiate and the damages or other remedies awarded, if any, may not be commercially meaningful. Accordingly, our efforts to enforce our intellectual property rights around the world may be inadequate to obtain a significant commercial advantage from the intellectual property that we develop or license.

Risks Related to Our Common Stock

The Black Horse Entities own more than a majority of our outstanding common stock and will be able to exert control over all matters subject to stockholder approval.

The completion of the Restructuring Transactions on February 27, 2018 resulted in a change in control of our company, as the issuance of the New Common Shares to the Black Horse Entities resulted in the Black Horse Entities and their affiliates owning more than a majority of our outstanding common stock. As of February 27, 2018, the Black Horse Entities collectively held 66,870,851 shares of our common stock, or approximately 62.6% of our outstanding common stock, and Dr. Chappell, a member of our board of directors from June 30, 2016 until November 10, 2017, who controls the Black Horse Entities, nor has the ability to elect all of the members of our board of directors and thereby to control our management and affairs, including determinations with respect to entry into new lines of business, borrowings, and issuances of common stock or other securities, as well as the outcome of all matters requiring stockholder approval and the ability to cause or prevent a change of control of our company. The control possessed by Dr. Chappell could prevent or discourage unsolicited acquisition proposals or offers for our common stock that may be in the best interest of our other stockholders.

The interests of the Black Horse Entities may not in all cases be aligned with the interests of our other stockholders. For example, a sale of a substantial number of shares of our common stock in the future by the Black Horse Entities could cause our stock price to decline. Additionally, the Black Horse Entities are in the business of making investments in companies and may from time to time acquire and hold interests in businesses that compete directly or indirectly with us. Accordingly, the Black Horse Entities may also pursue acquisition opportunities that may be complementary to our business, and as a result, those acquisition opportunities may not be available to us. In addition, Black Horse Entities may have an interest in pursuing acquisitions, divestitures and other transactions that, in their judgment, could enhance their equity investment, even though such transactions might involve risks to holders of our common stock.

The concentration of our common stock owned by insiders may limit the ability of our other stockholders to influence corporate matters and may contribute to volatility in our stock price.

We have a relatively small public float due to the ownership percentage of our executive officers and directors, and greater than 5% stockholders. Our directors, executive officers, and the holders of more than 5% of our common stock together with their affiliates beneficially own approximately 94.3% of our common stock as of February 27, 2018. Some of these persons or entities may have interests that are different from our other stockholders. As of February 27, 2018, Nomis Bay held 33,573,530 shares of our common stock, or approximately 31.4% of our outstanding common stock, and the Black Horse Entities collectively held 66,870,851 shares of our common stock, or approximately 62.6% of our outstanding common stock. This significant concentration of ownership may adversely affect the trading price of our common stock because investors often perceive disadvantages in owning stock in companies with controlling stockholders.

As a result of our small public float, our common stock may be less liquid and have greater stock price volatility than the common stock of companies with broader public ownership. In addition, the trading of a relatively small volume of shares of our common stock may result in significant volatility in our stock price. If and to the extent ownership of our common stock becomes more concentrated, whether due to increased ownership by our directors and executive officers or other principal stockholders, any future repurchase of our common stock, or other factors, our public float would further decrease, which in turn would likely result in increased stock price volatility. Additionally, because a large amount of our stock is closely held, we may experience low trading volume or large fluctuations in share price and volume due to large sales by our principal stockholders.

There is a limited trading market for our securities. An active trading market for our common stock may not develop or be sustained and the market price of our securities is subject to volatility.

Trading in our common stock is limited and we cannot predict whether an active market for our common stock will ever develop in the future. In the absence of an active trading market:

- investors may have difficulty buying and selling shares of our common stock;
- market visibility for shares of our common stock may be limited;
- a lack of visibility for shares of our common stock may have a depressive effect on the market price for shares of our common stock; and
- significant sales of our common stock, or the expectation of these sales, could materially and adversely affect the market price of our common stock.

An inactive market may also impair our ability to raise capital to continue as a going concern and to fund operations by selling shares and may impair our ability to acquire additional intellectual property assets by using our shares as consideration.

No assurance can be given that an active market will develop for the common stock or as to the liquidity of the trading market for the common stock. The common stock may be traded only infrequently in transactions arranged through brokers or otherwise, and reliable market quotations may not be available.

Our ability to re-list our common stock on a national securities exchange is subject to us meeting applicable listing criteria.

If we are able to raise the necessary capital, we intend to apply for our common stock to be re-listed on a national securities exchange. In addition, we are exploring strategic transactions to affect a listing on a national securities exchange, including by completing a reverse merger or sale. However, no assurances can be given regarding our ability to achieve a listing in a timely manner or at all. Each national securities exchange requires companies desiring to list their common stock to meet certain listing criteria including total number of stockholders, minimum stock price, total value of public float, and in some cases total shareholders' equity and market capitalization. Our failure to meet such applicable listing criteria will prevent us from listing our common stock on a national securities exchange.

Raising additional funds by issuing securities or through licensing or lending arrangements may cause dilution to our existing stockholders, restrict our operations or require us to relinquish proprietary rights.

To the extent that we raise additional capital by issuing equity securities, the share ownership of existing stockholders will be diluted. To the extent that additional capital is raised through the sale of equity or convertible debt securities, the issuance could result in further dilution to our stockholders.

Any future debt financing may involve covenants that restrict our operations, including, among other restrictions, limitations on our ability to incur liens or additional debt, pay dividends, redeem our stock, make certain investments, and engage in certain merger, consolidation, or asset sale transactions. In addition, if we raise additional funds through licensing arrangements, it may be necessary to grant potentially valuable rights to our product candidates or grant licenses on terms that are not favorable to us.

We have identified material weaknesses in our internal control over financial reporting and may be unable to maintain effective control over financial reporting.

In the course of the preparation and external audit of our consolidated financial statements for the fiscal year ended December 31, 2017, we and our independent registered public accounting firm identified a "material weakness" in our internal control over financial reporting related to our limited number of accounting and financial reporting personnel. A material weakness in internal control over financial reporting is a deficiency, or combination of deficiencies, in internal control over financial reporting that results in more than a reasonable possibility that a material misstatement of annual or interim consolidated financial statements will not be prevented or detected on a timely basis. We identified an insufficient degree of segregation of duties amongst our accounting and financial reporting personnel.

During 2018, we intend to work to remediate the material weaknesses identified above, which could include the addition of accounting and financial reporting personnel and/or the engagement of accounting and personnel consultants on a limited-time basis until we add a sufficient number of personnel. However, our current financial position could make it difficult for us to add the necessary resources.

Any material weaknesses in our internal control over financing reporting in the future could adversely affect investor confidence, impair the value of our common stock and increase our cost of raising capital.

If we are unable to remediate our material weakness over financial controls or we identify other material weaknesses or significant deficiencies in the future, our operating results might be harmed, we may fail to meet our reporting obligations or fail to prevent or detect material misstatements in our financial statements. Any such failure could, in turn, affect the future ability of our management to certify that internal control over our financial reporting is effective. Inferior internal control over financial reporting could also subject us to the scrutiny of the SEC and other regulatory bodies which could cause investors to lose confidence in our reported financial information and could subject us to civil or criminal penalties or stockholder litigation, which could have an adverse effect on our results of operations and the market price of our common stock.

In addition, if we or our independent registered public accounting firm identify deficiencies in our internal control over financial reporting, the disclosure of that fact, even if quickly remedied, could reduce the market's confidence in our financial statements and harm our share price. Furthermore, deficiencies could result in future non-compliance with Section 404 of the Sarbanes-Oxley Act of 2002. Such non-compliance could subject us to a variety of administrative sanctions, including review by the SEC or other regulatory authorities.

Our stock price is volatile and purchasers of our common stock could incur substantial losses.

The market price of our common stock may fluctuate significantly in response to a number of factors. These factors include those discussed in this "Risk Factors" section of this Annual Report on Form 10-K and others such as:

- delay or failure in initiating or completing preclinical studies or clinical trials, or unsatisfactory results of these trials and the resulting impact on ongoing product development;
- the success, progress, timing and costs of our efforts to evaluate or consummate various strategic alternatives if in the best interests of our stockholders;
- our ability to re-list our common stock on a national securities exchange, whether through a new listing or by completing a strategic transaction;
- announcements regarding equity or debt financing transactions;
- sales or potential sales of substantial amounts of our common stock or securities convertible into our common stock;
- announcements about us or about our competitors including clinical trial results, regulatory approvals, or new product candidate introductions;
- developments concerning our development partner, licensors or product candidate manufacturers;
- litigation and other developments relating to our patents or other proprietary rights or those of our competitors;
- conditions in the pharmaceutical or biotechnology industries and the economy as a whole;
- governmental regulation and legislation;
- recruitment or departure of members of our board of directors, management team or other key personnel;
- changes in our operating results;
- any financial projections we may provide to the public, any changes in these projections, our failure to meet these projections, or changes in recommendations by any securities analysts that elect to follow our common stock;
- change in securities analysts' estimates of our performance, or our failure to meet analysts' expectations; and
- price and volume fluctuations in the overall stock market or resulting from inconsistent trading volume levels of our shares.

In recent years, the stock market in general, and the market for pharmaceutical and biotechnological companies in particular, has experienced extreme price and volume fluctuations that have often been unrelated or disproportionate to changes in the operating performance of the companies whose stock is experiencing those price and volume fluctuations. Broad market and industry factors may seriously affect the market price of our common stock, regardless of our actual operating performance.

Our common stock may be considered to be a "penny stock" and, as such, any market for our common stock may be further limited by certain SEC rules applicable to penny stocks.

To the extent the price of our common stock remains below $5.00 per share, our common stock may be subject to certain "penny stock" rules promulgated by the SEC. Those rules impose certain sales practice requirements on brokers who sell penny stock to persons other than established customers and accredited investors (generally institutions with assets in excess of $5,000,000 or individuals with net worth in excess of $1,000,000). For transactions covered by the penny stock rules, the broker must make a special suitability determination for the purchaser and receive the purchaser's written consent to the transaction prior to the sale. Furthermore, the penny stock rules generally require, among other things, that brokers engaged in secondary trading of penny stocks provide customers with written disclosure documents, monthly statements of the market value of penny stocks, disclosure of the bid and asked prices and disclosure of the compensation to the brokerage firm and disclosure of the sales person working for the brokerage firm. These rules and regulations adversely affect the ability of brokers to sell our common stock and limit the liquidity of our common stock.

In addition, under applicable SEC rules and interpretations, issuers of penny stocks are subject to disclosure requirements that can increase the cost and complexity of registering shares for sale in a public offering, including a public offering proposed to be made to facilitate sales by existing stockholders. These penny stock disclosure requirements may pose challenges or impediments to achieving our goals of increasing our public float and the liquidity of the trading market for our shares.

Substantial future sales of shares by existing stockholders, or the perception that such sales may occur, could cause our stock price to decline.

If our existing stockholders, particularly our directors, executive officers and the holders of more than 5% of our common stock, or their affiliates or associates, sell substantial amounts of our common stock in the public market, or are perceived by the public market as intending to sell substantial amounts of our common stock, the trading price of our common stock could decline significantly. As of March 23, 2018, we had 109,207,786 shares of common stock outstanding, of which 100,683,750 shares were held by directors, officers and stockholders who hold greater than 5% of our common stock.

If securities analysts do not publish research or publish unfavorable research about our business, our stock price and trading volume could decline.

The trading market for a company's common stocks often is based in part on the research and reports that securities and industry analysts publish about the company. We are not currently aware of any well-known analysts that are covering our common stock, and without analyst coverage it could be hard to generate interest in investments in our common stock. Furthermore, if analyst coverage does develop, and an analyst downgrades our stock or publishes unfavorable research about our business, or if our clinical trials or operating results fail to meet the analysts' expectations, our stock price would likely decline.

We have never paid and do not intend to pay cash dividends and, consequently, your ability to achieve a return on your investment in our common stock will depend on appreciation in the price of our common stock.

We have never paid cash dividends on any of our capital stock, and we currently intend to retain future earnings, if any, to fund the development and growth of our business. Therefore, you are not likely to receive any dividends on our common stock for the foreseeable future. Since we do not intend to pay dividends, your ability to receive a return on an investment in our common stock will depend on any future appreciation in the market value of our common stock. There is no guarantee that our common stock will appreciate or even maintain the price at which you purchased it.

Anti-takeover provisions in our charter documents and Delaware law, could discourage, delay, or prevent a change in control of our company and may affect the trading price of our common stock.

We are a Delaware corporation and the anti-takeover provisions of the Delaware General Corporation Law may discourage, delay, or prevent a change in control by prohibiting us from engaging in a business combination with an interested stockholder for a period of three years after the person becomes an interested stockholder, even if a change in control would be beneficial to our existing stockholders.

Our amended and restated certificate of incorporation, as amended (the "Charter"), and our second amended and restated bylaws (the "Bylaws") may discourage, delay, or prevent a change in our management or control over us that stockholders may consider favorable. Our Charter and Bylaws:

- provide that vacancies on our board of directors, including newly created directorships, may be filled only by a majority vote of directors then in office;
- do not provide stockholders with the ability to cumulate their votes; and
- require advance notification of stockholder nominations and proposals.

In addition, effective February 26, 2018, our Charter permits the Board to issue up to 25,000,000 shares of Preferred Stock, with such powers, rights, terms and conditions as may be designated by the Board upon the issuance of shares of Preferred Stock at one or more times in the future. Specifically, the Charter permits the Board to approve the future issuance of all or any shares of the Preferred Stock in one or more series, to determine the number of shares constituting any series and to determine any voting powers, conversion rights, dividend rights, and other designations, preferences, limitations, restrictions and rights relating to such shares without any further authorization by our stockholders. The Board's power to issue Preferred Stock could have the effect of delaying, deterring or preventing a transaction or a change in control of our company that might otherwise be in the best interest of our stockholders.

We are an emerging growth company and the extended transition period for complying with new or revised financial accounting standards and reduced disclosure and governance requirements applicable to emerging growth companies could make our common stock less attractive to investors.

We are an emerging growth company. Under the JOBS Act, emerging growth companies can delay adopting new or revised accounting standards until such time as those standards apply to private companies. We plan to avail ourselves of this exemption from new or revised accounting standards and, therefore, we may not be subject to the same new or revised accounting standards as other public companies that are not emerging growth companies.

For as long as we continue to be an emerging growth company, we also intend to take advantage of certain other exemptions from various reporting requirements that are applicable to other public companies including, but not limited to, reduced disclosure obligations regarding executive compensation in our periodic reports and proxy statements, exemptions from the requirements of holding a nonbinding advisory stockholder vote on executive compensation and any golden parachute payments not previously approved, exemption from the requirement of auditor attestation in the assessment of our internal control over financial reporting and exemption from any requirement that may be adopted by the Public Company Accounting Oversight Board regarding mandatory audit firm rotation or a supplement to the auditor's report providing additional information about the audit and the financial statements (auditor discussion and analysis). If we do, the information that we provide stockholders may be different than what is available with respect to other public companies.

Investors could find our common stock less attractive because we will rely on these exemptions, which may make it more difficult for investors to compare our business with other companies in our industry. If some investors find our common stock less attractive as a result, there may be a less active trading market for our common stock and our stock price may be more volatile. In addition, it may be difficult for us to raise additional capital as and when we need it. If we are unable to do so, our financial condition and results of operations could be materially and adversely affected.

We will remain an emerging growth company until the earliest of (i) the end of the fiscal year in which the market value of our common stock that is held by non-affiliates exceeds $700 million as of the end of the second fiscal quarter, (ii) the end of the fiscal year in which we have total annual gross revenue of $1 billion or more during such fiscal year, (iii) the date on which we issue more than $1 billion in non-convertible debt in a three-year period or (iv) December 31, 2018, the end of the fiscal year following the fifth anniversary of the first sale of our common equity securities pursuant to an effective registration statement filed under the Securities Act.

ITEM 1B. UNRESOLVED STAFF COMMENTS

None.

ITEM 2. PROPERTIES

We lease a facility in Brisbane, California. The lease commenced in April 2016 and was to expire in March 2017. On February 16, 2017, we amended the lease to extend the term of the lease for an additional period of eighteen months such that the lease will expire on September 30, 2018.

ITEM 3. LEGAL PROCEEDINGS

Bankruptcy Proceedings

We filed for protection under Chapter 11 of Title 11 of the United States Code on December 29, 2015, in the United States Bankruptcy Court for the District of Delaware, or the Bankruptcy Court (Case No. 15-12628 (LSS). Our Second Amended Plan of Reorganization, dated May 9, 2016, as amended, or the Plan, was approved by the Bankruptcy Court on June 16, 2016 and went effective on June 30, 2016, or the Effective Date. As of the Effective Date, approximately 195 proofs of claim were outstanding (including claims that were previously identified on the Schedules) totaling approximately $32.0 million.

The reconciliation of certain proofs of claim filed against us in the Bankruptcy Case, including certain General Unsecured Claims, Convenience Class Claims and Other Subordinated Claims, is ongoing. As a result of its examination of the claims, we may ask the Bankruptcy Court to disallow, reduce, reclassify or otherwise adjudicate certain claims we believe are subject to objection or otherwise improper. Under the terms of the Plan, we had until December 27, 2016 to file additional objections to disputed claims, subject to our right to seek an extension of this deadline from the Bankruptcy Court. By Order, dated February 6, 2017, the Bankruptcy Court extended the claims objection deadline to June 26, 2017. By Order dated July 10, 2017, the Bankruptcy Court extended the claims objection deadline to September 25, 2017. By Order dated October 23, 2017, the Bankruptcy Court extended the claims objection deadline to December 26, 2017. By Order dated January 19, 2018, the Bankruptcy Court extended the claims objection deadline to March 26, 2018. We may compromise certain claims with or without specific prior approval of the Bankruptcy Court as set forth in the Plan and may identify additional liabilities that will need to be recorded or reclassified to liabilities subject to compromise. The resolution of such claims could result in material adjustments to our financial statements.

As of December 31, 2017, approximately $0.5 million in claims remain subject to review and reconciliation. We may file objections to these claims after we complete the reconciliation process. As of December 31, 2017, we have recorded $0.06 million related to these claims in Accounts payable and Notes payable to vendors, which represents our best estimate of claims to be allowed by the Bankruptcy Court.

Savant Litigation

On July 10, 2017, we filed a complaint against Savant Neglected Diseases, LLC (“Savant”) in the Superior Court for the State of Delaware, New Castle County (the “Delaware Court”). *KaloBios Pharmaceuticals, Inc. v. Savant Neglected Diseases, LLC*, No. N17C-07-068 PRW-CCLD. We asserted breach of contract and declaratory judgment claims against Savant arising under the MDC Agreement. See Note 6 - “Savant Arrangements” to the accompanying condensed consolidated financial statements for more information about the MDC Agreement. We allege that Savant has breached its MDC Agreement obligations to pay cost overages that exceed a budgetary threshold as well as other related MDC Agreement representations and obligations. In the litigation, we have alleged that as of June 30, 2017, Savant was responsible for aggregate cost overages of approximately $3.4 million, net of a $0.5 million deductible under the MDC. We assert that we are entitled to offset $2.0 million in milestone payments due Savant against the cost overages, such that as of June 30, 2017 Savant owed us approximately $1.4 million.

On July 12, 2017, Savant removed the case to the United States District Court for the District of Delaware, claiming that the action is related to or arises under the bankruptcy court case from which we emerged in July 2016. On July 27, 2017, Savant filed an Answer and Counterclaims. Savant's filing alleges breaches of contracts under the MDC Agreement and the Security Agreement, claiming that we breached its obligations to pay the milestone payments and other related representations and obligations.

On August 1, 2017, we moved to remand the case back to the Delaware Superior Court. Briefing on that motion is completed and awaiting determination by the Bankruptcy Court.

On August 2, 2017, Savant sent a foreclosure notice to us, demanding that we provide the Collateral as defined in the Security Agreement for inspection and possession on August 9, 2017, with a public sale to be held on September 1, 2017. We moved for a Temporary Restraining Order, or TRO, and Preliminary Injunction in the bankruptcy court on August 4, 2017. Savant responded on August 7, 2017. On August 7, 2017, the bankruptcy court granted our motion for a TRO, entering an order prohibiting Savant from collecting on or selling the Collateral, entering our premises, issuing any default notices to us, or attempting to exercise any other remedies under the MDC Agreement or the Security Agreement. The parties have stipulated to continue the provisions of the TRO in full force and effect until further order of the appropriate court.

On January 22, 2018, Savant wrote to the Bankruptcy Court requesting dissolution of the TRO. On January 29, 2018, the Bankruptcy Court granted the Motion to Remand and denied Savant's request to dissolve the TRO, ordering that any request to dissolve the TRO be made to the Delaware Superior Court.

On February 13, 2018 Savant made a letter request to the Delaware Superior Court to dissolve the TRO. Also on February 13, 2018, Humanigen filed its Answer and Affirmative defenses to Savant's Counterclaims. On February 15, 2018 Humanigen filed a letter opposition to Savant's request to dissolve the TRO and requesting a status conference. There have been no further proceedings in this matter to date.

BioWa, Inc. Litigation

On October 17, 2016, Kyowa Hakko Kirin Co., Ltd. and BioWa, Inc. filed a patent infringement Complaint in the U.S. District Court for the Northern District of California against Aragen Bioscience, Inc. and Transposagen Biopharmaceuticals, Inc. ("Defendants"), alleging infringement of three United States Patents that are currently licensed to Humanigen, Inc. (Captioned as *Kyowa Hakko Kirin Co. Ltd. and BioWa, Inc. v. Aragen Bioscience, Inc. and Transposagen Biopharmaceuticals, Inc.*, Case No. 3:16-cv-05993-JD (N.D. Cal.)). On January 17, 2017, the Defendants filed an Amended Answer and Counterclaims. One of the Defendants' counterclaims sought a declaratory judgment that the three asserted patents are invalid. Since then, the litigation has been ongoing and trial is scheduled to begin on June 25, 2018. Fact discovery recently closed, and expert discovery is currently taking place. No dispositive motions have yet been filed. In April 2017, Defendants filed petitions in the U.S. Patent and Trademark Office ("USPTO") for *inter partes* review ("IPR") of the same three patents asserted in the district court patent infringement litigation. In October 2017, the USPTO's Patent Trial and Appeal Board ("PTAB") declined to institute IPR of the patents, holding that Defendants had not shown a reasonable likelihood that they would prevail in showing the unpatentability of even one of the challenged patent claims. In November 2017, Defendants filed requests for rehearing of the PTAB's decision not to institute IPR, and the PTAB denied those requests as well. The PTAB's decision cannot be appealed.

Releases, Exculpation, Injunction and Discharge Provisions

Section 10.3 of the Plan provides certain releases, including the following: (i) releases by us, subject to certain exclusions, of claims and causes of action against (a) our officers, directors, employees, advisors and certain related persons who acted in such capacity on or after the Petition Date and (b) the Black Horse Entities and Nomis, as well as their respective current and former directors and officers, partners, advisors and certain other related parties, or collectively, the Released Parties; (ii) releases by holders of claims and interests, subject to certain exclusions, of claims and causes of action against us and Released Parties; (iii) mutual releases between us and the PIPE Claimants, for the benefit of each and certain related parties, as contemplated by the PIPE Settlement; and (iv) releases as contemplated by the Securities Class Action Settlement. All our claims and causes of action or those of our bankruptcy estate not expressly released by us under the Plan or pursuant to another Bankruptcy Court order are expressly reserved to us under the Plan.

The Plan also contains certain exculpation provisions, which include exculpation from liability, subject to certain exceptions for acts and omissions that are the result of willful misconduct or gross negligence, in favor of us and our directors, officers, employees, advisors and certain other related persons and entities who served in such capacity on or after the Petition Date relating to the bankruptcy proceedings, the negotiation and formulation of the Plan and the related disclosure statement, and the confirmation, consummation and administration of the Plan.

The Plan provides for a discharge of all claims against us to the fullest extent provided under section 1141(d)(1)(A) of the Bankruptcy Code.

Additional Information

For additional information on the foregoing bankruptcy proceeding, including with respect to our bankruptcy related financing arrangements, our arrangements with Savant and details on the Governance Agreement, see Note 2, 6 and 10 to our Consolidated Financial Statements included in Part II, Item 8, “Financial Statements and Supplementary Data” of this Annual Report on Form 10-K, which are incorporated by reference into this Item.

ITEM 4. MINE SAFETY DISCLOSURES

None.

PART II

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

Market Information

Our common stock is currently quoted on the OTCQB Venture Market operated by OTC Markets Group, Inc. under the symbol "HGEN". From January 13, 2016 to June 25, 2017, our common stock was quoted on the OTC Pink marketplace operated OTC Markets Group, Inc. Previously, our common stock was listed on the NASDAQ Global Market under the symbol "KBIO" from its beginning of trading on January 31, 2013 through January 13, 2016. Prior to January 31, 2013, there was no public market for our common stock.

The following table sets forth the high and low intraday sale prices per share of our common stock for the quarterly periods beginning January 1, 2016 through January 13, 2016 as reported by The NASDAQ Global Market. The following table also sets forth the high and low intraday sales prices per share of our common stock for the quarterly periods beginning January 14, 2016 through December 31, 2017 based on information provided by OTC Markets Group, Inc. The over-the-counter market quotations set forth for our common stock reflect inter-dealer prices, without retail mark-up, mark-down or commission and may not necessarily represent actual transactions.

	High	Low
2017		
4th Quarter	$ 1.00	$ 0.13
3rd Quarter	$ 2.60	$ 0.23
2nd Quarter	$ 2.98	$ 1.51
1st Quarter	$ 4.50	$ 1.90
2016		
4th Quarter	$ 4.75	$ 2.17
3rd Quarter	$ 6.00	$ 3.18
2nd Quarter	$ 8.70	$ 2.51
1st Quarter	$ 23.59	$ 1.02

Holders of Common Stock

As of March 23, 2018, we had 109,207,786 shares of common stock outstanding held by approximately 43 stockholders of record. The actual number of stockholders is greater than this number of record holders, and includes stockholders who are beneficial owners, but whose shares are held in street name by brokers and other nominees.

Dividend Policy

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

ITEM 6. SELECTED FINANCIAL DATA

Information requested by this Item is not applicable as we are electing scaled disclosure requirements available to Smaller Reporting Companies with respect to this Item.

ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

You should read the following discussion and analysis together with our Consolidated Financial Statements and the notes thereto included elsewhere in this Annual Report on Form 10-K. This discussion contains forward-looking statements that involve risks and uncertainties. For additional discussion, see "SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS" above.

Overview

We were incorporated on March 15, 2000 in California and reincorporated as a Delaware corporation in September 2001 under the name KaloBios Pharmaceuticals, Inc. We completed our initial public offering in January 2013. Effective August 7, 2017, we changed our legal name to Humanigen, Inc.

We have undergone significant changes since December 2015. As a result of challenges facing us at the time, on December 29, 2015, we filed a voluntary petition for bankruptcy protection under Chapter 11 of Title 11 of the U.S. Bankruptcy Code. On June 30, 2016, our Second Amended Plan of Reorganization, dated May 9, 2016, as amended, or the Plan, became effective and we emerged from our Chapter 11 bankruptcy proceedings. For further information on our bankruptcy and emergence from bankruptcy, see Note 2 to our Consolidated Financial Statements included in Part II, Item 8, "Financial Statements and Supplementary Data" of this Annual Report on Form 10-K .

On January 13, 2016, our common stock was suspended from the Nasdaq Global Market and began trading on the over-the-counter market under the ticker symbol KBIOQ. On January 26, 2016, NASDAQ filed a Form 25 with the Securities and Exchange Commission to complete the delisting of our common stock, and the delisting was effective on February 5, 2016. On June 30, 2016, upon emergence from bankruptcy, the ticker symbol for the trading of our common stock on the over-the-counter market reverted back to KBIO. On June 26, 2017 our common stock began trading on the OTCQB Venture Market under the same ticker symbol. On August 7, 2017, following effectiveness of our previously reported name change to Humanigen, Inc., our common stock began trading on the OTCQB Venture Market under the new ticker symbol "HGEN".

From the time of our emergence from bankruptcy to August 29, 2017, our lead product candidate was benznidazole for the treatment of Chagas disease, a parasitic illness that can lead to long-term heart, intestinal and neurological problems. On June 30, 2016, we acquired certain worldwide rights to benznidazole from Savant Neglected Diseases, LLC, or Savant, and until August 29, 2017, we were primarily focused on the development necessary to seek and obtain approval by the United States Food and Drug Administration, or FDA, for benznidazole and the subsequent commercialization, if approved. According to FDA-issued guidance, benznidazole is eligible for review pursuant to a 505(b)(2) regulatory pathway as a potential treatment for Chagas disease and, if it became the first FDA-approved treatment for Chagas disease, we would have been eligible to receive a Priority Review Voucher ("PRV").

However, on August 29, 2017, the FDA announced it had granted accelerated and conditional approval of a benznidazole therapy manufactured by Chemo Research, S.L., or Chemo, for the treatment of Chagas disease and had awarded that manufacturer a neglected tropical disease PRV. Chemo's benznidazole also received Orphan Drug designation. As a result of FDA's actions and because we no longer expected to be eligible to receive a PRV with our own benznidazole candidate for the treatment of Chagas disease, we immediately ceased development for benznidazole and began assessing a full range of options with respect to our benznidazole assets and development program. We also began an accelerated scientific assessment of emerging new possibilities for our monoclonal antibody assets and development programs

On December 21, 2017, we reached an agreement with our Term Loan Lenders (as defined below) on a series of transactions, including the transfer and assignment of all of our assets related to benznidazole to an affiliate of one of the Term Loan Lenders, providing for, among other things, the satisfaction and extinguishment of our outstanding obligations under our Term Loan Credit Agreement (as defined below). We refer to these transactions herein as the "Restructuring Transactions." On February 27, 2018, we completed the Restructuring Transactions. For further information regarding the Restructuring Transactions, see "Liquidity and Capital Resources" and "Item 1. Business – Restructuring Transactions."

Since the FDA's August 29, 2017 announcement relating to benznidazole, we have shifted our primary focus toward developing our proprietary monoclonal antibody portfolio, which comprises lenzilumab (formerly known as KB003) and ifabotuzumab (formerly known as KB004), for use in addressing significant unmet needs in oncology. Both of these product candidates are in the early stage of development and will require substantial time, expenses, clinical development, testing, and regulatory approval prior to commercialization. Furthermore, neither of these product candidates has advanced into a pivotal registration study and it may be years before such a study is initiated, if at all.

Lenzilumab is a recombinant monoclonal antibody, or mAb, that neutralizes soluble granulocyte-macrophage colony-stimulating factor, or GM-CSF, a critical cytokine in the inflammatory cascade associated with CAR-T-related side effects and in the growth of certain hematologic malignancies, solid tumors and other serious conditions. We expect to study lenzilumab's potential in reducing serious and life-threatening adverse events associated with CAR-T therapy. We have begun to explore lenzilumab's effectiveness in preventing or ameliorating neurotoxicity associated with CAR-T therapy, and potentially cytokine release syndrome or CRS. In addition, we continue dosing in a Phase 1 clinical trial in patients with CMML to identify the maximum tolerated dose, or MTD, or recommended Phase 2 dose of lenzilumab and to assess lenzilumab's safety, pharmacokinetics, and clinical activity. We have fully enrolled the total of 12 patients in the 200, 400 and 600 mg dose cohorts of our CMML trial, and are currently evaluating subjects in the highest dose cohort of 600 mg for continuing accrual. We also plan to review preliminary safety and efficacy results and anticipate completion of the ad hoc interim analysis in the first half of 2018. We may also use the interim data from the lenzilumab CMML Phase 1 study to determine the feasibility of rapidly commencing a Phase 1 study in JMML patients, or to explore progressing directly the CMML development program. JMML is a rare pediatric cancer, is associated with a very high unmet medical need and there are no FDA-approved therapies.

Ifabotuzumab is an anti-Ephrin Type-A receptor 3, or EphA3, mAb that has the potential to offer a novel approach to treating solid tumors and hematologic malignancies, serious pulmonary conditions and as a CAR construct. EphA3 is aberrantly expressed on the surface of tumor cells and stroma cells in certain cancers. We have completed the Phase 1 dose escalation portion of a Phase 1/2 clinical trial in ifabotuzumab in multiple hematologic malignancies for which the preliminary results were published in the journal Leukemia Research in 2016. An investigator-sponsored Phase 0/1 radio-labeled imaging trial of ifabotuzumab in glioblastoma multiforme, a particularly aggressive and deadly form of brain cancer, has begun at the Olivia-Newton John Cancer Institute in Melbourne, Australia. We are currently exploring partnering opportunities to enable further development of ifabotuzumab.

Lenzilumab and ifabotuzumab were each developed with our proprietary, patent-protected Humaneered® technology, which consists of methods for converting antibodies (typically murine) into engineered, high-affinity antibodies designed for human therapeutic use, typically for chronic conditions.

We have incurred significant losses and had an accumulated deficit of $262.5 million as of December 31, 2017. We expect to continue to incur net losses for the foreseeable future as we develop our drug candidates, expand clinical trials for our drug candidates currently in clinical development, expand our development activities and seek regulatory approvals. Significant capital is required to continue to develop and to launch a product and many expenses are incurred before revenue is received, if any. We are unable to predict the extent of any future losses or when we will receive revenue or become profitable, if at all.

Despite completing the Restructuring Transactions, we will require substantial additional capital to continue as a going concern and to support our business efforts, including obtaining regulatory approvals for our product candidates, clinical trials and other studies, and, if approved, the commercialization of our product candidates. We anticipate that we will seek additional financing from a number of sources, including, but not limited to, the sale of equity or debt securities, strategic collaborations, and licensing of our product candidates. Additional funding may not be available to us on a timely basis or at acceptable terms, if at all. Our ability to access capital when needed is not assured and, if not achieved on a timely basis, would materially harm our business, financial condition and results of operations. If adequate funds are not available, we may be required to delay, reduce the scope of, or eliminate one or more of our development programs. We may also be required to sell or license to others our technologies, product candidates, or development programs that we would have preferred to develop and commercialize ourselves and on less than favorable terms, if at all. If in the best interests of our stockholders, we may also find it appropriate to enter into a strategic transaction that could result in, among other things, a sale, merger, consolidation or business combination.

If management is unsuccessful in efforts to raise additional capital, based on our current levels of operating expenses, our current capital is not expected to be sufficient to fund our operations for the next twelve months. These conditions raise substantial doubt about our ability to continue as a going concern. The Report of Independent Registered Public Accounting Firm at the beginning of the consolidated financial statements included in Part II, Item 8, “Financial Statements and Supplementary Data” of this Annual Report on Form 10-K includes an explanatory paragraph about our ability to continue as a going concern.

The consolidated financial statements for the year ended December 31, 2017 were prepared on the basis of a going concern, which contemplates that we will be able to realize our assets and discharge liabilities in the normal course of business. Our ability to meet our liabilities and to continue as a going concern is dependent upon the availability of future funding. The financial statements do not include any adjustments that might be necessary if we are unable to continue as a going concern.

Critical Accounting Policies and Use of Estimates

Our management’s discussion and analysis of our financial condition and results of operations is based on our consolidated financial statements, which have been prepared in accordance with accounting principles generally accepted in the United States, or GAAP. The preparation of our financial statements in conformity with GAAP requires our management to make estimates and assumptions that affect the amounts and disclosures reported in the consolidated financial statements and accompanying notes. Actual results could differ materially from those estimates. Our management believes judgment is involved in determining revenue recognition, valuation of financing derivative, the fair value-based measurement of stock-based compensation, accruals and warrant valuations. Our management evaluates estimates and assumptions as facts and circumstances dictate. As future events and their effects cannot be determined with precision, actual results could differ from these estimates and assumptions, and those differences could be material to the consolidated financial statements. If our assumptions change, we may need to revise our estimates, or take other corrective actions, either of which may also have a material adverse effect on our statements of operations, liquidity and financial condition.

We are an emerging growth company under the JOBS Act. Emerging growth companies can delay adopting new or revised accounting standards until such time as those standards apply to private companies. We have elected to avail ourselves of this exemption from new or revised accounting standards and, therefore, we may not be subject to the same new or revised accounting standards as other public companies that are not emerging growth companies.

While our significant accounting policies are described in more detail in Note 3 to our consolidated financial statements included in Part II, Item 8, “Financial Statements and Supplementary Data” of this Annual Report on Form 10-K, we believe the following accounting policies to be critical to the judgments and estimates used in the preparation of our financial statements.

Accrued Research and Development Expenses

As part of the process of preparing our consolidated financial statements, we are required to estimate our accrued research and development expenses. This process involves reviewing contracts and purchase orders, reviewing the terms of our license agreements, communicating with our applicable personnel to identify services that have been performed on our behalf, and estimating the level of service performed and the associated cost incurred for the service when we have not yet been invoiced or otherwise notified of actual cost. Some of our service providers invoice us monthly in arrears for services performed. We make estimates of our accrued expenses as of each balance sheet date based on facts and circumstances known to us at that time. Examples of estimated accrued research and development expenses include fees to:

- contract research organizations and other service providers in connection with clinical studies;
- contract manufacturers in connection with the production of clinical trial materials; and
- vendors in connection with preclinical development activities.

We base our expenses related to clinical studies on our estimates of the services received and efforts expended pursuant to contracts with multiple research institutions and contract research organizations that conduct and manage clinical studies on our behalf. The financial terms of these agreements are subject to negotiation, vary from contract to contract, and may result in uneven payment flows and expense recognition. Payments under some of these contracts depend on factors such as the successful enrollment of patients and the completion of clinical trial milestones. In accruing these costs, we estimate the time period over which services will be performed for which we have not been invoiced and the level of effort to be expended in each period. If the actual timing of the performance of services or the level of effort varies from our estimate, we adjust the accrual accordingly. Our understanding of the status and timing of services performed relative to the actual status and timing of services performed may vary and may result in our reporting changes in estimates in any particular period.

Stock-Based Compensation

Our stock-based compensation expense for stock options is estimated at the grant date based on the award's fair value as calculated by the Black-Scholes option pricing model and is recognized as expense over the requisite service period. The Black-Scholes option pricing model requires various highly judgmental assumptions including expected volatility and expected term. The expected volatility is based on the historical stock volatilities of several of our publicly listed peers over a period equal to the expected terms of the options as we do not have a sufficient trading history to use the volatility of our own common stock. To estimate the expected term, we have opted to use the simplified method, which is the use of the midpoint of the vesting term and the contractual term. If any of the assumptions used in the Black-Scholes option pricing model changes significantly, stock-based compensation expense may differ materially in the future from that recorded in the current period. In addition, we are required to estimate the expected forfeiture rate and only recognize expense for those shares expected to vest. We estimate the forfeiture rate based on historical experience and our expectations regarding future pre-vesting termination behavior of employees. To the extent our actual forfeiture rate is different from our estimate, stock-based compensation expense is adjusted accordingly.

Revenue Recognition

Our contract revenue to date has been generated primarily through license agreements and research and development collaboration agreements. Contract revenue may include nonrefundable, non-creditable upfront fees, funding for research and development efforts, and milestone or other contingent payments for achievements with regards to our licensed products. We did not materially modify any previous material collaboration agreements or enter into any new such agreements from 2011 through the end of 2016. All collaboration agreements have been accounted for in accordance with the accounting guidance applicable to such arrangements prior to our adoption of Accounting Standards Update, or ASU, 2009-13, Multiple-Deliverable Revenue Arrangements, and ASU 2010-17, Revenue Recognition—Milestone Method, each of which we adopted on a prospective basis on January 1, 2011.

We recognize revenue when persuasive evidence of an arrangement exists, transfer of technology has been completed, services have been performed or products have been delivered, the fee is fixed and determinable, and collection is reasonably assured.

For multiple element arrangements, we evaluate whether the components of each arrangement are to be accounted for as separate units of accounting based on certain criteria. Upfront payments for licensing our intellectual property to date have not been separable from the activity of providing research and development services because the license has not been assessed to have stand-alone value separate from the research and development services provided. Such upfront payments are recorded as deferred revenue in the balance sheet and are recognized as contract revenue over the contractual or estimated substantive performance period, which is consistent with the term of the research and development obligations contained in the research and development collaboration agreement.

Payments resulting from our research and development efforts under license agreements are recognized as the activities are performed and are presented on a gross basis. Revenue is recorded gross because we act as a principal, with discretion to choose suppliers, bear credit risk, and perform part of the services.

Substantive, at-risk milestone payments are recognized as revenue when the milestone is achieved and collectability is reasonably assured. When contingent payments are not for substantive and at-risk milestones, revenue is recognized over the estimated remaining term of the related service period or, if there are no continuing performance obligations under the arrangement, upon receipt provided that collection is reasonably assured and other revenue recognition criteria have been satisfied.

Financial Reporting in Reorganization

Liabilities subject to compromise is our estimate of known or potential pre-petition claims to be resolved in connection with our Chapter 11 bankruptcy case (the "Bankruptcy Case"). Such claims remain subject to future adjustments. Payment terms for liabilities subject to compromise are established as part of the Plan.

We applied Financial Accounting Standards Board ("FASB") Accounting Standards Codification ("ASC") 852, *Reorganizations*, which is applicable to companies under bankruptcy protection, and requires amendments to the presentation of key financial statement line items. It requires that the financial statements for periods subsequent to the Chapter 11 filing distinguish transactions and events that are directly associated with the reorganization from the ongoing operations of the business. Revenues, expenses, realized gains and losses, and provisions for losses that can be directly associated with the reorganization and restructuring of the business must be reported separately as reorganization items in the Consolidated Statements of Operations and Comprehensive Loss. The balance sheet must distinguish pre-petition liabilities subject to compromise from both those pre-petition liabilities that are not subject to compromise and from post-petition liabilities. Liabilities that may be subject to a plan of reorganization must be reported at the amounts expected to be allowed in the Company's Chapter 11 case, even if they may be settled for lesser amounts as a result of the plan of reorganization or negotiations with creditors. In addition, cash used by reorganization items are disclosed separately in the Consolidated Statements of Cash Flow.

In conjunction with our exit from bankruptcy on June 30, 2016, we reclassified $4.8 million of Liabilities subject to compromise in the amounts of $2.8 million, $0.8 million and $1.2 million to Accounts payable, Accrued expenses and Notes payable to vendors, respectively. For the year ended December 31, 2016, we paid approximately $3.4 million related to Liabilities subject to compromise, issued $1.2 million in promissory notes to vendors, wrote off approximately $0.3 million in deferred rent liabilities related to its lease termination and reversed approximately $0.1 million in accrued expenses related to a claim that has been denied by the court, which as discussed above, were previously included in Liabilities subject to compromise. As of December 31, 2016, approximately $0.4 million and $1.2 million remain in Accounts payable and Notes payable to vendors, respectively. As of December 31, 2017, approximately $0.06 million and $1.3 million remain in Accounts payable and Notes payable to vendors, respectively. Remaining amounts will be paid based on terms of the Plan.

Reorganization items, net consisted of the following charges ($000's):

	Year ended December 31, 2017	2016
Legal fees	$ 297	$ 4,870
Professional fees	34	1,218
Debtor-in-possession financing costs	-	1,143
Beneficial conversion on debtor-in-possession financing	-	484
Fair value of shares issued to officer and directors for service in bankruptcy	-	700
Gain on lease termination	-	(227)
Total reorganization items, net	**$ 331**	**$ 8,188**

Recently Issued Accounting Pronouncements

For a discussion of new accounting pronouncements, see Note 3, *Summary of Significant Accounting Policies* in the notes to the consolidated financial statements included elsewhere in this Annual Report on Form 10-K.

Results of Operations

General

We have not generated net income from operations, except for the year ended December 31, 2007, during which we recognized a one-time license payment from Novartis. At December 31, 2017, we had an accumulated deficit of $262.5 million, primarily as a result of research and development and general and administrative expenses as well as costs incurred in reorganization. While we may in the future generate revenue from a variety of sources, including license fees, milestone payments, and research and development payments in connection with strategic partnerships, our product candidates are at an early stage of development and may never be successfully developed or commercialized. Accordingly, we expect to continue to incur substantial losses from operations for the foreseeable future, and there can be no assurance that we will ever generate significant revenue or profits.

Research and Development Expenses

Conducting research and development is central to our business model. We expense both internal and external research and development costs as incurred. We track external research and development costs incurred by project for each of our clinical programs. We began tracking our external costs by project beginning January 1, 2008, and we have continued to refine our systems and our methodology in tracking external research and development costs. Our external research and development costs consist primarily of:

- expenses incurred under agreements with contract research organizations, investigative sites, and consultants that conduct our clinical trials and a substantial portion of our preclinical activities;
- the cost of acquiring and manufacturing clinical trial and other materials; and
- other costs associated with development activities, including additional studies.

Other research and development costs consist primarily of internal research and development costs such as salaries and related fringe benefit costs for our employees (such as workers compensation and health insurance premiums), stock-based compensation charges, travel costs, lab supplies, overhead expenses such as rent and utilities, and external costs not allocated to one of our clinical programs. Internal research and development costs generally benefit multiple projects and are not separately tracked per project. The following table shows our total research and development expenses for the years ended December 31, 2017 and 2016 ($000's):

	Year Ended December 31,	
	2017	2016
External Costs		
KB001	$ -	$ 22
Lenzilumab	2,271	304
Ifabotuzumab	145	214
Benznidazole	6,959	5,543
Internal costs	1,790	4,366
Total research and development	$ 11,165	$ 10,449

We expect to continue to incur substantial expenses related to our research and development activities for the foreseeable future as we continue product development including our development efforts for lenzilumab in the prevention of neurotoxicity and potentially CRS associated with CAR-T-cell treatment and in CMML. Depending on the results of our development efforts we expect to incur substantial costs to prepare for potential clinical trials and activities for lenzilumab.

General and Administrative Expenses

General and administrative expenses consist principally of personnel-related costs, professional fees for legal, consulting, audit and tax services, rent and other general operating expenses not otherwise included in research and development. For the years ended December 31, 2017 and 2016, general and administrative expenses were $7.9 million and $8.4 million, respectively.

Comparison of Years Ended December 31, 2017 and 2016 ($000's)

	Year Ended December 31,		Increase/ (Decrease)	
	2017	2016	$'s	%
Operating expenses:				
Research and development	$ 11,165	$ 10,449	$ 716	7
General and administrative	7,866	8,376	(510)	(6)
Loss from operations	(19,031)	(18,825)	206	1
Interest expense	(3,056)	(131)	2,925	2,233
Other income, net	431	125	306	245
Reorganization items, net	(331)	(8,188)	(7,857)	(96)
Net loss	$ (21,987)	$ (27,019)	$ (5,032)	(19)

Research and development expenses increased $0.7 million in 2017 from $10.4 million for the year ended December 31, 2016 to $11.2 million for the year ended December 31, 2017. The increase is primarily attributable to increased spending of $1.9 million on lenzilumab primarily related to the CMML study and $1.4 million on benznidazole development for Chagas disease. We expect our research and development expenses will decrease in 2018 compared to 2017, primarily due to the discontinuation of development of benznidazole.

General and administrative expenses decreased $0.5 million in 2017 from $8.4 million for the year ended December 31, 2016 to $7.9 million for the year ended December 31, 2017. The decrease in general and administrative expenses is primarily attributable to lower insurance and accounting services costs. We expect our general and administrative expenses to continue to decrease in 2018 as compared to 2017 levels.

Reorganization items, net decreased $7.9 million in 2017, from $8.2 million for the year ended December 31, 2016 to $0.3 million for the year ended December 31, 2017. Reorganization items, net for the year ended December 31, 2016 primarily consisted of amounts incurred related to the Plan in 2016, including legal fees of $4.9 million, $1.2 million in other professional fees, $0.7 million related to the fair value of common shares issue to our CEO and two directors for their service in bankruptcy, $1.1 million in legal and other costs related to the debtor-in-possession financing, $0.5 million related to the beneficial conversion expense recognized in connection with the debtor-in-possession financing, offset by a net gain on the termination of the South San Francisco lease of $0.2 million. Reorganization items, net for the year ended December 31, 2017 primarily consisted of legal fees.

Interest expense of $0.13 million recognized for the year ended December 31, 2016 is comprised of $0.05 million related to the debtor-in-possession financing entered into on April 1, 2016, $0.06 million related to the promissory notes issued to certain vendors in accordance with the Plan and $0.02 million related to interest and loan issuance costs related to the Term Loans (as defined below). Interest expense recognized of $3.0 million for the year ended December 31, 2017 is comprised of $2.9 million related to interest and loan issuance costs related to the Term Loans and $0.1 million related to the promissory notes issued to certain vendors in accordance with the Plan.

Other income, net for the year ended December 31, 2017 primarily consisted of settlements for a reduction in amounts owed to certain vendors. Other income, net for the year ended December 31, 2016 primarily consisted of foreign currency gains related to the payment of bankruptcy liabilities.

Income Taxes

As of December 31, 2017, we had net operating loss carryforwards of approximately $166 million to offset future federal income taxes which expire in the years 2021 through 2037, and approximately $156 million that may offset future state income taxes which expire in the years 2018 through 2037. Current federal and state tax laws include substantial restrictions on the utilization of net operating losses and tax credits in the event of an ownership change. Even if the carryforwards are available, they may be subject to annual limitations, lack of future taxable income, or future ownership changes that could result in the expiration of the carryforwards before they are utilized. At December 31, 2017, we recorded a 100% valuation allowance against our deferred tax assets of approximately $52 million, as at that time our management believed it was uncertain that they would be fully realized. If we determine in the future that we will be able to realize all or a portion of our deferred tax assets, an adjustment to our valuation allowance would increase net income in the period in which we make such a determination.

Liquidity and Capital Resources

Since our inception, we have financed our operations primarily through proceeds from the public offerings and private placements of our common stock, private placements of our preferred stock, debt financings, interest income earned on cash, and cash equivalents, and marketable securities, borrowings against lines of credit, and receipts from agreements with Sanofi and Novartis. At December 31, 2017, we had cash and cash equivalents of $0.7 million. As of March 23, 2018, we had cash and cash equivalents of $1.6 million.

The following table sets forth the primary sources and uses of cash and cash equivalents for each of the periods presented below ($000's):

	Year Ended December 31,	
	2017	2016
Net cash (used in) provided by:		
Operating activities	$ (14,249)	$ (20,961)
Investing activities	-	103
Financing activities	12,080	15,333
Net decrease in cash and cash equivalents	$ (2,169)	$ (5,525)

Net cash used in operating activities was $14.2 million and $21.0 million for the years ended December 31, 2017 and 2016, respectively. The primary use of cash in 2016 was to fund our operations related to the Plan. Cash used in operating activities of $21.0 million for the year ended December 31, 2016 primarily related to our net loss of $27.0 million, adjusted for non-cash items, such as $1.6 million related to reorganization items related to the debtor-in-possession financing, $1.4 million related to the issuance of stock to our CEO and two directors, $0.4 million related to the issuance of warrants to Savant in connection with the acquisition of certain rights related to the benznidazole license, $0.2 million related to a net gain on lease termination, other non-cash items of $1.2 million and net cash outflows of $1.6 million related to changes in operating assets and liabilities, primarily Liabilities subject to compromise, Accounts payable and Accrued expenses. Cash used in operating activities in 2017 primarily related to our net loss of $21.9 million, adjusted for non-cash items, such as $3.0 million in noncash interest expense, $2.1 million in stock-based compensation, and net increases in working capital items, primarily $2.6 million of Accrued expenses.

Net cash provided by investing activities was $0.1 million for the year ended December 31, 2016, primarily related to the reduction in restricted cash related to the termination of our office lease in South San Francisco.

Net cash provided by financing activities was $12.1 million for the year ended December 31, 2017 related to the Term Loans (as defined below). Net cash provided by financing activities was $15.3 million for the year ended December 31, 2016 related to the debtor-in-possession and bankruptcy-related equity financings and proceeds from the Term Loans (as defined below).

In connection with our emergence from bankruptcy, we closed an $11 million financing that provided the funds required to enable our exit from Chapter 11 as well as to fund our current working capital needs. In December 2016, we entered into a Credit and Security Agreement (as amended, the "Term Loan Credit Agreement") providing for an original $3.0 million credit facility (the "December 2016 Term Loan"), net of certain fees and expenses. On March 21, 2017, we entered into an amendment to the Term Loan Credit Agreement to obtain an additional $5.5 million (the "March 2017 Term Loan"), net of certain fees and expenses, providing additional working capital. On July 8, 2017, we entered into a second amendment to the Term Loan Credit Agreement to obtain an additional $5.0 million (the "July 2017 Term Loan"), net of certain fees and expenses, providing additional working capital. As of the third quarter of 2017, we had received the entire amount available under the Term Loan Credit Agreement.

On December 21, 2017, we entered into a Securities Purchase and Loan Satisfaction Agreement (the "Purchase Agreement") and a Forbearance and Loan Modification Agreement (the "Forbearance Agreement" and, together with the Purchase Agreement, the "Restructuring Agreements"), each with the Term Loan Lenders, in connection with a series of transactions providing for, among other things, the satisfaction and extinguishment of our outstanding obligations under the Term Loan Credit Agreement and the infusion of $3.0 million of new capital. The Restructuring Transactions were completed on February 27, 2018. For additional information regarding the Restructuring Transactions, see "Restructuring Transactions" in Item 1 of this Annual Report on Form 10-K.

Despite completing the Restructuring Transactions, we will require substantial additional capital to continue as a going concern and to support our business efforts, including obtaining regulatory approvals for our product candidates, lenzilumab and ifabotuzumab, clinical trials and other studies, and, if approved, the commercialization of our product candidates. The amount of capital we will require and the timing of our need for additional capital will depend on many factors, including:

- the type, number, timing, progress, costs, and results of the product candidate development programs that we are pursuing or may choose to pursue in the future;
- the scope, progress, expansion, costs, and results of our pre-clinical and clinical trials;
- the timing of and costs involved in obtaining regulatory approvals;
- the success, progress, timing and costs of our efforts to evaluate or consummate various strategic alternatives if in the best interests of our stockholders;
- our ability to re-list our common stock on a national securities exchange, whether through a new listing or by completing a strategic transaction;
- our ability to establish and maintain development partnering arrangements and any associated funding;
- the emergence of competing products or technologies and other adverse market developments;
- the costs of maintaining, expanding, and protecting our intellectual property portfolio, including potential litigation costs and liabilities;
- the resources we devote to marketing, and, if approved, commercializing our product candidates;
- the scope, progress, expansion and costs of manufacturing our product candidates; and
- the costs associated with being a public company.

We are pursuing efforts to raise additional capital from a number of sources, including, but not limited to, the sale of equity or debt securities, strategic collaborations, and licensing of our product candidates. Additional funding may not be available to us on a timely basis or at acceptable terms, if at all. Our ability to access capital when needed is not assured and, if not achieved on a timely basis, would materially harm our business, financial condition and results of operations. If adequate funds are not available, we may be required to delay, reduce the scope of, or eliminate one or more of our development programs. We may also be required to sell or license to others our technologies, product candidates, or development programs that we would have preferred to develop and commercialize ourselves and on less than favorable terms, if at all. If in the best interests of our stockholders, we may also find it appropriate to enter into a strategic transaction that could result in, among other things, a sale, merger, consolidation or business combination.

If management is unsuccessful in efforts to raise additional capital, based on our current levels of operating expenses, our current capital will not be sufficient to fund our operations for the next twelve months. These conditions raise substantial doubt about our ability to continue as a going concern.

Our common stock currently trades on the OTCQB Venture Market under the ticker symbol “HGEN”. Although our common stock is listed for quotation on the OTCQB Venture Market, trading is limited and an active market for our common stock may never develop in the future, which could harm our ability to raise capital to continue to fund operations.

Contractual Obligations and Commitments

The following table summarizes our contractual obligations at December 31, 2017 and the effect such obligations are expected to have on our liquidity and cash flow in future years. ($000's)

	Total	Less than 1 year	1 to 3 years	4 to 5 years	After 5 years
Lease obligations	$ 202	$ 202	$ -	$ -	$ -
Principal Payments on term loans	16,308	16,308	-	-	-
Interest payments on term loans	1,032	1,032	-	-	-
Commitment fees on term loans	678	678	-	-	-
Principal payments on notes payable to vendors	1,174	-	1,174	-	-
Interest payments on notes payable to vendors	177	-	177	-	-
Total	$ 19,571	$ 18,220	$ 1,351	$ -	$ -

Operating Leases

Per the terms of our former lease agreement, we had the option to terminate the lease after 36 months, subject to additional fees and expenses. In March 2016, we entered into a termination agreement, or the Lease Termination Agreement, related to the lease of this facility. The Lease Termination Agreement, approved by order of the Bankruptcy Court issued March 15, 2016, waived all damages related to early termination of the lease, relieved us of March rental expenses and set an effective termination date of March 31, 2016.

Concurrent with the termination of this lease, we entered into a lease agreement for a new facility in Brisbane, California. The new lease commenced in April 2016 and was to expire on March 31, 2017. On February 16, 2017, we amended the lease to extend the term of the lease for an additional period of eighteen months such that the lease will expire on September 30, 2018. The minimum lease payments presented in the table above include payments due under the amended lease that expires on September 30, 2018.

2016 Financing Transactions

2016 Credit Agreement

On April 1, 2016, we entered into the Credit Agreement with Black Horse Capital Master Fund Ltd., as administrative agent and lender ("BHCMF" or "Agent"), Black Horse Capital LP, as a lender ("BHC"), Cheval Holdings, Ltd., as a lender ("Cheval") and Nomis Bay LTD, as a lender ("Nomis" and, together with BHCMF, BHC and Cheval, the "Lenders"). The Credit Agreement provided for a debtor-in-possession credit facility in the original principal amount of $3.0 million (the "Term Loan"). The Credit Agreement provided that the Term Loan will be made by the Lenders at an original discount equal to $0.2 million (the "Upfront Fee") and required the payment by us to the Lenders of a commitment fee equal to $0.2 million (the "Commitment Fee"). In accordance with the terms of the Credit Agreement, we used the proceeds of the Term Loan for working capital, bankruptcy-related costs, costs related to our plan of reorganization, the payment of certain fees and expenses owed to BHCMF and the Lenders in connection with the Credit Agreement and other costs incurred in the ordinary course of business.

The Credit Agreement provided that the outstanding principal balance of the Term Loan, plus accrued and unpaid interest, plus the Upfront Fee, plus the Commitment Fee and all other non-contingent obligations would mature on the earlier of an event of default under the Credit Agreement or the effective date of our plan of reorganization. The Maturity Date was deemed to occur simultaneously with the Effective Date and, accordingly, on June 30, 2016, 2,350,480 shares of common stock were issued to the Lenders in repayment of our debt obligations under the Credit Agreement, including 201,436 shares to BHC, 470,096 shares to BHCMF, 503,708 shares to Cheval, 940,192 shares to Nomis and 235,048 shares to Cortleigh Limited ("Cortleigh"). Pursuant to the terms of the Credit Agreement, we also paid $0.4 million to BHC in payment of its fees and expenses and $0.3 million to Nomis in payment of its fees and expenses.

2016 Securities Agreement

Also on April 1, 2016, we entered into the Securities Purchase Agreement, or the SPA, with the Lenders. The SPA provides for the sale to the Lenders on the closing date of an aggregate of 5,885,000 shares of common stock, subject to adjustment as provided in the SPA, in respect of exit financing in the amount of $11 million (the "Exit Financing") plus an exit financing commitment fee of $0.8 million payable by us to the Lenders, plus payment to the Lenders of their fees and expenses incurred in connection with the Exit Financing and the SPA. Nomis subsequently assigned twenty percent (20%) of its interest in the shares of common stock to be purchased by Nomis under the SPA and the Credit Agreement to Cortleigh (collectively with the Lenders, the "Purchasers").

The issuance of the shares contemplated by the SPA was consummated on the Effective Date, and we issued to the Purchasers an aggregate of 7,147,035 shares of common stock for an aggregate purchase price of $11 million, including 612,501 shares to BHC, 1,429,407 shares to BHCMF, 1,531,610 shares to Cheval, 2,858,814 shares to Nomis and 714,703 shares to Cortleigh. Pursuant to the terms of the SPA, we paid $0.4 million to BHC in payment of its fees and expenses and $0.3 million to Nomis in payment of its fees and expenses.

Notes Payable to Vendors

On June 30, 2016, we issued promissory notes in an aggregate principal amount of approximately $1.2 million to certain claimants in accordance with the Plan. The notes are unsecured, bear interest at 10% per annum and are due and payable in full, including principal and accrued interest on June 30, 2019. As of December 31, 2017, we have accrued $0.2 million in interest related to these promissory notes.

Term Loans

On December 21, 2016, we entered into a Credit and Security Agreement,, as amended on March 21, 2017 and on July 8, 2017 (as amended, the "Term Loan Credit Agreement"), with BHCMF, as administrative agent and lender, and lenders BHC, Cheval and Nomis Bay (collectively the "Term Loan Lenders"). The Term Loan Credit Agreement provided for the following term loans (the "Term Loans") in 2017 and 2016 ($000's):

Term Loan	Proceeds to Company	Fees	Original Principal Amount	Commitement Fee Due at Maturity	Total Due at Maturity
December 2016 Loan	$ 2,993	$ 322	$ 3,315	$ 153	$ 3,468
March 2017 Loan	5,500	478	5,978	275	6,253
July 2017 Loan	5,000	435	5,435	250	5,685

In accordance with the terms of the Term Loan Credit Agreement, we used the proceeds of the Term Loans for general working capital, the payment of certain fees and expenses owed to BHCMF and the Term Loan Lenders and other costs incurred in the ordinary course of business. Dr. Chappell, one our former directors, is an affiliate of each of BHCMF, BHC and Cheval. On November 9, 2017, Dr. Chappell resigned from the Board, effective immediately.

The Term Loans bore interest at 9.00% and were subject to certain customary representations, warranties and covenants, as set forth in the Term Loan Credit Agreement.

Upon the occurrence of any event of default set forth in the Term Loan Credit Agreement, BHCMF had the option of terminating the Term Loan Credit Agreement and declaring all of the Company's obligations immediately payable. The occurrence of an event of default caused the Term Loans to bear interest at a rate per annum equal to 14.00%.

Our obligations under the Term Loan Credit Agreement were secured by a first priority interest in all of our real and personal property, subject only to certain carve outs and permitted liens, as set forth in the Term Loan Credit Agreement.

The outstanding principal balance of the Term Loans, plus accrued interest and fees, were due on the earlier of acceleration after an event of default under the Term Loan Credit Agreement, or October 31, 2017. On October 31, 2017, we obtained a short-term extension of the maturity of our obligations under the Term Loans. On November 16, 2017, we obtained an additional short-term extension of the maturity of our obligations under the Term Loans.

On December 1, 2017, our obligations matured under the Term Loan Credit Agreement. On December 21, 2017, we agreed to enter into a series of transactions (as further described below, the "Restructuring Transactions") providing for, among other things, the satisfaction and extinguishment of our outstanding obligations under the Term Loan Credit Agreement between us and the Term Loan Lenders, and the infusion into the company of $3.0 million of new capital.

The following chart shows the components of our Term Loans (including the Bridge Loan and the Claims Advances, as discussed below) as of December 31, 2017 and 2016 ($000's):

As of December 31, 2017

	Original Principal Amount	Accrued Interest	Loan Balance	Fees	Balance Due
December 2016 Loan	$ 3,315	$ 324	$ 3,639	$ 153	$ 3,792
March 2017 Loan	5,978	452	6,430	275	6,705
July 2017 Loan	5,435	249	5,684	250	5,934
Bridge Loan	1,500	6	1,506	-	1,506
Claims Advances Loan	80	1	81	-	81
Totals	$ 16,308	$ 1,032	$ 17,340	$ 678	$ 18,018

As of December 31, 2016

	Original Principal Amount	Accrued Interest	Loan Balance	Unamortized Fees	Balance Due
December 2016 Loan	$ 3,315	$ 8	$ 3,323	$ (307)	$ 3,016

The Restructuring Transactions were completed on February 27, 2018. For additional information regarding the Restructuring Transactions, see "Restructuring Transactions" in Item 1 of this Annual Report on Form 10-K.

On March 12, 2018, we issued 2,445,557 shares of our common stock for total proceeds of $1.1 million to accredited investors.

Contracts

We are obligated to make future payments to third parties under in-license agreements, including sublicense fees, royalties, and payments that become due and payable on the achievement of certain development and commercialization milestones.

We record upfront and milestone payments made to third parties under licensing arrangements as an expense. Upfront payments are recorded when incurred and milestone payments are recorded when the specific milestone has been achieved.

Indemnification

In the normal course of business, we enter into contracts and agreements that contain a variety of representations and warranties and provide for general indemnifications. Our exposure under these agreements is unknown because it involves claims that may be made against us in the future, but have not yet been made. To date, we have not paid any claims or been required to defend any action related to our indemnification obligations. However, we may record charges in the future as a result of these indemnification obligations.

Off-Balance Sheet Arrangements

We currently have no off-balance sheet arrangements, such as structured finance, special purpose entities, or variable interest entities.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Information requested by this Item is not applicable as we are electing scaled disclosure requirements available to Smaller Reporting Companies with respect to this Item.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

Our Consolidated Financial Statements and The Report of Independent Registered Public Accounting Firm are included in this Annual Report on Form 10-K on pages F-1 through F-34.

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

None.

ITEM 9A. CONTROLS AND PROCEDURES

Evaluation of Disclosure Controls and Procedures

Our management, Chief Executive Officer and Chief Financial Officer, evaluated the effectiveness of our disclosure controls and procedures as of December 31, 2017. The term "disclosure controls and procedures," as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act, means controls and other procedures of a company that are designed to ensure that information required to be disclosed by us in the reports that we file or submit under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms.

Disclosure controls and procedures include, without limitation, controls and procedures designed to ensure that information required to be disclosed by us in the reports that we file or submit under the Exchange Act is accumulated and communicated to our management, including our Chief Executive Officer and Chief Financial Officer, to allow timely decisions regarding required disclosure. Based on this evaluation, and in light of the weaknesses in our internal control over financial reporting described below, our Chief Executive Officer and Chief Financial Officer concluded that our disclosure controls and procedures were not effective as of December 31, 2017.

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 Rule 13a-15(f) and 15d-15(f) under the Exchange Act). Our Chief Executive Officer and Chief Financial Officer assessed the effectiveness of our internal control over financial reporting as of December 31, 2017. In making this assessment, our Chief Executive Officer and Chief Financial Officer used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission, or COSO, in *Internal Control—Integrated Framework*. Based on that assessment and using the COSO criteria, our Chief Executive Officer and Interim Chief Financial Officer have concluded that, as of December 31, 2017, our internal control over financial reporting was not effective because of the material weaknesses described below.

A material weakness is defined as "a deficiency, or a combination of deficiencies in internal control over financial reporting, such that there is a reasonable possibility that a material misstatement of the company's annual or interim financial statements will not be prevented or detected on a timely basis."

The ineffectiveness of our internal control over financial reporting at December 31, 2017, was due to an insufficient degree of segregation of duties amongst our accounting and financial reporting personnel.

During 2018, we intend to work to remediate the material weaknesses identified above, which could include the addition of accounting and financial reporting personnel and/or the engagement of accounting and personnel consultants on a limited-time basis until we add a sufficient number of personnel. However, our current financial position could make it difficult for us to add the necessary resources.

This Annual Report on Form 10-K does not include an attestation report of our registered public accounting firm due to a transition period established by the Jumpstart Our Business Startups Act, or JOBS Act, for emerging growth companies.

Changes in Internal Control Over Financial Reporting

Other than as described above, there has been no change in our internal control over financial reporting during the quarter ended December 31, 2017, that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

Inherent Limitations of Controls

Management does not expect that our disclosure controls and procedures or our internal control over financial reporting will prevent or detect all error and all fraud. Controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving their objectives and management necessarily applies its judgment in evaluating the cost-benefit relationship of possible controls and procedures. Because of the inherent limitations in all control systems, no evaluation of controls can provide absolute assurance that all control issues and instances of fraud, if any, within the Company have been detected. These inherent limitations include the realities that judgments in decision-making can be faulty, and that breakdowns can occur because of a simple error or mistake. Additionally, controls can be circumvented by the individual acts of some persons, by collusion of two or more people, or by management override of the controls. The design of any system of controls also is based in part upon certain assumptions about the likelihood of future events, and there can be no assurance that any design will succeed in achieving its stated goals under all potential future conditions. Over time, controls may become inadequate because of changes in conditions, or deterioration in the degree of compliance with the policies or procedures. Because of the inherent limitations in a cost-effective control system, misstatements due to error or fraud may occur and not be detected.

ITEM 9B. OTHER INFORMATION

None.

PART III

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

Directors

The following table sets forth the names, ages and current positions of members of the Board of Directors, or the Board, of Humanigen, Inc., or the Company or us. Following the table is biographical information for each director, including information on specific experiences, qualifications and skills that support the conclusion that the director should currently serve on the Board.

Name	Age	Principal Occupation	Director Since
Cameron Durrant, M.D., MBA	57	Chairman and Chief Executive Officer, Humanigen, Inc.	2016
Ronald Barliant, JD	72	Of Counsel, Goldberg Kohn, Ltd.	2016
Timothy Morris, CPA	56	Chief Financial Officer, Iovance Biotherapeutics, Inc.	2016
Rainer Boehm, M.D., MBA	57	Former Chief Commercial and Medical Officer and interm Chief Executive Officer at Novartis Pharmaceuticals	2018
Robert Savage, MBA	64	President, Chief Executive Officer and Chairman Strategic Imagery, LLC	2018

Cameron Durrant, M.D., MBA, has served as a member and Chairman of our Board since January 2016, and as our Chief Executive Officer since March 2016. From May 2014 to January 2016, Dr. Durrant served as Founder and Director of Taran Pharma Limited, a private semi-virtual specialty pharma company developing and registering treatments in Europe for orphan conditions. Dr. Durrant served as President and Chief Executive Officer of ECR Pharmaceuticals Co., Inc., a subsidiary of Hi-Tech Pharmacal Co., Inc., from September 2012 to April 2014. From January 2010 to September 2012, Dr. Durrant served as a consultant to several biopharma companies, as the Founder, CEO, CFO and director of PediatRx, Inc. and on the boards of several privately-held healthcare companies. He previously served as CEO of PediaMed Pharmaceuticals and has been a senior executive at Johnson and Johnson, Pharmacia Corporation, GSK and Merck. Dr. Durrant has been a director of Immune Pharmaceuticals Inc. since July 2014 and serves on the boards of directors of several privately held healthcare companies. Dr. Durrant earned his medical degree from the Welsh National School of Medicine, Cardiff, UK, his DRCOG from the Royal College of Obstetricians and Gynecologists, London, UK, his MRCGP from the Royal College of General Practitioners, London, UK, his DipCH from the Melbourne Academy, Australia and his MBA from Henley Management College, Oxford, UK. Dr. Durrant brings to the Board extensive experience as a pharma/biotech entrepreneur, operating executive and board member, as well as his day to day operating experience as our Chief Executive Officer.

Ronald Barliant, JD, has served as a member of our Board since January 2016. Mr. Barliant has been Of Counsel to Goldberg Kohn, Ltd. since January 2016, and immediately prior to that had served as a principal in Goldberg Kohn's Bankruptcy & Creditors' Rights Group since September 2002. He previously served as U.S. bankruptcy judge for the Northern District of Illinois from 1988 to 2002. Mr. Barliant has represented debtors and creditors in complex bankruptcy cases, and counseled major financial institutions, business firms and boards of directors in connection with workouts. He is a member of the board of directors of a closely held information technology company and the board of the estate representative supervising the liquidation of assets in the Global Crossing case. Mr. Barliant brings to the Board valuable experience gained from a distinguished career as a counselor to numerous boards, considered judgment and experience with bankruptcy in the bankruptcy setting, which continues to be relevant as we address the finalization of matters related to our emergence from bankruptcy.

Timothy Morris, CPA has served as a member of our Board since June 2016. Mr. Morris has served as the Chief Financial Officer of Iovance Biotherapeutics, Inc., a biopharmaceutical company, since August 2017. From March 2014 to June 2017 Mr. Morris served as Chief Financial Officer and Head of Business Development of AcelRx Pharmaceuticals, Inc., a specialty pharmaceutical company. From November 2004 to December 2013, Mr. Morris served as Senior Vice President Finance and Global Corporate Development, Chief Financial Officer of VIVUS, Inc. a biopharmaceutical company. Mr. Morris received his BS in Business with an emphasis in Accounting from California State University, Chico, and is a Certified Public Accountant (Inactive). Mr. Morris brings to the Board valuable operational experience with public companies in the biopharmaceutical industry, particularly in the areas of finance and corporate development.

Rainer Boehm, M.D., MBA has served as a member of our Board since February 2018. Mr. Boehm has been a biopharmaceutical industry leader for more than three decades. At Novartis for 29 years, he held roles of increasing responsibility culminating with his position as Chief Commercial and Medical Affairs Officer and as ad interim CEO of Novartis' pharmaceuticals division. His background spans senior leadership, marketing, sales and medical affairs positions in both oncology and pharmaceuticals and he has led regions around the world, including North America, Asia and all emerging markets. Mr. Boehm has overseen the launch and commercialization of many new drugs in his career, including blockbuster breakthroughs Cosentyx and Entresto, and major oncology brands including Afinitor, Exjade, Tasigna, Femara, Zometa and Glivec. Mr. Boehm also currently serves on the board of directors for Cellectis, a clinical-stage biopharmaceutical company focused on immunotherapies based on gene-edited CAR-T cells; as an advisor in leadership development for senior executives at the GLG Institute in New York City; and as a consultant to healthcare companies. He graduated from the medical school at the University of Ulm in Germany and received his MBA from Schiller University at the Strasbourg campus in France. Mr. Boehm was introduced to the Board by Dr. Durrant as a potential candidate and was elected after a review of the above qualifications. Mr. Boehm brings to the Board significant knowledge and experience within the biopharmaceutical industry, as well as financial acumen and operational experience.

Robert Savage, MBA, has served as a member of our Board since March 2018. Mr. Savage is a seasoned executive with more than 40 years of experience in marketing, sales, drug development, operations and business development in the pharmaceutical and biotechnological industries. Moreover, Mr. Savage has served on 12 boards over two decades helping to guide companies and organizations, both public and private. Recently, he has been a director at Depomed, from October 2016 to August 2017; The Medicines Company, from 2003 – 2016; Medworth Acquisition Corporation, from 2013 – 2015; Savient Pharmaceuticals, Inc., from 2012 – 2013; and Epicept Corporation, from 2004 – 2013. He has led multinational groups to successfully execute on corporate strategies to develop, launch and market multiple pharmaceutical brands with sales exceeding $4 billion. Currently, Mr. Savage is the president, chief executive officer and chairman of Strategic Imagery, LLC. He served as group vice president and president, worldwide general therapeutics & inflammation business, at Pharmacia Corporation from 2002 until its acquisition by Pfizer. Prior to his work with Pharmacia, Mr. Savage held leadership positions at Johnson & Johnson, where he was the worldwide chairman of the pharmaceuticals group, with prior senior roles at Ortho-McNeil Pharmaceuticals and Hoffman La-Roche. Mr. Savage earned his MBA in international marketing from Rutgers University in New Jersey. He received his BS in biology from Upsala College.

Additional Information. Upon the emergence from our bankruptcy on June 30, 2016, Dr. Durrant and Messrs. Barliant and Morris were designated (in the case of Dr. Durrant and Mr. Barliant) or appointed (in the case of Mr. Morris) to serve on our Board pursuant to the terms of the Stock Purchase Agreement discussed in Item 13 below. Accordingly, Dr. Durrant continued to serve on the Board as a joint designee of the Black Horse Entities and Nomis Bay, and Mr. Barliant was designated by the Black Horse Entities. Mr. Morris was appointed by Nomis Bay.

Executive Officers

The following table sets forth the names, ages and current positions of each of our current executive officers. Following the table is biographical information for each executive officer not currently serving as a director.

Name	Age	Position
Cameron Durrant, M.D., MBA	57	Chief Executive Officer
Greg Jester	50	Chief Financial Officer

Cameron Durrant, M.D, MBA has served as our Chief Executive Officer since March 2016. See "Directors" for Dr. Durrant's biographical information.

Greg Jester has served as of Chief Financial Officer since September 2017. Prior to his appointment as Chief Financial Officer, Mr. Jester served as Vice President, Finance, for Tris Pharma, Inc., a specialty pharmaceutical company, from May 2015 to August 2017. From August 2014 to May 2015, Mr. Jester served as interim controller for Virtus Pharmaceuticals, LLC, a $40 million generic pharmaceutical company. He also served as a financial consultant to Cormedix, Inc., a publicly traded commercial drug device company, from March 2014 to August 2014. From July 2013 to December 2013, Mr. Jester served as Chief Financial Officer and Partner for Madden Global Solutions, Inc., a food brokerage serving warehouse club and chain drug stores, and served as Chief Financial Officer of House Party, Inc., a social media marketing company, from January 2011 to June 2013. Mr. Jester has held CFO roles at numerous private and publicly-owned pharmaceutical companies, including Alvogen Group Inc. and Innovive Pharmaceuticals, Inc. Mr. Jester holds a Bachelor of Science in business administration from the University of Richmond.

Section 16(a) Beneficial Ownership Reporting Compliance

Section 16(a) of the Securities Exchange Act of 1934, as amended, or the Exchange Act, requires our directors, executive officers and 10% stockholders to file reports of ownership of our equity securities. To our knowledge, based solely on review of the copies of such reports furnished to us related to the year ended December 31, 2017, all such reports were made on a timely basis, except that a Form 3 and a Form 4 were filed late by Mr. Jester in connection with his appointment as our Chief Financial Officer in September 2017 and the corresponding grant of stock options to purchase 150,000 shares of our common stock in connection with such appointment on September 5, 2017.

Code of Ethics

We have adopted a Code of Business Conduct that applies to all of our directors, officers and employees, including our principal executive officer and principal financial officer. The Code of Business Conduct is posted on our website at *http://ir.humanigen.com/corporate-governance.cfm*.

Audit Committee Matters

We have established an audit committee of the Board, which is currently comprised of Mr. Morris, as chair of the Committee, Mr. Boehm, and Mr. Savage. The Board has determined that Mr. Morris is an audit committee financial expert. Because we are not listed on a national securities exchange and there are no listing standards applicable to us, the Board makes determinations as to director independence based on the definition under the NASDAQ rules. Consistent with the discussion in Item 13 below regarding director independence, the Board has determined that each member of the Audit Committee is currently independent.

ITEM 11. EXECUTIVE COMPENSATION

Summary Compensation Table

The following summary compensation table shows, for the fiscal years ended December 31, 2017 and December 31, 2016, information regarding the compensation awarded to, earned by or paid to our most highly compensated executive officers for 2017, and all individuals serving as our principal financial officer during the fiscal year ended December 31, 2017. We refer to these officers as our "named executive officers."

Name and Principal Position	Year	Salary ($)	Bonus ($)(8)	Stock Awards ($)(5)	Option Awards ($)(6)	All Other Compensation ($)(7)	Total ($)
Cameron Durrant, M.D., MBA (1)	2017	600,000	180,000	-	-	-	780,000
Chairman & Chief Executive Officer	2016	500,000	126,000	608,768	2,312,588	16,833	3,564,189
Morgan Lam (2)	2017	380,000	-	-	190,440	-	570,440
Former Chief Scientific Officer	2016	357,500	70,000	-	221,720	-	649,220
Greg Jester (3)	2017	96,667	145,000	-	33,120	-	274,787
Chief Financial Officer							
David L. Tousley, MBA, CPA (4)	2017	-	-	-	184,920	310,385	495,305
Former Interim Chief Financial Officer	2016	-	-	-	-	333,788	333,788

(1) Appointed as Chairman January 7, 2016 and as Chief Executive Officer on March 1, 2016.
(2) Appointed as Chief Operating Officer on February 1, 2016 and promoted to Chief Scientific Officer on September 13, 2016. Mr. Lam resigned as Chief Scientific Officer effective January 15, 2018.
(3) Appointed Chief Financial Officer on September 5, 2017.
(4) Appointed as Interim Chief Financial Officer on October 14, 2016. Mr. Tousley resigned as Interim Chief Financial Officer effective August 11, 2017.
(5) The amounts in this column represent the aggregate grant date fair value of stock awards granted to Dr. Durrant related to his service during bankruptcy proceedings, computed in accordance with FASB ASC Topic 718. See Note 10 of the notes to our Consolidated Financial Statements included elsewhere in this Annual Report on Form 10-K for a discussion of all assumptions made by us in determining the grant date fair value of our equity awards.
(6) The amounts in this column represent the aggregate grant date fair value of option awards granted to each named executive officer, computed in accordance with FASB ASC Topic 718. See Note 10 of the notes to our Consolidated Financial Statements included elsewhere in this Annual Report on Form 10-K for a discussion of all assumptions made by us in determining the grant date fair value of our equity awards.
(7) Amounts reflected in this column for fiscal year 2016 are (a) for Dr. Durrant, $16,833 in Board fees paid to Dr. Durrant prior to his becoming Chairman and Chief Executive Officer. Amounts for Mr. Tousley represent consulting fees for services rendered in 2017 and 2016, pursuant to his Engagement Agreement.
(8) For calendar year 2016, Dr. Durrant's bonus opportunity was pro-rated for the period commencing July 1, 2016 and ending on December 31, 2016. The target bonus opportunity for calendar year 2016 amounted to $180,000. The Board determined Dr. Durrant's bonus for 2016 to be $126,000, for which we have recorded an accrual for this amount in the Consolidated Financial Statements for the year ended December 31, 2016 and 2017. The Compensation Committee of the Board determined Dr. Durrant's bonus for calendar year 2017 to be $180,000. Dr. Durrant has agreed to defer receipt of the bonus pending completion of a fundraising transaction. Mr. Jester received 100% of his bonus in immediately exercisable stock options. The number of options granted was based on the grant date fair value as of March 9, 2018, reflecting a 10-year term.

Narrative to Summary Compensation Table

We offer stock options to our employees, including our named executive officers, as the long-term incentive component of our compensation program. Our stock options allow our employees to purchase shares of our common stock at a price equal to the fair market value of our common stock on the date of grant.

In 2017, we issued stock options to certain of our named executive officers. On February 21, 2017, Mr. Lam was issued stock options to purchase 100,000 shares of our common stock at an exercise price of $2.92. The options were to vest and become exercisable in 12 equal quarterly increments beginning on April 1, 2017. Mr. Lam's options were determined to have a grant date fair value of $0.2 million. Mr. Lam resigned effective January 15, 2018. As a result as of January 15, 2018 all of Mr. Lam's unvested options were forfeited. All remaining vested options will be forfeited on March 16, 2018 unless exercised.

On September 5, 2017, Mr. Jester was issued stock options to purchase 150,000 shares of our common stock at an exercise price of $0.33. The options will vest and become exercisable in 12 equal quarterly increments beginning on October 1, 2017. Mr. Jester's options were determined to have a grant date fair value of $0.03 million.

On February 21, 2017, Mr. Tousley was issued stock options to purchase 100,000 shares of our common stock at an exercise price of $2.92. Mr. Tousley's options were determined to have a grant date fair value of $0.2 million. These options were fully vested on the grant date and, unless exercised, will be forfeited on August 10, 2018.

Outstanding Equity Awards at 2017 Fiscal Year End

The following table shows certain information regarding outstanding equity awards held by our named executive officers as of December 31, 2017.

		Option Awards			
Name		**Number of Securities Underlying Unexercised Options Exercisable**	**Number of Securities Underlying Unexercised Options Unexercisable**	**Option Exercise Price ($)**	**Option Expiration Date**
Cameron Durrant, M.D., MBA	(1)	434,592	608,430	$ 3.38	9/13/2026
Morgan Lam	(2)	1,875	3,125	$ 4.72	6/1/2025
	(3)	8,333	91,667	$ 3.38	9/13/2026
	(4)	24,999	75,001	$ 2.92	2/20/2027
Greg Jester	(5)	12,500	137,500	$ 0.33	9/4/2027
David L. Tousley, MBA, CPA	(6)	100,000	100,000	$ 2.92	2/20/2027

(1) On September 13, 2016, Dr. Durrant was issued stock options to purchase 1,043,022 shares of the Company's common stock at an exercise price of $3.38. The options will vest and become exercisable in 12 equal quarterly increments beginning on October 1, 2016.

(2) On June 1, 2015, Mr. Lam was issued stock options to purchase 5,000 shares of the Company's common stock at an exercise price of $4.72. One quarter of the options vested on June 1, 2016 and the remaining options will vest and become exercisable in 36 equal monthly increments thereafter. Mr. Lam resigned effective January 15, 2018 and all remaining unvested options were forfeited. All remaining vested options will be forfeited on March 16, 2018 unless exercised.

(3) On September 13, 2016, Mr. Lam was issued stock options to purchase 100,000 shares of the Company's common stock at an exercise price of $3.38. The options were to vest and become exercisable in 12 equal quarterly increments beginning on October 1, 2016. Mr. Lam resigned effective January 15, 2018 and all remaining unvested options were forfeited. All remaining vested options will be forfeited on March 16, 2018 unless exercised.

(4) On February 21, 2017, Mr. Lam was issued stock options to purchase 100,000 shares of the Company's common stock at an exercise price of $2.92. The options were to vest and become exercisable in 12 equal quarterly increments beginning April 1, 2017. Mr. Lam resigned effective January 15, 2018 and all remaining unvested options were forfeited. All remaining vested options will be forfeited on March 16, 2018 unless exercised.

(5) On September 5, 2017, Mr. Jester was issued stock options to purchase 150,000 shares of the Company's common stock at an exercise price of $0.33. The options will vest and become exercisable in 12 equal quarterly increments beginning on October 1, 2017.
(6) On February 21, 2017, Mr. Tousley was issued stock options to purchase 100,000 shares of our common stock at an exercise price of $2.92. The options were fully vested on the grant date. Mr. Tousley resigned August 11, 2017. All remaining vested options will be forfeited August 10, 2018 unless exercised.

Retirement Benefits

We have established a 401(k) tax-deferred savings plan, which permits participants, including our named executive officers, to make contributions by salary deduction pursuant to Section 401(k) of the Internal Revenue Code. We are responsible for administrative costs of the 401(k) plan. We may, in our discretion, make matching contributions to the 401(k) plan. No employer contributions have been made to date.

Employment Agreement with Dr. Durrant

On September 13, 2016, we entered into a new employment agreement with Cameron Durrant, MD, our chairman and chief executive officer (the "Agreement"). The Agreement provides for an initial annual base salary for Dr. Durrant of $600,000 as well as eligibility for an annual bonus targeted at 60% of his salary based on the achievements of objectives set and agreed to by the Board. Such bonus may be a mix of cash and stock, as determined by the Board in its sole discretion. For calendar year 2016, Dr. Durrant's bonus opportunity was pro-rated for the period commencing July 1, 2016 and ending on December 31, 2016. The target bonus opportunity for calendar year 2016 amounted to $180,000. The Board determined Dr. Durrant's bonus for 2016 to be $126,000, for which we have recorded an accrual for this amount in the Consolidated Financial Statements for the year ended December 31, 2016 and 2017. The Compensation Committee of the Board determined Dr. Durrant's bonus for calendar year 2017 to be $180,000. Both amounts are expected to be paid in cash. Dr. Durrant has agreed to defer receipt of the bonus pending completion of a fundraising transaction. Dr. Durrant is entitled to participate in our benefit plans available to other executives, including its retirement plan and health and welfare programs.

Under the Agreement, Dr. Durrant is entitled to receive certain benefits upon termination of employment under certain circumstances. If we terminate Dr. Durrant's employment for any reason other than "Cause", or if Dr. Durrant resigns for "Good Reason" (each as defined in the Agreement), Dr. Durrant will receive twelve months of base salary then in effect and the amount of the actual bonus earned by Dr. Durrant under the agreement for the year prior to the year of termination, pro-rated based on the portion of the year Dr. Durrant was employed by us during the year of termination.

The Agreement additionally provides that if Dr. Durrant resigns for Good Reason or we or our successor terminates his employment within the three month period prior to and the 12 month period following a Change in Control (as defined in the Agreement), we must pay or cause its successor to pay Dr. Durrant a lump sum cash payment equal to two times (a) his annual salary as of the day before his resignation or termination plus (b) the aggregate bonus received by Dr. Durrant for the year preceding the Change in Control or, if no bonus had been received, at minimum 50% of the target bonus. In addition, upon such a resignation or termination, all outstanding stock options held by Dr. Durrant will immediately vest and become exercisable.

Offer Letter with Mr. Jester

In connection with his appointment as CFO, we entered into an offer letter with Mr. Jester (the "Offer Letter") pursuant to which Mr. Jester will be eligible to receive the following compensation: (i) an initial annual base salary of $290,000; (ii) an annual bonus pursuant to the Company's annual bonus plan for executive officers, as then in effect, with a maximum bonus (if any) equal to 50% of Mr. Jester's salary for the bonus period; and (iii) certain medical, retirement and other benefits generally available to the Company's other employees. Under the Offer Letter, Mr. Jester was also eligible to receive stock options to purchase 150,000 shares of the Company's common stock pursuant to the terms and conditions set forth in a stock option agreement governed by the Company's 2012 Equity Incentive Plan.

Engagement Agreement with Mr. Tousley

Mr. Tousley served as interim Chief Financial Officer pursuant to an engagement agreement (the "Engagement Agreement") between himself and the Company until his resignation effective August 11, 2017. Under the Engagement Agreement, we paid Mr. Tousley at a rate of $225 per hour and reimbursed him for all travel and out of pocket expenses incurred in connection therewith.

2012 Equity Incentive Plan

On September 13, 2016, the Board approved an amendment to our 2012 Equity Plan to increase the number of shares of our common stock available for issuance under the 2012 Equity Plan by 3,000,000 shares and to increase the annual maximum aggregate number of shares subject to stock option awards that may be granted to any one person under the Equity Plan from 125,000 to 1,100,000. On March 9, 2018, the Board approved an amendment to our 2012 Equity Plan to increase the number of shares of our common stock available for issuance under the 2012 Equity Plan by 16,050,000 shares.

Director Compensation

Pursuant to our Director Compensation Program, each member of our Board of Directors during 2017 who was not our employee was eligible to compensation for his service, as follows. At the option of the director, such fees were payable in cash or immediately exercisable stock options having a grant date fair value equal to the equivalent cash compensation owed.

- Board of Directors member: $40,000;
- Audit committee member: $10,000;
- Audit committee chair: $20,000;
- Compensation committee member: $6,000;
- Compensation committee chair: $12,000;
- Nominating and corporate governance committee member: $4,000; and
- Nominating and corporate governance committee chair: $8,000.

The following table shows for the fiscal year ended December 31, 2017 certain information with respect to the compensation of our non-employee directors:

Name	Fees Earned or Paid in Cash ($)(1)	Option Awards ($)	Stock Awards ($)	All Other Compensation ($)	Total ($)
Timothy Morris, CPA(2)	72,000	-	-	-	72,000
Ronald Barliant, JD(3)	64,000	-	-	-	64,000
Dale Chappell, M.D., MBA (4)	30,000	-	-	-	30,000
Ezra Friedberg (5)	40,500	-	-	-	40,500

(1) The amounts in this column reflect retainers earned under the Board of Directors Compensation Program for fiscal year 2017.
(2) Mr. Morris elected to receive 50% of his director compensation in immediately exercisable stock options and 50% in cash. The number of options granted was based on the grant date fair value as of March 9, 2018, reflecting a ten year term.
(3) Mr. Barliant elected to receive 100% of his director compensation in immediately exercisable stock options. The number of options granted was based on the grant date fair value as of March 9, 2018, reflecting a ten year term.
(4) Dr. Chappell resigned from the Board of Directors on November 9, 2017. In light of his status as a controlling stockholder, Dr. Chappell agreed to forego any separate compensation for his service on the Board of Directors.
(5) Mr. Friedberg resigned from the Board of Directors on November 9, 2017.

ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS

Security Ownership Information

The following table presents information regarding beneficial ownership of our common stock as of March 23, 2018 by:

- each stockholder or group of stockholders known by us to be the beneficial owner of more than 5% of our common stock;
- each of our directors;
- each of our named executive officers; and
- all of our current directors and executive officers as a group.

Beneficial ownership is determined in accordance with the rules of the SEC, and thus represents voting or investment power with respect to our securities. Unless otherwise indicated below, to our knowledge, the persons and entities named in the table have sole voting and sole investment power with respect to all shares beneficially owned, subject to community property laws where applicable.

Percentage ownership of our common stock is based on 109,207,786 shares of our common stock outstanding as of March 23, 2018.

Shares of our common stock subject to options that are currently exercisable or exercisable within 60 days of March 23, 2018 are deemed to be outstanding and to be beneficially owned by the person holding the options but are not deemed to be outstanding for the purpose of computing the percentage ownership of any other person. Unless otherwise indicated, the address of each of the individuals and entities named below is c/o Humanigen, Inc., 1000 Marina Boulevard, Suite 250, Brisbane, CA 94005.

Name and Address of Beneficial Owner	Shares of Common Stock Beneficially Owned	Percentage of Shares Beneficially Owned
5% Stockholders		
Entities affiliated with Black Horse Capital LP(1)	66,870,851	61.2%
Nomis Bay LTD(2)	33,573,530	30.7%
Named Executive Officers and Directors		
Cameron Durrant, M.D., MBA(3)	4,390,468	4.0%
Morgan Lam(4)	87,810	*
David L. Tousley, MBA, CPA(5)	100,000	*
Greg Jester(6)	488,282	*
Ronald Barliant, JD(7)	300,469	*
Timothy Morris, CPA (8)	138,235	*
Robert Savage	10,000	*
Rainer Bohem	-	*
All current executive officers and directors as a group (8 persons)(9)	5,515,444	5.1%

(1) Number of shares based solely on information reported on the Schedule 13D filed with the SEC on March 1, 2018, reporting beneficial ownership as of February 27, 2018, by BHC, BHCMF, Cheval, Black Horse Capital Management LLC, or BH Management, and Dale Chappell. According to the report, BHC has sole voting and dispositive power with respect to 5,996,710 shares, BHCMF has shared voting and dispositive power with respect to 13,997,832 shares, Cheval has shared voting and dispositive power with respect to 46,876,309 shares, BH Management has sole voting and dispositive power with respect to 52,873,019 shares and Dr. Chappell has shared voting and dispositive power with respect to 66,870,851 shares. The business address of each of BHC, BHCMF, BH Management and Dr. Chappell is c/o Opus Equum, Inc. P.O. Box 788, Dolores, Colorado 81323. The business address of Cheval is P.O Box 309G, Ugland House, Georgetown, Grand Cayman, Cayman Islands KY1-1104.

(2) Number of shares based solely on information reported on the Schedule 13D filed with the SEC on March 5, 2018, reporting beneficial ownership as of February 27, 2018, by Nomis. Nomis has sole voting and dispositive power over all 33,573,530 shares. The business address of Nomis is West Essex House, 3rd Floor, 45 Reid Street, Hamilton, Bermuda HM12.

(3) Includes options to purchase 4,254,885 shares of common stock that may be exercised within 60 days of March 23, 2018.

(4) Includes options to purchase 87,810 shares of common stock that may be exercised within 60 days of March 23, 2018.

(5) Includes options to purchase 100,000 shares of common stock that may be exercised within 60 days of March 23, 2018.

(6) Includes options to purchase 488,282 shares of common stock that may be exercised within 60 days of March 23, 2018.

(7) Includes options to purchase 300,649 shares of common stock that may be exercised within 60 days of March 23, 2018.

(8) Includes options to purchase 138,235 shares of common stock that may be exercised within 60 days of March 23, 2018.

(9) Includes options to purchase 5,088,265 shares of common stock that may be exercised within 60 days of March 23, 2018.

Equity Compensation Plan Information

The following table sets forth information as of December 31, 2017 with respect to shares of common stock that may be issued under our existing equity compensation plans.

Plan Category	Number of Securities to be Issued Upon Exercise of Outstanding Options, Warrants and Rights (a)	Weighted-Average Exercise Price of Outstanding Options, Warrants and Rights (b)	Number of Securities Remaining Available for Issuance Under Equity Compensation Plans (Excluding Securities Reflected in Column (a)) (c)
Equity compensation plans approved by security holders(1)	734,835	$ 5.33	-
Equity compensation plans not approved by security holders	1,713,548	2.97	1,286,452
Total	2,448,383	$ 3.67	1,286,452

(1) Represents shares reserved for issuance under the 2001 Stock Plan and the 2012 Equity Incentive Plan, as amended and restated. On September 13, 2016, the Board approved an amendment to the 2012 Equity Incentive Plan (the "Equity Plan Amendment") to increase the number of shares of our common stock available for issuance under the 2012 Equity Plan by 3,000,000 shares. The Equity Plan Amendment was not approved by our stockholders. See Note 10 of the notes to our Consolidated Financial Statements included elsewhere in this Annual Report on Form 10-K for a discussion of the material features of the 2012 Equity Incentive Plan.

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

Related Party Transactions

Term Loans and Restructuring Transactions

The Restructuring Transactions were completed on February 27, 2018. For additional information regarding the Restructuring Transactions, see "Restructuring Transactions" in Item 1 of this Annual Report on Form 10-K.

Director Independence

We are not currently a listed issuer. However, we use the definition of "independent" set forth in NASDAQ Marketplace rules in determining whether a director is independent in the capacity of director. Consistent with NASDAQ's independence criteria, our Board has affirmatively determined that each of our current directors, and all of our directors who served in 2017, other than Dr. Chappell and Dr. Durrant, our Chief Executive Officer, is independent. NASDAQ's independence criteria include a series of objective tests, such as that the director is not an employee of the Company and has not engaged in various types of business dealings with us. In addition, as further required by NASDAQ rules, our Board has subjectively determined as to each independent director that no relationship exists that, in the opinion of the board of directors, would interfere with each such person's exercising independent judgment in carrying out his or her responsibilities as a director. In making these determinations on the independence of our directors, our Board considered the relationships that each such director has with us and all other facts and circumstances the board deemed relevant in determining independence, including the beneficial ownership of our capital stock by each such person.

We have established an audit committee, a compensation committee and a nominating and corporate governance committee.

ITEM 14. PRINCIPAL ACCOUNTANT FEES AND SERVICES

Independent Registered Public Accounting Firm's Fees

The following table represents aggregate fees billed to us for the years ended December 31, 2017 and 2016 by our independent registered accounting firm, HORNE LLP.

	Year ended December 31,	
	2017	2016
Audit fees(1)	$ 246,354	$ 250,140
Tax fees (2)	15,695	12,000
Total fees	$ 262,049	$ 262,140

(1) Audit fees in 2017 and 2016 include fees billed or incurred by HORNE LLP for professional services rendered in connection with the annual audit of our Consolidated Financial Statements for each year and the review of our quarterly reports on Form 10-Q and consents associated with registration statements.
(2) Fees for services consist of tax compliance, including the preparation and review of federal and state tax returns.

All fees described above were pre-approved by the audit committee in accordance with the requirements of Regulation S-X under the Exchange Act.

Pre-Approval Policies and Procedures

The audit committee's policy is to pre-approve all audit and permissible non-audit services rendered by our independent registered public accounting firm. The audit committee can pre-approve specified services in defined categories of audit services, audit-related services and tax services up to specified amounts, as part of the audit committee's approval of the scope of the engagement of our independent registered public accounting firm or on an individual case-by-case basis before our independent registered public accounting firm is engaged to provide a service. The audit committee has determined that the rendering of tax-related services by our independent registered public accounting firm is compatible with maintaining the principal accountant's independence for audit purposes. Our independent registered public accounting firm has not been engaged to perform any non-audit services other than tax-related services and as indicated above.

PART IV

ITEM 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

(a) The following documents are filed as part of this report:

(1) Financial Statements—See Index to Consolidated Financial Statements at Part I, Item 8 on page F-1 of this Annual Report on Form 10-K.

(2) All financial statement schedules have been omitted because they are not applicable or not required or because the information is included elsewhere in the financial statements or the Notes thereto.

(3) See the accompanying Index to Exhibits filed as a part of this Annual Report, which list is incorporated by reference in this Item.

(b) See the accompanying Index to Exhibits filed as a part of this Annual Report.

(c) Other schedules are not applicable.

ITEM 16. Form 10-K Summary.

None.

SIGNATURES

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

Humanigen, Inc.

By: /s/ Cameron Durrant, M.D., MBA
Cameron Durrant, M.D., MBA
Chief Executive Officer and Chairman of the Board of Directors

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

Signature	Title	Date
/s/ Cameron Durrant Cameron Durrant	Chairman of the Board of Directors and Chief Executive Officer (Principal Executive Officer)	March 23, 2018
/s/ Greg Jester Greg Jester	Chief Financial Officer (Principal Financial Officer and Principal Accounting Officer)	March 23, 2018
/s/ Ronald Barliant, JD Ronald Barliant, JD	Director	March 23, 2018
/s/ Rainer Boehm Rainer Boehm	Director	March 23, 2018
/s/ Timothy Morris Timothy Morris	Director	March 23, 2018
/s/ Robert G. Savage Robert G. Savage	Director	March 23, 2018

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REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To Shareholders and the Board of Directors of Humanigen, Inc.

Opinion on Financial Statement

We have audited the accompanying consolidated balance sheets of Humanigen, Inc. (the "Company") as of December 31, 2017 and 2016, and the related consolidated statements of operations and comprehensive loss, shareholders' equity (deficit), and cash flows for the years then ended, and the related notes to the consolidated financial statements (collectively, the financial statements). In our opinion, the financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2017 and 2016, and the results of its operations and its cash flows for the years then ended, in conformity with accounting principles generally accepted in the United States of America.

Going Concern Uncertainty

The accompanying financial statements have been prepared assuming that the Company will continue as a going concern. As discussed in Note 1 to the financial statements, the Company has suffered recurring losses from operations and its total liabilities exceed its total assets. This raises substantial doubt about the Company's ability to continue as a going concern. Management's plans in regard to these matters also are described in Note 1. The financial statements do not include any adjustments that might result from the outcome of this uncertainty.

Basis for Opinion

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

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

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

/s/ HORNE LLP

We have served as the Company's auditor since 2015.

Ridgeland, Mississippi
March 27, 2018

Humanigen, Inc.
Consolidated Balance Sheets
(in thousands, except share and per share data)

	December 31, 2017	December 31, 2016
Assets		
Current assets:		
Cash and cash equivalents	$ 737	$ 2,906
Prepaid expenses and other current assets	813	1,643
Total current assets	1,550	4,549
Property and equipment, net	19	68
Restricted cash	101	101
Total assets	$ 1,670	$ 4,718
Liabilities and stockholders' deficit		
Current liabilities:		
Accounts payable	$ 3,330	$ 4,072
Accrued expenses	3,307	736
Term loans payable	18,018	3,016
Total current liabilities	24,655	7,824
Notes payable to vendors	1,351	1,273
Total liabilities	26,006	9,097
Stockholders' deficit:		
Common stock, $0.001 par value: 85,000,000 shares authorized at December 31, 2017 and December 31, 2016; 14,946,712 and 14,977,397 shares issued and outstanding at December 31, 2017 and December 31, 2016, respectively	15	15
Additional paid-in capital	238,246	236,216
Accumulated deficit	(262,597)	(240,610)
Total stockholders' deficit	(24,336)	(4,379)
Total liabilities and stockholders' deficit	$ 1,670	$ 4,718

See accompanying notes.

Humanigen, Inc.
Consolidated Statements of Operations and Comprehensive Loss
(in thousands, except share and per share data)

	Year Ended December 31,	
	2017	**2016**
Operating expenses:		
Research and development	$ 11,165	$ 10,449
General and administrative	7,866	8,376
Total operating expenses	19,031	18,825
Loss from operations	(19,031)	(18,825)
Other expense:		
Interest expense	(3,056)	(131)
Other income, net	431	125
Reorganization items, net	(331)	(8,188)
Net loss	(21,987)	(27,019)
Other comprehensive income	-	-
Comprehensive loss	$ (21,987)	$ (27,019)
Basic and diluted net loss per common share	$ (1.47)	$ (2.78)
Weighted average common shares outstanding used to calculate basic and diluted net loss per common share	14,975,370	9,707,877

See accompanying notes.

Humanigen, Inc.
Consolidated Statements of Stockholders' Deficit
(in thousands, except share and per share data)

	Common Stock		Additional Paid-In	Accumulated	Total Stockholders'
	Shares	Amount	Capital	Deficit	Deficit
Balances at January 1, 2016	4,450,994	$ 4	$ 219,319	$ (213,591)	$ 5,732
Issuance of common stock to officer and directors	323,155	1	1,451	-	1,452
Issuance of common stock, net of issuance costs	7,147,035	7	10,125	-	10,132
Issuance of common stock in settlement of litigation	631,358	1	(1)	-	-
Issuance of common stock for services	65,000	-	198	-	198
Issuance of common stock upon exercise of options	5,625	-	10	-	10
Issuance of common stock upon vesting of restricted stock units	3,750	-	-	-	-
Issuance of warrants in connection with acquisition of licenses	-	-	361	-	361
Issuance of warrants in exchange for services	-	-	40	-	40
Conversion of notes payable and related accrued interest and fees to common stock	2,350,480	2	3,385	-	3,387
Beneficial conversion feature	-	-	484	-	484
Stock-based compensation expense	-	-	844	-	844
Comprehensive loss	-	-	-	(27,019)	(27,019)
Balances at December 31, 2016	14,977,397	15	236,216	(240,610)	(4,379)
Issuance of stock in connection with financing agreement	9,315	-	12	-	12
Return of share of stock by advisor	(40,000)	-	-	-	-
Stock-based compensation expense	-	-	2,115	-	2,115
Write down in fair value of warrants	-	-	(97)	-	(97)
Comprehensive loss	-	-	-	(21,987)	(21,987)
Balances at December 31, 2017	14,946,712	$ 15	$ 238,246	$ (262,597)	$ (24,336)

See accompanying notes.

Humanigen, Inc.
Consolidated Statements of Cash Flows
(in thousands)

	Year Ended December 31,	
	2017	**2016**
Operating activities:		
Net loss	$ (21,987)	$ (27,019)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation and amortization	48	102
Gain on lease termination	-	(227)
Noncash interest expense	3,037	69
Reorganization items related to debtor-in-possession financing	-	1,627
Stock-based compensation expense	2,115	844
Loss on sale of property and equipment	-	22
Issuance of warrants in exchange for services	-	40
Issuance of common stock for services	12	-
Issuance of warrants in connection with acquisition of licenses	-	361
Change in fair value of warrants issued in connection with acquisition of licenses	(97)	-
Issuance of common stock in exchange for services	-	198
Issuance of common stock to officer and directors	-	1,452
Changes in operating assets and liabilities:		
Prepaid expenses and other assets	831	592
Accounts payable	(520)	4,474
Accrued expenses	2,571	(25)
Liabilities subject to compromise	(259)	(3,471)
Net cash used in operating activities	(14,249)	(20,961)
Investing activities:		
Proceeds from sale of property and equipment	-	11
Changes in restricted cash	-	92
Net cash provided by investing activities	-	103
Financing activities:		
Net proceeds from issuance of common stock	-	10,132
Net proceeds of stock option exercise	-	10
Net proceeds from term loans	12,080	2,993
Net proceeds from convertible notes payable	-	2,198
Net cash provided by financing activities	12,080	15,333
Net decrease in cash and cash equivalents	(2,169)	(5,525)
Cash and cash equivalents, beginning of period	2,906	8,431
Cash and cash equivalents, end of period	$ 737	$ 2,906
Supplemental disclosure of non-cash investing and financing activities:		
Conversion of notes payable and related accrued interest and fees to common stock	$ -	$ 3,387
Issuance of common stock for services	$ 12	$ -
Issuance of warrants in connection with acquisition of licenses	$ -	$ 361
Issuance of warrants in exchange for services	$ -	$ 40
Issuance of common stock in exchange for services	$ -	$ 198
Issuance of common stock to officer and directors	$ -	$ 1,452
Issuance of notes payable to vendors	$ -	$ 1,273

See accompanying notes.

Notes to Consolidated Financial Statements
(in thousands unless otherwise indicated, except share and per share data)

1. Organization and Description of Business

Description of the Business

The Company was incorporated on March 15, 2000 in California and reincorporated as a Delaware corporation in September 2001 under the name KaloBios Pharmaceuticals, Inc. The Company completed its initial public offering in January 2013. Effective August 7, 2017, the Company changed its legal name to Humanigen, Inc.

The Company has undergone a significant transformation since December 2015. As a result of challenges facing it at the time, on December 29, 2015, the Company filed a voluntary petition for bankruptcy protection under Chapter 11 of Title 11 of the U.S. Bankruptcy Code. On June 30, 2016, the Company's Second Amended Plan of Reorganization, dated May 9, 2016, as amended (the "Plan"), became effective and the Company emerged from its Chapter 11 bankruptcy proceedings. Refer to Note 2 for additional details regarding the Company's bankruptcy proceedings.

From the time of its emergence from bankruptcy to August 29, 2017, the Company's focus was on its lead product candidate benznidazole for the treatment of Chagas disease, a parasitic illness that can lead to serious and potentially life-threatening long-term heart, intestinal and neurological problems. As more fully described in Note 6, the Company acquired certain worldwide rights to benznidazole on June 30, 2016 and, until August 29, 2017, was primarily focused on the development necessary to seek and obtain approval by the United States Food and Drug Administration ("FDA") for benznidazole and the subsequent commercialization, if approved. According to FDA issued guidance, benznidazole is eligible for review pursuant to a 505(b)(2) regulatory pathway as a potential treatment for Chagas disease and, if it became the first FDA-approved treatment for Chagas disease, the Company would have been eligible to receive a Priority Review Voucher ("PRV").

However, on August 29, 2017, the FDA announced it had granted accelerated and conditional approval of a benznidazole therapy manufactured by Chemo Research, S.L. ("Chemo") for the treatment of Chagas disease and had awarded that manufacturer a neglected tropical disease PRV. Chemo's benznidazole also has received Orphan Drug designation. As a result of FDA's actions and with the information currently available, the Company no longer expects to be eligible to receive a PRV with its own benznidazole candidate for the treatment of Chagas disease. Accordingly, the Company has ceased development of benznidazole and is currently assessing a full range of options with respect to its benznidazole assets and development program. We also began an accelerated scientific assessment of emerging new possibilities for our monoclonal antibody assets and development programs.

On December 21, 2017, we reached an agreement with our Term Loan Lenders (as defined below) on a series of transactions, including the transfer and assignment of all of our assets related to benznidazole to an affiliate of one of the Term Loan Lenders, providing for, among other things, the satisfaction and extinguishment of our outstanding obligations under our Term Loan Credit Agreement (as defined below). We refer to these transactions herein as the "Restructuring Transactions." On February 27, 2018, we completed the Restructuring Transactions. For further information regarding the Restructuring Transactions, see Notes 7 and 10.

Since the FDA's August 29, 2017 announcement relating to benznidazole, we have shifted our primary focus toward developing our proprietary monoclonal antibody portfolio, which comprises lenzilumab and ifabotuzumab, for use in addressing significant, serious and potentially life-threatening unmet needs in oncology and immunology. Both of these product candidates are in the early stage of development and will require substantial time, expenses, clinical development, testing, and regulatory approval prior to commercialization. Furthermore, neither of these product candidates has advanced into a pivotal registration study and it may be years before such a study is initiated, if at all.

Lenzilumab is a recombinant monoclonal antibody, or mAb, that neutralizes soluble granulocyte-macrophage colony-stimulating factor, or GM-CSF, a critical cytokine in the inflammatory cascade associated with CAR-T-related side effects and in the growth of certain hematologic malignancies, solid tumors and other serious conditions. The Company expects to study lenzilumab's potential in reducing serious adverse events associated with CAR-T therapy. The Company has begun to explore lenzilumab's effectiveness in preventing or ameliorating neurotoxicity associated with CAR-T therapy, and potentially cytokine release syndrome (CRS). In addition, the Company continues dosing in a Phase 1 clinical trial in patients with CMML to identify the maximum tolerated dose, or MTD, or recommended Phase 2 dose of lenzilumab and to assess lenzilumab's safety, pharmacokinetics, and clinical activity. The Company has fully enrolled the total of 12 patients in the 200, 400 and 600 mg dose cohorts of its CMML trial, and are currently evaluating subjects in the highest dose cohort of 600 mg for continuing accrual. The Company also plans to review preliminary safety and efficacy results and anticipate completion of the ad hoc interim analysis in the first half of 2018. The Company may also use the interim data from the lenzilumab CMML Phase 1 study to determine the feasibility of rapidly commencing a Phase 1 study in JMML patients, or to explore progressing the CMML development program. JMML is a rare pediatric cancer, is associated with poor outcomes and a very high unmet medical need, for which there are no FDA-approved therapies.

Ifabotuzumab is an anti-Ephrin Type-A receptor 3, or EphA3, mAb that has the potential to offer a novel approach to treating solid tumors and hematologic malignancies, serious pulmonary conditions and as a CAR construct. EphA3 is aberrantly expressed on the surface of tumor cells and stroma cells in certain cancers. The Company has completed the Phase 1 dose escalation portion of a Phase 1/2 clinical trial in ifabotuzumab in multiple hematologic malignancies for which the preliminary results were published in the journal Leukemia Research in 2016. An investigator-sponsored Phase 0/1 radio-labeled imaging trial of ifabotuzumab in glioblastoma multiforme, a particularly aggressive and deadly form of brain cancer, has begun at the Olivia-Newton John Cancer Institute in Melbourne, Australia. The Company is currently exploring partnering opportunities to enable further development of ifabotuzumab.

Lenzilumab and ifabotuzumab were each developed with our proprietary, patent-protected Humaneered® technology, which consists of methods for converting antibodies (typically murine) into engineered, high-affinity antibodies designed for human therapeutic use, typically for chronic conditions.

Liquidity and Going Concern

The Company has incurred significant losses since its inception in March 2000 and had an accumulated deficit of $262.6 million as of December 31, 2017. At December 31, 2017, the Company had a working capital deficit of $23.1 million, including $18.0 million in term loans payable. On February 27, 2018, the Company issued 91,815,517 shares of common stock in exchange for the extinguishment of all term loans, related fees and accrued interest and received $1.5 million in cash proceeds. See Notes 7 and 10 for a more detailed discussion of the Restructuring Transactions. On March 12, 2018 the Company issued 2,445,557 shares of common stock for proceeds of $1.1 million to accredited investors. The Company will require additional financing in order to meet its anticipated cash flow needs during the next twelve months. The Company has financed its operations primarily through the sale of equity securities, debt financings, interest income earned on cash and cash equivalents, grants and the payments received under its agreements with Novartis Pharma AG and Sanofi Pasteur S.A. ("Sanofi"). To date, none of the Company's product candidates have been approved for sale and therefore the Company has not generated any revenue from product sales. Management expects operating losses to continue for the foreseeable future. As a result, the Company will continue to require additional capital through equity offerings, debt financing and/or payments under new or existing licensing or collaboration agreements. If sufficient funds are not available on acceptable terms when needed, the Company could be required to significantly reduce its operating expenses and delay, reduce the scope of, or eliminate one or more of its development programs. The Company's ability to access capital when needed is not assured and, if not achieved on a timely basis, could materially harm its business, financial condition and results of operations. These conditions raise substantial doubt about the Company's ability to continue as a going concern.

The Condensed Consolidated Financial Statements for the twelve months ended December 31, 2017 were prepared on the basis of a going concern, which contemplates that the Company will be able to realize assets and discharge liabilities in the normal course of business. The ability of the Company to meet its total liabilities of $26.0 million at December 31, 2017 and to continue as a going concern is dependent upon the availability of future funding. The financial statements do not include any adjustments that might be necessary if the Company is unable to continue as a going concern. See Note 14 – "Subsequent Events."

Delisting of Common Stock

On January 13, 2016, the Company's common stock was suspended from the Nasdaq Global Market and began trading on the over-the-counter market under the KBIOQ symbol. On January 26, 2016, NASDAQ filed a Form 25 with the Securities and Exchange Commission to complete the delisting of the common stock, and the delisting was effective on February 5, 2016. On June 30, 2016, upon emergence from bankruptcy, the ticker symbol for the trading of the Company's common stock on the over-the-counter market reverted back to KBIO. On August 7, 2017, following the effectiveness of our previously reported name change, the Company's common stock began trading on the OTCQB Venture Market under the new ticker symbol "HGEN".

2. Chapter 11 Filing

On December 29, 2015, the Company filed a voluntary petition for bankruptcy protection under Chapter 11 of the U.S. Bankruptcy Code. The filing was made in the United States Bankruptcy Court for the District of Delaware (the "Bankruptcy Court") (Case No. 15-12628 (LSS)).

In connection with financing efforts related to the Company's bankruptcy proceedings, on April 1, 2016, the Company entered into a Debtor-in-Possession Credit and Security Agreement (the "Credit Agreement") with a group of lenders (the "DIP Lenders"), pursuant to which the Company received $3.0 million in funds for working capital, bankruptcy-related costs, costs related to its plan of reorganization, payment of certain fees to the DIP Lenders and other costs associated with the ordinary course of business. Funds received under the Credit Agreement bore interest at a rate of 12% and were due and payable upon the Effective Date of the Plan, as defined below. Payment due under the Credit Agreement was convertible into shares of the Company's common stock, with share amounts subject to calculation as provided in the Credit Agreement.

On April 1, 2016, the Company also entered into a Securities Purchase Agreement (the "SPA") with the DIP Lenders. The SPA provided for the sale of the Company's common stock, with share amounts subject to calculation as provided in the SPA, in respect of exit financing in the amount of $11 million to be received upon the Effective Date of the Plan, as defined below.

Plan of Reorganization

On May 9, 2016, the Company filed with the Bankruptcy Court the Plan and related amended disclosure statement pursuant to Chapter 11 of the Bankruptcy Code. On June 16, 2016, the Bankruptcy Court entered an order confirming the Plan.

The Plan became effective on June 30, 2016 (the "Effective Date") and the Company emerged from its Chapter 11 bankruptcy proceedings. In connection with such emergence, the Company consummated the transactions and other items described below.

- Pursuant to the SPA and in repayment of its obligations under the Credit Agreement, the Company issued an aggregate of 9,497,515 shares of its common stock to the DIP Lenders.
- The Company became obligated to issue 327,608 shares of common stock to the plaintiffs in litigation related to the Company's 2015 private financing transaction in accordance with the settlement stipulation discussed below. As of December 31, 2016, all of the shares of common stock related to this settlement stipulation had been issued.
- The Company reserved 300,000 shares of common stock for issuance to the plaintiffs in class action litigation related to the events surrounding the Company's former Chairman and Chief Executive Officer. As of December 31, 2016, all of the shares related to this settlement stipulation had been issued.
- The Company became obligated to issue 3,750 shares of common stock to a former director in satisfaction of claims against the Company. As of December 31, 2016, all of the shares related to this settlement stipulation had been issued.
- The Company reserved for issuance shares of common stock in an amount as yet to be determined in connection with the settlement of certain other claims and interests as set forth in the Plan. As of December 31, 2017, management does not believe the issuance of additional common stock for any such claims is probable. As such, no accrual has been made in the Consolidated Financial Statements.
- The Company issued promissory notes in an aggregate principal amount of approximately $1.2 million to certain vendors in accordance with the Plan. The notes are unsecured, bear interest at 10% per annum and are due and payable in full, including principal and accrued interest on June 30, 2019. The Company has accrued $0.1 million and $0.2 million in interest expense related to these promissory notes as of December 31, 2016 and December 31, 2017, respectively.
- The Company issued an aggregate of 323,155 shares of common stock to Cameron Durrant, Ronald Barliant, and David Moradi pursuant to an order by the Bankruptcy Court approving a one-time equity award for the Company's Chief Executive Officer and two other directors. The Company recorded a charge of $1.5 million representing the fair value of the shares issued and classified $0.7 million and $0.8 million as Reorganization items, net and General and administrative expenses, respectively.

Bankruptcy Claims Administration

On February 29, 2016, the Company filed its schedules of assets and liabilities and statement of financial affairs (the "Schedules") with the Bankruptcy Court. The Bankruptcy Court entered an order setting April 1, 2016 as the deadline for filing proofs of claim for creditors other than governmental units and June 27, 2016 as the bar date for filing proofs of claim by governmental units (together, the "Bar Date"). The Bar Date is the date by which non-government claims against the Company relating to the period prior to the commencement of the Company's Chapter 11 case were required to be filed if such claims were not listed in liquidated, non-contingent and undisputed amounts in the Schedules, or if the claimant disagrees with the amount, characterization or classification of its claim as reflected in the Schedules. Claims that are subject to the Bar Date and that were not filed on or prior to the Bar Date are barred from participating in any distribution that may be made under the Plan.

As of the Effective Date, approximately 195 proofs of claim were outstanding (including claims that were previously identified on the Schedules) totaling approximately $32 million. Prior to the Bar Date, certain investors filed a class action claim in the amount of $20 million in connection with events surrounding the Company's former Chairman and Chief Executive Officer. On June 15, 2016, a settlement stipulation related to the class action suit was approved under order of the Bankruptcy Court. The settlement stipulation required the Company to issue 300,000 shares of common stock and submit a payment of $0.3 million to the claimants. During the year ended December 31, 2016, the 300,000 shares were issued and the $0.3 million payment was made. See Note 13 for additional information on this matter and settlement.

Separately, a claim was filed by certain investors in the Company's 2015 private financing transaction totaling approximately $6.9 million. On May 9, 2016, a settlement stipulation related to this suit was approved under order of the Bankruptcy Court. The settlement stipulation required the Company to issue 327,608 shares of common stock and submit a payment of $0.3 million to an escrow account on behalf of the claimants. During the year ended December 31, 2016, the 327,608 shares were issued and the $0.3 million payment was made. See Note 13 for additional information on this matter and settlement.

As of June 30, 2016, the Company emerged from bankruptcy. The Company expects the amounts remaining in Liabilities subject to compromise as of the Effective Date to be paid in accordance with the Plan. Accordingly, as of December 31, 2016, Liabilities subject to compromise have been reduced to zero and reclassified according to their payment terms.

In March 2016, the Company entered into a termination agreement (the "Lease Termination Agreement") related to the lease of its prior facility in South San Francisco, California. The Lease Termination Agreement, approved by order of the Bankruptcy Court issued March 15, 2016, waived all damages related to early termination of the lease, relieved the Company of March rental expenses and set an effective termination date of March 31, 2016. In accordance with the termination of the lease, the Company wrote off remaining deferred rent liabilities of approximately $0.3 million and disposed of certain leasehold improvements and furniture and fixtures with a net book value of approximately $0.1 million. The resulting gain of $0.2 million is included in Reorganization items, net in the accompanying Consolidated Statement of Operations and Comprehensive Loss for the year ended December 31, 2016. Concurrent with the termination of its prior lease, the Company entered into a lease agreement for a new office facility in Brisbane, California. The new lease commenced in April 2016 and expired in March 2017. On February 16, 2017, the Company amended the lease to extend the term of the lease for an additional period of eighteen months such that the lease will expire on September 30, 2018.

The reconciliation of certain proofs of claim filed against the Company in the Bankruptcy Case, including certain General Unsecured Claims, Convenience Class Claims and Other Subordinated Claims, is ongoing. As a result of its examination of the claims, the Company may ask the Bankruptcy Court to disallow, reduce, reclassify or otherwise adjudicate certain claims the Company believes are subject to objection or otherwise improper. Under the terms of the Plan, the Company had until December 27, 2016 to file additional objections to disputed claims, subject to the Company's right to seek an extension of this deadline from the Bankruptcy Court. By Order, dated February 6, 2017, the Bankruptcy Court extended the claims objection deadline to June 26, 2017. By Order dated July 10, 2017, the Bankruptcy Court extended the claims objection deadline to September 25, 2017. By Order dated October 23, 2017, the Bankruptcy Court extended the claims objection deadline to December 26, 2017. By Order dated January 19, 2018, the Bankruptcy Court extended the claims objection deadline to March 26, 2018. The Company may compromise certain claims with or without specific prior approval of the Bankruptcy Court as set forth in the Plan and may identify additional liabilities that will need to be recorded or reclassified to liabilities subject to compromise. The resolution of such claims could result in material adjustments to the Company's financial statements.

As of December 31, 2017, approximately $0.5 million in claims remain subject to review and reconciliation by the Company. The Company may file objections to these claims after it completes the reconciliation process. As of December 31, 2017, the Company has recorded $0.06 million related to these claims in Accounts payable and Notes payable to vendors, which represents management's best estimate of claims to be allowed by the Bankruptcy Court.

Although the Bankruptcy Case remains open, other than with respect to certain matters relating to the implementation of the Plan, the administration of certain claims, or over which the Bankruptcy Court may have otherwise retained jurisdiction, the Company is no longer operating under the direct supervision of the Bankruptcy Court. The Company anticipates that the Bankruptcy Case will be closed following the completion of the claims reconciliation process.

Bankruptcy Related Financing Arrangements

On April 1, 2016, the Company entered into the Credit Agreement with Black Horse Capital Master Fund Ltd., as administrative agent and lender ("BHCMF" or "Agent"), Black Horse Capital LP, as a lender ("BHC"), Cheval Holdings, Ltd., as a lender ("Cheval") and Nomis Bay LTD, as a lender ("Nomis" and, together with BHCMF, BHC and Cheval, the "Lenders"). The Credit Agreement provided for a debtor-in-possession credit facility in the original principal amount of $3.0 million (the "Term Loan"). The Credit Agreement provided that the Term Loan will be made by the Lenders at an original discount equal to $0.2 million (the "Upfront Fee") and required the payment by the Company to the Lenders of a commitment fee equal to $0.2 million (the "Commitment Fee"). In accordance with the terms of the Credit Agreement, the Company used the proceeds of the Term Loan for working capital, bankruptcy-related costs, costs related to the Company's plan of reorganization, the payment of certain fees and expenses owed to the Agent and the Lenders in connection with the Credit Agreement and other costs incurred in the ordinary course of business.

Pursuant to the terms of the Credit Agreement, the Term Loan bore interest at a rate per annum equal to 12.00%.

In accordance with the bidding procedures order entered by the Bankruptcy Court, the Term Loan and the SPA were together subject to competing, higher and better offers.

In connection with the Company's obligations under the Credit Agreement, the Company executed in favor of the Agent an Intellectual Property Security Agreement, dated as of April 1, 2016 (the "IP Security Agreement"). Under the terms of the IP Security Agreement, the Company pledged all of its intellectual property to the Agent for the ratable benefit of the Lenders, as collateral for its obligations under the Credit Agreement.

The Credit Agreement provided that the outstanding principal balance of the Term Loan, plus accrued and unpaid interest, plus the Upfront Fee, plus the Commitment Fee and all other non-contingent obligations would mature on the earlier of an event of default under the Credit Agreement or the effective date of the Company's plan of reorganization. The Maturity Date was deemed to occur simultaneously with the Effective Date and, accordingly, on June 30, 2016, 2,350,480 shares of common stock were issued to the Lenders in repayment of the Company's debt obligations under the Credit Agreement, including 201,436 shares to BHC, 470,096 shares to BHCMF, 503,708 shares to Cheval, 940,192 shares to Nomis and 235,048 shares to Cortleigh Limited ("Cortleigh"). Pursuant to the terms of the Credit Agreement, the Company also paid $0.4 million to BHC in payment of its fees and expenses and $0.3 million to Nomis in payment of its fees and expenses.

The Company records discounts to convertible notes for the intrinsic value of conversion options embedded in debt instruments based upon the fair value of the underlying common stock at the commitment date of the note transaction exceeding the effective conversion price embedded in the note. The Company evaluated the Credit Agreement for beneficial conversion features and calculated a value of approximately $0.5 million, all of which was expensed as of the Effective Date.

In conjunction with the Credit Agreement, during the year ended December 31, 2016, the Company incurred the following expenses which have been charged to Reorganization items, net in the accompanying Consolidated Statements of Operations and Comprehensive Loss:

	Year ended December 31, 2016
Upfront fee	$ 191
Commitment fee	150
Beneficial conversion feature	484
Legal fees	802
Total Credit Agreement expense	**$ 1,627**

On April 1, 2016, the Company also entered into the SPA with the Lenders. The SPA provides for the sale to the Lenders on the closing date of an aggregate of 5,885,000 shares of common stock, subject to adjustment as provided in the SPA, in respect of exit financing in the amount of $11 million (the "Exit Financing") plus an exit financing commitment fee of $0.8 million payable by the Company to the Lenders, plus payment to the Lenders of their fees and expenses incurred in connection with the Exit Financing and the SPA. Nomis subsequently assigned twenty percent (20%) of its interest in the shares of common stock to be purchased by Nomis under the SPA and the Credit Agreement to Cortleigh (collectively with the Lenders, the "Purchasers").

The consummation of the transactions contemplated by the SPA were contingent on, among other things, the funding of the Term Loan, the approval of the Bankruptcy Court of the Company's plan of reorganization, and the simultaneous closing of the Company's transaction with Savant. In addition, the closing of the transactions under the SPA were contingent upon the board of directors of the Company, upon the effectiveness of the confirmed plan of reorganization, consisting of (i) one director to be designated by Nomis; (ii) one director to be jointly designated by BHC, BHCF, and Cheval; (iii) the Chief Executive Officer of the Company to be designated jointly and unanimously by the Lenders; and (iv) two independent directors to be designated jointly and unanimously by the Lenders.

The issuance of the shares contemplated by the SPA was consummated on the Effective Date, and the Company issued to the Purchasers an aggregate of 7,147,035 shares of common stock for an aggregate purchase price of $11 million, including 612,501 shares to BHC, 1,429,407 shares to BHCMF, 1,531,610 shares to Cheval, 2,858,814 shares to Nomis and 714,703 shares to Cortleigh. Pursuant to the terms of the SPA, the Company paid $0.4 million to BHC in payment of its fees and expenses and $0.3 million to Nomis in payment of its fees and expenses.

Under the terms of the SPA, the Company was required to use commercially reasonable efforts to cause a registration statement registering the resale by the Purchasers of the shares issuable under the SPA to be declared effective by the SEC no later than December 27, 2016. The Company was obligated to keep the registration statement effective until all of the shares issued pursuant to the SPA are eligible for resale by the Purchasers without volume restrictions under an exemption from registration under the Securities Act. If the registration statement has not been declared effective by December 27, 2016 and any of the shares issued pursuant to the SPA are not eligible to be sold under Rule 144, then during each subsequent thirty day period (or portion thereof) until the registration statement is declared effective, the Company agrees to issue additional shares of common stock to the Purchasers in an amount equivalent to 10.0% of the shares originally purchased under the SPA that are then held by the Purchasers. On October 28, 2016, the SPA was amended to require the Company to file a registration statement by January 10, 2017 with effectiveness to be no later than March 31, 2017. On December 19, 2016, the SPA was amended again to require the Company to file a registration statement by March 17, 2017 with effectiveness to be no later than June 20, 2017. The Company timely filed a registration statement on Form S-1 on March 17, 2017. On June 20, 2017 the SPA was amended again to require the Company to obtain effectiveness of the registration statement no later than July 30, 2017. On July 14, 2017, the registration statement was declared effective by the SEC.

Governance Arrangements

On the Effective Date, the Company and Martin Shkreli, the Company's former Chief Executive Officer, former Chairman and former controlling stockholder, entered into a Corporate Governance Agreement (the "Governance Agreement"), which provides for certain terms and conditions regarding the acquisition, disposition, holding and voting of securities of the Company by Mr. Shkreli. The Governance Agreement applies to all common stock owned by Mr. Shkreli or affiliates he controls.

Under the terms of the Governance Agreement, for 180 days following the Effective Date, Mr. Shkreli could not sell his shares of common stock at a price per share that was less than the greater of (x) $2.50 and (y) a 10% discount to the prior two week volume-weighted average price (the "Market Discount Price"). In addition, for 180 days following the 61st day after the Effective Date, the Company had a right to purchase any or all of Mr. Shkreli's shares at a purchase price per share equal to the Market Discount Price. For a limited time, the Company also had a right of first refusal to purchase shares that Mr. Shkreli proposed to sell. Mr. Shkreli was also prohibited from transferring any shares to his affiliates or associates unless such transferee agreed to be subject to the terms of the Governance Agreement. Transfers of shares by Mr. Shkreli not made in compliance with the Governance Agreement would be null and void.

Under the terms of the Governance Agreement, Mr. Shkreli will not have any right to nominate directors to the Board of Directors of the Company and agreed in connection with any stockholder vote to vote his shares in proportion to the votes of the Company's public stockholders. The Governance Agreement also prohibits Mr. Shkreli or his affiliates for a period of 24 months after the date of the Governance Agreement, from, among other things:

- purchasing any stock or assets of the Company;
- participating in any proposal for any merger, tender offer or other business combination, or similar extraordinary transaction involving the Company or any of its subsidiaries;
- seeking to control or influence the management, the Company's Board or the policies of the Company; or
- submitting any proposal to be considered by the stockholders of the Company.

In addition, any material transaction between Mr. Shkreli or his associates and the Company, or relating to the Governance Agreement, cannot be taken without the prior approval of the Company's Board.

The Governance Agreement provides for a mutual release between the Company and Mr. Shkreli of all claims and liabilities existing as of the date of execution.

On August 25 and August 26, 2016, Mr. Shkreli sold all of his shares of the Company to third party investors in private transactions.

Financial Reporting in Reorganization

The Company applied Financial Accounting Standards Board ("FASB") Accounting Standards Codification ("ASC") 852, *Reorganizations*, which is applicable to companies under bankruptcy protection, and requires amendments to the presentation of key financial statement line items. It requires that the financial statements for periods subsequent to the Chapter 11 filing distinguish transactions and events that are directly associated with the reorganization from the ongoing operations of the business. Revenues, expenses, realized gains and losses, and provisions for losses that can be directly associated with the reorganization and restructuring of the business must be reported separately as reorganization items in the Condensed Consolidated Statements of Operations and Comprehensive Loss. The balance sheet must distinguish pre-petition liabilities subject to compromise from both those pre-petition liabilities that are not subject to compromise and from post-petition liabilities. Liabilities that may be subject to a plan of reorganization must be reported at the amounts expected to be allowed in the Company's Chapter 11 case, even if they may be settled for lesser amounts as a result of the plan of reorganization or negotiations with creditors.

As of December 31, 2015, the Company had approximately $5.4 million recorded as Liabilities subject to compromise. In conjunction with the Company's exit from bankruptcy, the Company reclassified remaining Liabilities subject to compromise totaling approximately $2.8 million, $0.8 million and $1.2 million to Accounts payable, Accrued expenses and Notes payable to vendors, respectively. For year ended December 31, 2016, the Company paid approximately $3.4 million related to Liabilities subject to compromise, issued $1.2 million in promissory notes to vendors, wrote off approximately $0.3 million in deferred rent liabilities related to its lease termination and reversed approximately $0.1 million in accrued expenses related to a claim that has been denied by the court, which as discussed above, were previously included in Liabilities subject to compromise. As of December 31, 2016, approximately $0.4 million and $1.2 million remain in Accounts payable and Notes payable to vendors, respectively. For the year ended December 31, 2017, the Company wrote off approximately $0.2 million in claims that had been reduced or for which a settlement had been reached at a lower amount than what had been previously accrued and also paid approximately $0.1 million in claims. As of December 31, 2017, approximately $0.06 million and $1.3 million remain in Accounts payable and Notes payable to vendors, respectively. Remaining amounts will be paid based on terms of the Plan.

For the years ended December 31, 2017 and 2016, Reorganization items, net consisted of the following charges:

	Year ended December 31, 2017	2016
Legal fees	$ 297	$ 4,870
Professional fees	34	1,218
Debtor-in-possession financing costs	-	1,143
Beneficial conversion on debtor-in-possession financing	-	484
Fair value of shares issued to officer and directors for service in bankruptcy	-	700
Gain on lease termination	-	(227)
Total reorganization items, net	**$ 331**	**$ 8,188**

Cash payments for reorganization items totaled $0.9 million and $5.0 million for the years ended December 31, 2017 and 2016, respectively.

3. Summary of Significant Accounting Policies

Basis of Presentation and Use of Estimates

The accompanying Consolidated Financial Statements have been prepared in accordance with U.S. generally accepted accounting principles ("GAAP") and include all adjustments necessary for the presentation of the Company's consolidated financial position, results of operations and cash flows for the periods presented. The Consolidated Financial Statements include the accounts of the Company and its wholly owned subsidiaries. These financial statements have been prepared on a basis that assumes that the Company will continue as a going concern, which contemplates the realization of assets and the satisfaction of liabilities and commitments in the normal course of business.

The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the amounts and disclosures reported in the Consolidated Financial Statements and accompanying notes. Actual results could differ materially from those estimates. The Company believes judgment is involved in determining the valuation of the financing derivative, the fair value-based measurement of stock-based compensation, accruals, liabilities subject to compromise and warrant valuations. The Company evaluates its estimates and assumptions as facts and circumstances dictate. As future events and their effects cannot be determined with precision, actual results could differ from these estimates and assumptions, and those differences could be material to the Consolidated Financial Statements.

Concentration of Credit Risk

Cash, cash equivalents, and marketable securities consist of financial instruments that potentially subject the Company to a concentration of credit risk in the event of a default by the related financial institution holding the securities, to the extent of the value recorded in the balance sheet. The Company invests cash that is not required for immediate operating needs primarily in highly liquid instruments with lower credit risk. The Company has established guidelines relating to the quality, diversification, and maturities of securities to enable the Company to manage its credit risk.

Fair Value of Financial Instruments

Cash, accounts payable and accrued liabilities are carried at cost, which approximates fair value given their short-term nature. Marketable securities and cash equivalents are carried at fair value.

The fair value of financial instruments reflects the amounts that would be received upon the sale of an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date (exit price). The fair value hierarchy is based on three levels of inputs that may be used to measure fair value, of which the first two are considered observable, and the third is considered unobservable, as follows:

Level 1—Quoted prices in active markets for identical assets or liabilities.

Level 2—Inputs other than those included in Level 1 that are directly or indirectly observable, such as quoted prices for similar assets or liabilities in active markets; quoted prices for identical or similar assets or liabilities 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.

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

The Company measures the fair value of financial assets and liabilities using the highest level of inputs that are reasonably available as of the measurement date. The following tables summarize the fair value of financial assets (marketable securities) that are measured at fair value, and the classification by level of input within the fair value hierarchy:

	Fair Value Measurements as of December 31, 2017			
Investments:	Level 1	Level 2	Level 3	Total
Money market funds	$ 101	$ —	$ —	$ 101
Total assets measured at fair value	$ 101	$ —	—	$ 101

	Fair Value Measurements as of December 31, 2016			
	Level 1	Level 2	Level 3	Total
Investments:				
Money market funds	$ 101	$ —	$ —	$ 101
Total assets measured at fair value	$ 101	$ —	—	$ 101

The estimated fair value of the Term Loans payable and the Notes payable to vendors as of December 31, 2017 and 2016, based upon current market rates for similar borrowings, as measured using Level 3 inputs, approximate the carrying amounts as presented in the Consolidated Balance Sheets.

Cash, Cash Equivalents, and Marketable Securities

The Company considers all highly liquid investments with an original maturity of 90 days or less at the time of purchase to be cash equivalents. Cash and cash equivalents consist of deposits with commercial banks in checking, interest-bearing and demand money market accounts.

Restricted Cash

Restricted cash at December 31, 2017 and 2016 of $0.1 million related to a standby letters of credit in the amount of $0.05 million issued in connection with certain insurance policy coverage maintained by the Company and restricted cash related to a credit card facility in the amount of $0.05 million.

Property and Equipment, Net

Property and equipment is stated at cost, less accumulated depreciation and amortization, and depreciated over the estimated useful lives of the respective assets of three years using the straight-line method. Leasehold improvements are amortized on a straight-line basis over the shorter of the useful lives or the non-cancelable term of the related lease. Maintenance and repair costs are charged as expense in the Statements of Operations and Comprehensive Loss as incurred.

Long-Lived Assets

The Company evaluates the carrying value of its long-lived assets, including intangible assets, whenever events or changes in circumstances indicate that the carrying value of the asset may be impaired. An impairment loss would be recognized when estimated future cash flows expected to result from the use of the asset, including disposition, are less than the carrying value of the asset. To date, the Company has not recorded any impairment charges on its long-lived assets.

Debt Issue Costs

As of January 1, 2016, the Company adopted Financial Accounting Standards Board ("FASB") Accounting Standards Update ("ASU") No. 2015-03 and No. 2015-15, which require that debt issuance costs related to a recognized debt liability be presented on the balance sheet as a direct deduction from the carrying amount of that debt liability, consistent with debt discounts. As a result of our adoption of the guidance, as of December 31, 2016, $0.5 million of deferred financing costs were reclassified to reduce the Term loan payable in the Consolidated Balance Sheet. As of December 31, 2017 all debt issuance costs had been fully amortized. The guidance did not have a material impact on the consolidated financial statements.

Research and Development Expenses

Development costs incurred in the research and development of new product candidates are expensed as incurred, including expenses that may or may not be reimbursed under research and development collaboration arrangements. Research and development costs include, but are not limited to, salaries, benefits, stock-based compensation, laboratory supplies, allocated overhead, fees for professional service providers and costs associated with product development efforts, including preclinical studies and clinical trials. Research and development expenses under collaborative agreements approximate or exceed the revenue recognized under such agreements.

The Company estimates preclinical study and clinical trial expenses based on the services performed, pursuant to contracts with research institutions and clinical research organizations that conduct and manage preclinical studies and clinical trials on its behalf. In accruing service fees, the Company estimates the time period over which services will be performed and the level of effort to be expended in each period. If the actual timing of the performance of services or the level of effort varies from the estimate, the Company will adjust the accrual accordingly. Payments made to third parties under these arrangements in advance of the receipt of the related services are recorded as prepaid expenses until the services are rendered.

The Company records upfront and milestone payments made to third parties under licensing arrangements as an expense. Upfront payments are recorded when incurred and milestone payments are recorded when the specific milestone has been achieved.

Research and Development Services

Internal and external research and development costs incurred in connection with collaboration agreements are recognized as revenue in the same period as the costs are incurred and are presented on a gross basis when the Company acts as a principal, has the discretion to choose suppliers, bears credit risk, and performs at least part of the services.

Revenue Recognition

The Company recognizes revenue when: (i) persuasive evidence of an arrangement exists, (ii) transfer of technology has been completed, delivery has occurred or services have been rendered, (iii) the fee is fixed or determinable, and (iv) collectability is reasonably assured. Payments received in advance of work performed are recorded as deferred revenue and recognized when earned. All revenue recognized to date under the Company's collaborative agreements has been nonrefundable.

Multiple Element Arrangements

The Company evaluates revenue from agreements that have multiple elements to determine whether the components of the arrangement represent separate units of accounting. Management considers whether components of an arrangement represent separate units of accounting based upon whether certain criteria are met, including whether the delivered element has stand-alone value to the customer. To date, all of the Company's research and development collaboration and license agreements have been assessed to have one unit of accounting. Up-front and license fees received for a combined unit of accounting are deferred and recognized ratably over the projected performance period. Nonrefundable fees where the Company has no continuing performance obligations are recognized as revenue when collection is reasonably assured and all other revenue recognition criteria have been met.

Stock-Based Compensation Expense

The Company measures employee and director stock-based compensation expense for stock awards at the grant date, based on the fair value-based measurement of the award, and the expense is recorded over the related service period, generally the vesting period, net of estimated forfeitures. The Company calculates the fair value-based measurement of stock options using the Black-Scholes valuation model and the single-option method and recognizes expense using the straight-line attribution approach.

The Company accounts for equity instruments issued to non-employees in accordance with the provisions of ASC 505, *Equity*, using a fair-value approach and the provisions of ASC 815-40, *Accounting for Derivative Financial Instruments Indexed to, and Potentially Settled in, a Company's Own Stock.*. The equity instruments are valued using the Black-Scholes valuation model. Measurement of share-based compensation is subject to periodic adjustments as the underlying equity instruments vest and performance conditions are satisfied. The related expense is recognized as an expense over the term services are received.

Income Taxes

The Company accounts for income taxes under an asset-and-liability approach. Deferred income taxes reflect the impact of temporary differences between assets and liabilities recognized for tax and financial reporting purposes measured by applying enacted tax rates and laws that will be in effect when the differences are expected to reverse, net operating loss carryforwards and tax credits. Valuation allowances are provided when necessary to reduce net deferred tax assets to an amount that is more likely than not to be realized. The Company's policy is to include interest and penalties related to unrecognized tax benefits within the Company's provision for income taxes.

Comprehensive Loss

Comprehensive loss represents net loss adjusted for the change during the periods presented in unrealized gains and losses on available-for-sale securities less reclassification adjustments for realized gains or losses included in net loss. The unrealized gains or losses are reported on the Consolidated Statements of Operations and Comprehensive Loss.

Net Loss Per Common Share

Basic net loss per common share is calculated by dividing the net loss attributable to common stockholders by the weighted-average number of common shares outstanding during the period, without consideration for potentially dilutive securities. Diluted net loss per share is computed by dividing the net loss attributable to common stockholders by the weighted-average number of common shares and potentially dilutive securities outstanding for the period determined using the treasury-stock and if-converted methods. For purposes of the diluted net loss per share calculation, stock options, restricted stock units and common stock warrants are considered to be potentially dilutive securities but are excluded from the calculation of diluted net loss per share because their effect would be anti-dilutive and therefore, basic and diluted net loss per share were the same for all periods presented.

The Company's potential dilutive securities, which include stock options, restricted stock units and warrants have been excluded from the computation of diluted net loss per share as the effect would be to reduce the net loss per common share and be antidilutive. Therefore, the denominator used to calculate both basic and diluted net loss per common share is the same in all periods presented.

The following shares subject to outstanding potentially dilutive securities have been excluded from the computations of diluted net loss per common share as the effect of including such securities would be antidilutive:

	Year Ended December 31,	
	2017	2016
Options to purchase common stock	2,448,383	1,835,835
Warrants to purchase common stock	331,193	356,193
	2,779,576	2,192,028

Deferred Rent

The Company records its costs under facility operating lease agreements as rent expense. Rent expense is recognized on a straight-line basis over the non-cancelable term of the operating lease. The difference between the actual amounts paid and amounts recorded as rent expense is recorded to deferred rent.

Segment Reporting

The Company determines its segment reporting based upon the way the business is organized for making operating decisions and assessing performance. The Company operates in only one segment, which is related to the development of pharmaceutical products.

Recent Accounting Pronouncements

The Company qualifies as an “emerging growth company” (“EGC”) pursuant to the provisions of the JOBS Act and has elected to take advantage of the extended transition period provided in Section 7(a)(2)(B) of the Securities Act which permits EGCs to defer compliance with new or revised accounting standards (the “EGC extension”) until non-issuers are required to comply with such standards. Accordingly, so long as the Company continues to qualify as an EGC, the Company will not have to adopt or comply with new accounting standards until non-issuers are required to comply with such standards.

In May 2014, the FASB issued ASU 2014-09, "Revenue from Contracts with Customers (Topic 606)." ASU 2014-09 completes the joint effort by the FASB and International Accounting Standards Board to improve financial reporting by creating common revenue recognition guidance for U.S. GAAP and International Financial Reporting Standards. ASU 2014-09 applies to all companies that enter into contracts with customers to transfer goods or services. ASU 2014-09 is effective for public entities for interim and annual reporting periods beginning after December 15, 2017. EGCs that have elected the EGC extension, including the Company, and non-public entities will be required to comply with the guidance for annual reporting periods beginning after December 15, 2018. Early application is not permitted and entities have the choice to apply ASU 2014-09 either retrospectively to each reporting period presented or by recognizing the cumulative effect of applying ASU 2014-09 at the date of initial application and not adjusting comparative information. The Company is currently evaluating the requirements of ASU 2014-09 and has not yet determined its impact on the Company's Consolidated Financial Statements.

In February 2016, the FASB issued ASU 2016-02, “Leases (Topic 842)”, which requires lessees to recognize on the balance sheet a right-of use asset, representing its right to use the underlying asset for the lease term, and a lease liability for all leases with terms greater than 12 months. The guidance also requires qualitative and quantitative disclosures designed to assess the amount, timing, and uncertainty of cash flows arising from leases. The standard requires the use of a modified retrospective transition approach, which includes a number of optional practical expedients that entities may elect to apply. EGCs that have elected the EGC extension, including the Company, and non-public entities will be required to comply with the guidance for annual reporting periods beginning after December 15, 2019, and interim periods within fiscal years beginning after December 15, 2020. Early application is permitted. The Company is currently evaluating the requirements of ASU 2016-02 and has not yet determined its impact on the Company’s Consolidated Financial Statements.

In March 2016, the FASB issued Accounting Standards Update 2016-09, *Stock Compensation – Improvements to Employee Share-Based Payment Accounting*. This new accounting standard simplifies accounting for share-based payment transactions, including income tax consequences and the classification of the tax impact on the statement of cash flows. EGCs that have elected the EGC extension, including the Company, and non-public entities will be required to comply with the guidance for annual reporting periods beginning after December 15, 2017. Early application is permitted. The Company is assessing the potential impact to its financial statements and disclosures.

4. Investments

At December 31, 2017, the amortized cost and fair value of investments, with gross unrealized gains and losses, were as follows:

	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value
Money market funds	$ 101	$ —	$ —	$ 101
Total investments	$ 101	$ —	$ —	$ 101
Reported as:				
Cash and cash equivalents				$ —
Restricted cash				101
Total investments				$ 101

At December 31, 2016, the amortized cost and fair value of investments, with gross unrealized gains and losses, were as follows:

	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value
Money market funds	$ 101	$ —	$ —	$ 101
Total investments	$ 101	$ —	$ —	$ 101
Reported as:				
Cash and cash equivalents				$ -
Restricted cash, long-term				101
Total investments				$ 101

5. Property and Equipment

Property and equipment consists of the following:

	December 31,	
	2017	2016
Computer equipment and software	$ 216	$ 216
Accumulated depreciation and amortization	(197)	(148)
Property and equipment, net	$ 19	$ 68

Depreciation and amortization expense for the years ended December 31, 2017 and December 31, 2016 was $0.05 million and $0.1 million, respectively.

6. Savant Arrangements

On February 29, 2016, the Company entered into a binding letter of intent (the "LOI") with Savant Neglected Diseases, LLC ("Savant"). The LOI provided that the Company would acquire certain worldwide rights relating to benznidazole (the "Compound") from Savant. Under the LOI, the Company made a non-refundable deposit to Savant of $0.5 million, which was credited towards the Initial Payment (as defined below), and agreed to make monthly payments to Savant equal to $0.1 million for development services performed by Savant relating to the Compound.

The LOI provided that in consideration for the assets to be acquired, the Company would provide consideration to Savant, including:

- $3.0 million (the "Initial Payment") payable as soon as practicable but in no event later than the Company emerging from its Chapter 11 bankruptcy pursuant to a plan of reorganization (the "Bankruptcy Exit");
- a five-year warrant from the date of the Bankruptcy Exit to purchase up to 200,000 shares of common stock at a per share price of $2.25, exercisable for 25% of the shares immediately and exercisable for the remaining shares upon reaching certain milestones related to regulatory approval of the Compound; and
- certain additional payments to be further specified in the definitive agreements.

On the Effective Date, as authorized by the Plan and the Confirmation Order, the Company and Savant entered into an Agreement for the Manufacture, Development and Commercialization of Benznidazole for Human Use (the "MDC Agreement"), pursuant to which the Company acquired certain worldwide rights relating to the Compound. The MDC Agreement consummates the transactions contemplated by the LOI.

Under the terms of the MDC Agreement, the Company acquired certain regulatory and non-intellectual property assets relating to the Compound and any product containing the Compound and an exclusive license of certain intellectual property assets related to the Compound. Savant retained the right to use the licensed intellectual property for veterinary uses. The MDC Agreement provides that the Company and Savant will jointly conduct research and development activities with respect to the Compound, while the Company will be solely responsible for commercializing the Compound.

As required by the MDC Agreement, on the Effective Date, the Company made payments to Savant totaling $2.7 million, consisting of the remaining portion of the Initial Payment less the deposit in the amount of $2.5 million, an initial monthly Joint Development Program Cost payment of $0.1 million, and reimbursement of Savant's legal fees capped at $0.1 million. The MDC Agreement provides for milestone payments, including payments related to U.S. and foreign regulatory submissions of up to $21 million and certain other contingent payments. Additionally, the Company will pay Savant royalties on any net sales of the Compound, which royalty would increase if a PRV is granted subsequent to regulatory approval of the Compound. The MDC Agreement also provides that Savant is entitled to a portion of the amount the Company receives upon the sale, if any, of a PRV relating to the Compound.

In addition, on the Effective Date the Company and Savant also entered into a Security Agreement (the "Security Agreement"), pursuant to which the Company granted Savant a continuing senior security interest in the assets and rights acquired by the Company pursuant to the MDC Agreement and certain future assets developed from those acquired assets.

On the Effective Date, the Company issued to Savant a five year warrant (the "Warrant") to purchase 200,000 shares of the Company's Common Stock, at an exercise price of $2.25 per share, subject to adjustment. The Warrant is exercisable for 25% of the shares immediately and exercisable for the remaining shares upon reaching certain regulatory related milestones. In addition, pursuant to the MDC Agreement, the Company has granted Savant certain "piggyback" registration rights for the shares issuable under the Warrant (See Note 8 "Warrants to Purchase Common Stock").

The Company will continue to reevaluate the performance conditions and expected vesting of the Warrant on a quarterly basis until all performance conditions have been met.

Before a compound receives regulatory approval, the Company records upfront and milestone payments made to third parties under licensing arrangements as expense. Upfront payments are recorded when incurred and milestone payments are recorded when the specific milestone has been achieved.

The Company determined that the acquisition of the Compound should be treated as a purchase of in-process research and development. Accordingly, during the year ended December 31, 2016, the Company recorded $3.3 million, which includes an additional $0.3 million payment made in 2015 to Savant, as Research and development expense in the accompanying Condensed Consolidated Statement of Operations and Comprehensive Loss. In addition, during the year ended December 31, 2016, the Company recorded $0.3 million in connection with the Joint Development Program and recorded $0.1 million in legal fee reimbursement as Research and development expense in the accompanying Condensed Consolidated Statement of Operations and Comprehensive Loss.

On May 26, 2017, the Company submitted its benznidazole IND to FDA which became effective on June 26, 2017. The Company recorded expense of $1.0 million during the year ended December 31, 2017 as Research and development expense related to the milestone achievement associated with the IND being declared effective.

On July 10, 2017 FDA notified the Company that it granted Orphan Drug Designation to benznidazole for the treatment of Chagas disease. The Company recorded expense of $1.0 million during the year ended December 31, 2017 as Research and development expense related to the milestone achievement associated with Orphan Drug Designation.

In July 2017, the Company commenced litigation against Savant alleging that Savant breached the MDC Agreement and seeking a declaratory judgement. Savant has asserted counterclaims for breaches of contract under the MDC Agreement and the Security Agreement. The dispute primarily concerns the Company's right under the MDC Agreement to offset certain costs incurred by the Company in excess of the agreed upon budget against payments due Savant. The aggregate cost overages as of December 31, 2017 that the Company asserts are Savant's responsibility total approximately $3.4 million, net of a $0.5 million deductible. The Company asserts that it is entitled to offset $2.0 million in milestone payments due Savant against the cost overages, such that as of June 30, 2017, Savant owed the Company approximately $1.4 million. As of December 31, 2017, Savant owed the Company approximately $2.1 million in cost overages. Such cost overages have been charged to Research and development expense as incurred. Recovery of such cost overages, if any, will be recorded as a reduction of Research and development expense in the period received. See Part I, Item 3 of this Form 10-K for more information about this pending matter.

7. Debt

Notes Payable to Vendors

On June 30, 2016, the Company issued promissory notes in an aggregate principal amount of approximately $1.2 million to certain claimants in accordance with the Plan. The notes are unsecured, bear interest at 10% per annum and are due and payable in full, including principal and accrued interest on June 30, 2019. As of December 31, 2017 and 2016, the Company has accrued $0.2 million and $0.1 million in interest related to these promissory notes, respectively.

Term Loans

Term Loans consisted of the following at December 31, 2017 and 2016:

As of December 31, 2017

	Original Principal Amount	Accrued Interest	Loan Balance	Fees	Balance Due
December 2016 Loan	$ 3,315	$ 324	$ 3,639	$ 153	$ 3,792
March 2017 Loan	5,978	452	6,430	275	6,705
July 2017 Loan	5,435	249	5,684	250	5,934
Bridge Loan	1,500	6	1,506	-	1,506
Claims Advances Loan	80	1	81	-	81
Totals	$ 16,308	$ 1,032	$ 17,340	$ 678	$ 18,018

As of December 31, 2016

	Original Principal Amount	Accrued Interest	Loan Balance	Unamortized Fees	Balance Due
December 2016 Loan	$ 3,315	$ 8	$ 3,323	$ (307)	$ 3,016

On December 21, 2016, the Company entered into a Credit and Security Agreement, as amended on March 21, 2017 and on July 8, 2017 (as amended, the “Credit Agreement”), with BHCMF as administrative agent and lender, and lenders BHC, Cheval and Nomis Bay (collectively the “Lenders”). The Credit Agreement provided for the December 2016 Loan, the March 2017 Loan and the July 2017 Loan (the “Term Loans”).

In accordance with the terms of the Credit Agreement, the Company used the proceeds of the Credit Facility for general working capital, the payment of certain fees and expenses owed to BHCMF and the Lenders and other costs incurred in the ordinary course of business. Dr. Chappell, one of the Company’s former directors, is an affiliate of each of BHCMF, BHC and Cheval.

The Term Loans bore interest at 9.00% and are subject to certain customary representations, warranties and covenants, as set forth in the Credit Agreement.

On December 1, 2017 the Term Loans matured and began bearing interest at the default rate of 14.00%. The Company’s obligations under the Credit Agreement are secured by a first priority interest in all of the Company’s real and personal property, subject only to certain carve outs and permitted liens, as set forth in the agreement.

On December 21, 2017, the Company obtained a $1.5 million bridge loan (the "Bridge Loan") from Cheval. The Bridge Loan bears interest at 14.00% and is treated as a secured loan under the Credit Agreement.

On February 27, 2018 the Term Loans and the Bridge Loans along with all related fees and accrued interest, were extinguished in connection with the Restructuring Transactions described in Note 10.

8. Warrants to Purchase Common Stock

On June 30, 2016, in connection with the benznidazole acquisition the Company issued to Savant a five year warrant (the “Savant Warrant”) to purchase 200,000 shares of the Company’s Common Stock, at an exercise price of $2.25 per share, subject to adjustment. The Savant Warrant is exercisable for 25% of the shares immediately and exercisable for the remaining shares upon reaching certain regulatory related milestones. In addition, pursuant to the MDC Agreement, the Company has granted Savant certain “piggyback” registration rights for the shares issuable under the Warrant.

The Company determined the initial fair value of the Savant Warrant to be approximately $0.7 million as of June 30, 2016. The Company reevaluated the performance conditions and expected vesting of the Savant Warrant as of September 30 and December 31, 2016 and recorded total expense of approximately $0.4 million during the year ended December 31, 2016, which is included in Research and development expenses in the accompanying Consolidated Statement of Operations and Comprehensive Loss. The Company reevaluated the performance conditions and expected vesting of the Warrant quarterly during 2017 and recorded a reduction of expense of approximately $0.1 million during the year ended December 31, 2017. The expense reduction was due to a decline in the fair value, which reduction is included in Research and development expenses in the accompanying Condensed Consolidated Statement of Operations and Comprehensive Loss. Specifically, as a result of the FDA granting accelerated and conditional approval of a benznidazole therapy manufactured by Chemo for the treatment of Chagas disease and awarding Chemo a neglected tropical disease PRV, the Company re-evaluated the final two vesting milestones and concluded that the probability of achievement of these milestones had decreased to 0%.

The Company will continue to reevaluate the performance conditions and expected vesting of the Savant Warrant on a quarterly basis until all performance conditions have been met.

On December 1, 2016 the Company issued a warrant to purchase up to an aggregate of 25,000 shares of common stock at an exercise price of $4.00 per share. The warrant expires on the one year anniversary of its issuance and had a fair value of approximately $0.04 million which is included in General and administrative expenses in the accompanying Consolidated Statements of Operations and Comprehensive Loss. The warrant provided that if the Company declared a dividend, or made any other distribution of its assets, to holders of common stock, then the warrant holder would be entitled to participate in such dividend or distribution to the same extent that the holder would have participated had it held the number of shares of common stock acquirable upon complete exercise of the warrant. The warrant was issued in connection with the engagement agreement related to certain investor relations activities. The warrant expired on December 1, 2017.

9. Commitments and Contingencies

Operating Leases

In December 2013, the Company entered into a lease agreement for a facility in South San Francisco, California. The lease commenced in July 2014 and was set to expire in 2019. Per the terms of the lease agreement, the Company had the option to terminate the lease after 36 months, subject to additional fees and expenses. In March 2016, the Company entered into a termination agreement (the "Lease Termination Agreement") related to the lease of this facility. The Lease Termination Agreement, approved by order of the Bankruptcy Court issued March 15, 2016, waived all damages related to early termination of the lease, relieved the Company of March rental expenses and set an effective termination date of March 31, 2016.

Concurrent with the termination of this lease, the Company entered into a lease agreement for a new facility in Brisbane, California. The new lease commenced in April 2016 and was to expire on March 31, 2017. On February 16, 2017, the Company amended the lease to extend the term of the lease for an additional period of eighteen months such that the lease will expire on September 30, 2018.

As of December 31, 2017, future minimum lease payments due under the Company's lease, are as follows:

Year	Amount
2018	$ 202

Rent expense was $0.3 million for each of the years ended December 31, 2017 and December 31, 2016.

Indemnification

The Company has certain agreements with service providers with which it does business that contain indemnification provisions pursuant to which the Company typically agrees to indemnify the party against certain types of third-party claims. The Company accrues for known indemnification issues when a loss is probable and can be reasonably estimated. The Company would also accrue for estimated incurred but unidentified indemnification issues based on historical activity. As the Company has not incurred any indemnification losses to date, there were no accruals for or expenses related to indemnification issues for any period presented.

10. Stockholders' Equity

Restructuring Transactions

On December 21, 2017, the Company entered into a Securities Purchase and Loan Satisfaction Agreement (the "Purchase Agreement") and a Forbearance and Loan Modification Agreement (the "Forbearance Agreement" and, together with the Purchase Agreement, the "Agreements"), each with the Lenders. The Agreements provide for a series of transactions (the "Restructuring Transactions") pursuant to which, at the closing of the Restructuring Transactions (the "Transaction Closing"), the Company will: (i) in exchange for the satisfaction and extinguishment of the entire balance of the Term Loans, (a) issue to the Lenders an aggregate of 59,786,848 shares of Common Stock (the "New Lender Shares"), and (b) transfer and assign to an affiliate of Nomis Bay (the "JV Entity"), all of the assets of the Company related to benznidazole (the "Benz Assets"), the Company's former drug candidate; and (ii) issue to Cheval an aggregate of 32,028,669 shares of Common Stock (the "New Black Horse Shares" and, collectively with the New Lender Shares, the "New Common Shares") for total consideration of $3.0 million.

Issuance of the New Lender Shares

Under the Purchase Agreement, at the Transaction Closing, the Company will issue to the Lenders the New Lender Shares, of which 29,893,424 shares of Common Stock will be issued to the Black Horse Entities and 29,893,424 shares of Common Stock will be issued to Nomis Bay. The issuance of the New Lender Shares to the Lenders and the assignment of the Benz Assets to the JV Entity will result in the satisfaction and extinguishment of the Company's outstanding obligations under the Credit Agreement and the cancellation of the Term Loans, other than the Bridge Loan described below. At the Transaction Closing, the Company will no longer be liable for repayment of its outstanding obligations under the Credit Agreement, and all security interests of the Lenders in the Company's assets will be released.

Transfer of the Benz Assets; Claims Advances

Under the Purchase Agreement, at the Transaction Closing, the Company will transfer and assign the Benz Assets to the JV Entity. The Company also will agree to retain, but provide the JV Entity the benefits of, any Benz Assets which are not permitted to be assigned absent receipt of third-party consents. The JV Entity (at the election of Nomis Bay, which will control the JV Entity) will have 90 days from the date of the Rule 2004 Discovery Order granting the Rule 2004 Discovery Motion (each as defined below), or 180 days from the Transaction Closing if a Rule 2004 Discovery Order is either entered denying the Rule 2004 Discovery Motion or has not been entered on or before the Transaction Closing, to decide, in its sole discretion, whether to elect to keep the Benz Assets (a "Positive Election"). The Benz Assets will revert back to the Company in the event that the JV Entity (at the election of Nomis Bay) elects not to make a Positive Election.

In connection with the transfer of the Benz Assets to the JV Entity, Nomis Bay will pay certain amounts incurred by the Company and the JV Entity after December 21, 2017 in investigating certain causes of action and claims related to or in connection with the Benz Assets (the "Claims"), including the right to pursue causes of action and claims related to potential misappropriation of the Company's trade secrets by a competitor in connection with such competitor's submissions to the U.S. Food and Drug Administration. In addition, if the JV Entity (at the election of Nomis Bay) makes a Positive Election: (i) Nomis Bay will assume certain legal fees and expenses owed by the Company to its litigation counsel, and (ii) the Company will be entitled to receive 30% of any amounts realized from the successful prosecution of the Claims or otherwise from the Benz Assets, after Nomis Bay is reimbursed for certain expenses in connection with funding the Claims and after giving effect to any payments that the JV Entity may be required to make to any third parties.

Nomis Bay will have full control, in its sole discretion, over the management of the JV Entity, any development of or realization on the Benz Assets and the prosecution of the Claims. In addition, the Company has agreed that, as soon as practicable after entering into the Agreements, the Company will make appropriate motion to the Bankruptcy Court currently responsible for the Company's pending Chapter 11 proceeding dating from December 2015 (the "Bankruptcy Court") to permit discovery in relation to the Claims pursuant to Rule 2004 of the Federal Rules of Bankruptcy Procedure (the "Rule 2004 Discovery Motion"), and commence such discovery promptly after entry of an order of the Bankruptcy Court authorizing such discovery (the "Rule 2004 Discovery Order"). Nomis Bay has agreed to fund these litigation efforts from the date of the Agreements to the Transaction Closing or termination of the Restructuring Transactions as secured loans under the Credit Agreement ("Claims Advances"). Pursuant to the Forbearance Agreement, the Claims Advances will have priority over the Bridge Loan (as defined below) and all other Term Loans in the Benz Assets. At the Transaction Closing, the entire amount of the Claims Advances will be deemed satisfied and extinguished along with the other Term Loans, and all security interests of Nomis Bay in the Benz Assets will be released.

Issuance of the New Black Horse Shares; Bridge Loan

Under the Purchase Agreement, at the Transaction Closing, the Company will also issue to Cheval the New Black Horse Shares for total consideration of $3.0 million (including extinguishment of the Bridge Loan described below). The Company plans to use the proceeds from the issuance of the New Black Horse Shares for working capital and other costs incurred in the ordinary course of business, including additional fundraising. On December 21, 2017, concurrently with entering into the Agreements, Cheval agreed to make a bridge loan to the Company of $1.5 million (the "Bridge Loan"). Pursuant to the Forbearance Agreement, until the Transaction Closing, the Bridge Loan will be treated as a secured loan under the Credit Agreement. The Bridge Loan will have priority over the Claims Advances and the Term Loans in certain of the Company's non-benznidazole related assets, including lenzilumab and ifabotuzumab. At the Transaction Closing, the entire amount of the Bridge Loan will be credited to Cheval's $3.0 million payment obligation and will be converted into New Black Horse Shares and all security interests of Cheval in the non-benznidazole assets will be released.

Bankruptcy Related Common Stock Issuances

As more fully described in Note 2, on June 30, 2016, pursuant to the SPA and in repayment of its obligations under the Credit Agreement, the Company issued an aggregate of 9,497,515 shares of its common stock to the DIP Lenders.

As more fully described in Note 2, on June 30, 2016, the Company issued 327,608 shares of common stock to the plaintiffs in litigation related to the Company's 2015 private financing transaction in accordance with the settlement stipulation.

As more fully described in Note 2, on June 30, 2016, the Company issued 3,750 shares of common stock to a former director in satisfaction of claims against the Company.

As more fully described in Note 2, on June 30, 2016, the Company issued 300,000 shares of common stock for issuance to the plaintiffs in a class action litigation related to the events surrounding the Company's former Chairman and Chief Executive Officer.

Other Common Stock Transactions

In June 2014, the Company amended and restated its certificate of incorporation to increase the authorized common stock to 85,000,000 shares. In February 2018, the Company amended and restated its certificate of incorporation to increase the authorized common stock to 225,000,000 shares and authorize 25,000,000 shares of preferred stock.

On November 7, 2016, the Company issued 25,000 shares of restricted common stock to an investor relations consultant. The fair value of the shares issued based on the closing price on November 7, 2016 was $0.1 million and was recorded as stock based compensation in the attached Consolidated Statements of Operations and Comprehensive Loss for the year ended December 31, 2016.

On November 15, 2016, the Company issued 40,000 shares of restricted common stock to a financial advisor in return for services. The fair value of the shares issued based on the closing price on November 15, 2016 was $0.1 million and was recorded as stock based compensation in the attached Consolidated Statements of Operations and Comprehensive Loss for the year ended December 31, 2016. In November 2017, the financial advisor returned the shares for no consideration.

The Company had reserved the following shares of common stock for issuance as of December 31, 2017:

Warrants to purchase common stock	331,193
Options:	
Outstanding under the 2012 Equity Incentive Plan	2,439,183
Outstanding under the 2001 Equity Incentive Plan	9,200
Available for future grants under the 2012 Equity Incentive Plan	1,367,566
Total common stock reserved for future issuance	4,147,142

Committed Equity Financing Facility

On August 24, 2017, the Company entered into a Common Stock Purchase Agreement, dated as of August 23, 2017 (the "ELOC Purchase Agreement"), with Aperture Healthcare Ventures Ltd. ("Aperture") pursuant to which the Company may, subject to certain conditions and limitations set forth in the ELOC Purchase Agreement, require Aperture to purchase up to $15 million worth of newly issued shares (the "Put Shares") of the Company's common stock, over the 36-month term following the effectiveness of the initial resale registration statement described below (the "Investment Period"). From time to time over the Investment Period, and in the Company's sole discretion, the Company may present Aperture with one or more notices requiring Aperture to purchase a specified dollar amount of Put Shares, based on the price per share per day over five consecutive trading days (a "Pricing Period"). The per share purchase price for these shares equals the daily volume weighted average price of the common stock on each date during the Pricing Period on which shares are purchased, less a discount of 6.0% based on a minimum price as set forth in the ELOC Purchase Agreement. In addition, in the Company's sole discretion, but subject to certain limitations, the Company may require Aperture to purchase a percentage of the daily trading volume of common stock for each trading day during the Pricing Period.

Under the ELOC Purchase Agreement, the Company paid Aperture a document preparation fee of $0.02 million by issuing to Aperture 9,315 shares of common stock (the "Fee Shares" and, together with the Put Shares, the "ELOC Shares").

On August 23, 2017, in connection with the ELOC Purchase Agreement, the Company entered into a Registration Rights Agreement (the "ELOC RRA") with Aperture, pursuant to which the Company granted to Aperture certain registration rights related to the ELOC Shares issuable in accordance with the ELOC Purchase Agreement. Under the ELOC RRA, the Company agreed to use its commercially reasonable efforts to prepare and file with the SEC one or more registration statements for the purpose of registering the resale of the maximum ELOC Shares issuable pursuant to the ELOC Purchase Agreement. The Company agreed to file the initial registration statement with the SEC within 90 days after the date of the ELOC Purchase Agreement and to use commercially reasonable efforts to cause that registration statement to be declared effective within 120 days of the date of the ELOC Purchase Agreement (180 days if the registration statement is reviewed by the SEC).

The actual amount of funds that can be raised under the Aperture facility will depend on the number of shares sold under the ELOC Purchase Agreement and the market value of the Company's common stock during the Pricing Period of each sale. The Company has not yet filed a registration statement under the ELOC RRA. Sales of common stock under the ELOC Purchase Agreement cannot commence until such registration statement is filed and declared effective by the SEC. There can be no assurance that the Company will use the Aperture facility to raise funds in the future.

2012 Equity Incentive Plan

Under the Company's 2012 Equity Incentive Plan, the Company may grant shares, stock units, stock appreciation rights, performance cash awards and/or options to employees, directors, consultants, and other service providers. For options, the per share exercise price may not be less than the fair market value of a Company common share on the date of grant. Awards generally vest and become exercisable over three to four years and expire 10 years from the date of grant. Options generally become exercisable as they vest following the date of grant.

In general, to the extent that awards under the 2012 Plan are forfeited or lapse without the issuance of shares, those shares will again become available for awards.

The 2012 Plan will continue in effect for 10 years from its adoption date, unless the Company's board of directors decides to terminate the plan earlier.

On September 13, 2016, the Board of Directors of the Company approved an amendment to the Company's 2012 Equity Incentive Plan to increase the number of shares of the Company's common stock available for issuance under the Plan by 3,000,000 shares and to increase the annual maximum aggregate number of shares subject to stock option awards that may be granted to any one person under the Plan from 125,000 to 1,100,000.

As of December 31, 2017, there were 1,367,566 shares available for grant under the 2012 Equity Incentive Plan.

2001 Equity Incentive Plan

Under the Company's 2001 Stock Plan (the "2001 Plan"), the Company was able to grant shares and/or options to purchase up to 426,030 shares of common stock to employees, directors, consultants, and other service providers. In connection with the 2012 Plan taking effect, the 2001 Plan was terminated in August 2012. However, the awards under the 2001 Plan outstanding as of the termination of the 2001 Plan continued to be governed by their existing terms.

2012 Employee Stock Purchase Plan

The Employee Stock Purchase Plan (the "ESPP") provided eligible employees with the opportunity to acquire an ownership interest in the Company through periodic payroll deductions, based on a six-month look-back period, at a price equal to the lesser of 85% of the fair market value of the ordinary shares at either the beginning of the offering period, or the fair market value on the purchase date. The ESPP was structured as a qualified employee stock purchase plan under Section 423 stock bonus plan under Section 401(a) of the Internal Revenue Code of 1986 and was not subject to the provisions of the Employee Retirement Income Security Act of 1974. There were 21,058 shares initially authorized for issuance under the plan, and the first offering period commenced on June 1, 2014 and ended on October 31, 2014. The second offering period commenced on November 1, 2014 and ended on April 30, 2015. Offerings subsequent to the second offering commence on May 1 and November 1 and end on April 30 and October 31 each year. On May 3, 2016, the ESPP was terminated.

Stock Option Activity

The following table summarizes stock option activity for the years ended December 31, 2017:

	Number of Shares	Weighted Average Exercise Price (per share)(1)	Weighted-Average Remaining Contractual Term (in years)	Aggregate Intrinsic Value (2)
Outstanding at January 1, 2016	465,401	$ 19.29		
Granted	1,778,022	3.38		
Exercised	(5,625)	1.77		
Forfeited	(3,416)	5.86		
Expired	(398,547)	18.38		
Outstanding at December 31, 26016	1,835,835	$ 4.15		
Granted	765,000	2.41		
Forfeited	(152,365)			
Expired	(87)	1.99		
Outstanding at December 31, 2017	2,448,383	$ 3.67	8.7	$ 11
Options vested and expected to vest	2,440,058	$ 3.67	8.7	$ 11
Exercisable	1,307,236	$ 4.28	8.6	$ 1

(1) The weighted average price per share is determined using exercise price per share for stock options.

(2) The aggregate intrinsic value is calculated as the difference between the exercise price of the option and the fair value of the Company's common stock for in-the-money options at December 31, 2017.

The stock options outstanding and exercisable by exercise price at December 31, 2017 are as follows:

	Stock Options Outstanding			Stock Options Exercisable	
Range of Exercise Prices	Number of Shares	Weighted-Average Remaining Contractual Life In Years	Weighted-Average Exercise Price Per Share	Number of Shares	Weighted-Average Exercise Price Per Share
$0.33 - $0.33	150,000	9.68	$ 0.33	12,500	$ 0.33
$1.91 - $3.30	598,353	9.10	2.94	508,352	2.95
$3.38 - $3.38	1,602,604	8.71	3.38	690,837	3.38
$3.40 - $4.72	55,625	8.65	3.52	53,750	3.48
$8.24 - $17.36	9,200	0.13	9.78	9,200	9.78
$42.88 - $48.00	32,601	0.08	45.52	32,597	45.52
	2,448,383	8.72	$ 3.65	1,307,236	$ 4.28

The total fair value of options vested for the years ended December 31, 2017 and 2016 was $2.1 million and $0.8 million, respectively.

Stock-Based Compensation

The Company's stock-based compensation expense for stock options is estimated at the grant date based on the award's fair value as calculated by the Black-Scholes option pricing model and is recognized as expense over the requisite service period. The Black-Scholes option pricing model requires various highly judgmental assumptions including expected volatility and expected term. The expected volatility is based on the historical stock volatilities of several of the Company's publicly listed peers over a period equal to the expected terms of the options as the Company does not have a sufficient trading history to use the volatility of its own common stock. To estimate the expected term, the Company has opted to use the simplified method, which is the use of the midpoint of the vesting term and the contractual term. If any of the assumptions used in the Black-Scholes option pricing model changes significantly, stock-based compensation expense may differ materially in the future from that recorded in the current period. In addition, the Company is required to estimate the expected forfeiture rate and only recognize expense for those shares expected to vest. The Company estimates the forfeiture rate based on historical experience and its expectations regarding future pre-vesting termination behavior of employees. The Company reviews its estimate of the expected forfeiture rate annually, and stock-based compensation expense is adjusted accordingly.

The weighted-average fair value-based measurement of stock options granted under the Company's stock plans in the years ended December 31, 2017 and 2016 was $1.54 and $2.41 per share, respectively. The fair value- based measurement of stock options granted under the Company's stock plans was estimated at the date of grant using the Black-Scholes model with the following assumptions:

	Year Ended December 31,	
	2017	2016
Expected term	5-6 years	5-6 years
Expected volatility	83 - 88%	85 - 90%
Risk-free interest rate	1.8 - 2.1%	1.3 - 1.4%
Expected dividend yield	0%	0%

Total stock-based compensation expense recognized was as follows:

	Year Ended December 31,	
	2017	2016
General and administrative	$ 1,753	$ 547
Research and development	362	297
	$ 2,115	$ 844

At December 31, 2017, the Company had $2.2 million of total unrecognized compensation expense, net of estimated forfeitures, related to outstanding stock options that will be recognized over a weighted-average period of 1.8 years.

11. Income Taxes

No provision for federal income taxes has been recorded for the years ended December 31, 2017 and 2016 due to net losses and the valuation allowance established.

Deferred tax assets and liabilities reflect the net tax effects of net operating loss and tax credit carryovers and the temporary differences between the carrying amounts of assets and liabilities for financial reporting and the amounts used for income tax purposes. Significant components of the Company's deferred tax assets are as follows:

	December 31,	
	2017	2016
Deferred tax assets:		
Net operating losses	$ 45,791	$ 57,903
Research and other credits	2,178	2,121
Stock based compensation	1,585	2,164
In-Process research and development	1,375	1,246
Other	676	761
Total deferred tax assets	51,605	64,195
Valuation allowance	(51,605)	(64,195)
Net deferred tax assets	$ -	$ -

A reconciliation of the statutory tax rates and the effective tax rates for the years ended December 2017 and 2016 is as follows:

	Year Ended December 31,	
	2017	2016
Statutory rate	34.0%	34.0%
Valuation allowance	57.6%	(34.8)%
Deferred tax expense from enacted rate reduction	(98.7)%	-%
Nondeductible stock compensation	(0.1)%	(0.1)%
Other	7.2%	0.9%
Effective tax rate	-%	-%

The Tax Cuts and Jobs Act (the "Tax Act"), enacted on December 22, 2017, among other things, permanently lowered the statutory federal corporate rate from 35% to 21%, effective for tax years including or beginning January 1, 2018. Under the guidance of ASC 740, "Income Taxes" ("ASC 740"), the Company revalued its net deferred tax assets on the date of enactment based on the reduction in the overall future tax benefit expected to be realized at the lower tax rate implemented by the new legislation. After reviewing the Company's inventory of deferred tax assets on the date of enactment and giving consideration to the future impact of the lower corporate tax rates and other provisions of the new legislation, the Company's revaluation of its net deferred tax assets resulted in a decrease of $21.6 million and a corresponding reduction in the valuation allowance on net deferred tax assets. Although in the normal course of business the Company is required to make estimates and assumptions for certain tax items which cannot be fully determined at period end, the Company did not identify items for which the income tax effects of the Tax Act have not been completed as of December 31, 2017 and, therefore, considers its accounting for the tax effects of the Tax Act on its deferred tax assets to be complete as of December 31, 2017.

Realization of deferred tax assets is dependent upon future earnings, if any, the timing and amount of which are uncertain. Accordingly, the net deferred tax assets have been fully offset by a valuation allowance. The valuation allowance decreased by $12.6 million during 2017 and increased by $10.5 million during 2016.

At December 31, 2017, the Company had federal net operating loss carryforwards of approximately $166 million, which expire in the years 2021 through 2037, and state net operating loss carryforwards of approximately $156 million, which expire in the years 2018 through 2037.

At December 31, 2017, the Company had federal research and development credit carryforwards of approximately $1.3 million, which expire in the years 2022 through 2035 and state research and development credit carryforwards of approximately $2.2 million. The state research and development credit carryforwards can be carried forward indefinitely.

During 2013, the Company completed a Section 382 study in accordance with the Internal Revenue Code of 1986, as amended, and similar state provisions. The study concluded that the Company has experienced several ownership changes since inception. This causes the Company's utilization of its net operating loss and tax credit carryforwards to be subject to substantial annual limitations. These results are reflected in the above carryforward amounts and deferred tax assets. The Company's ability to utilize its net operating loss and tax credit carryforwards may be further limited as a result of subsequent ownership changes. All such limitations could result in the expiration of carryforwards before they are utilized. An ownership change may have occurred during 2015, 2016 and 2017, or all three years and in connection with the Restructuring Transactions described in Note 10. As a result, tax attributes such as net operating losses and research and development credits may be subject to further limitation.

The Company adopted FASB Interpretation ASC 740, Income Taxes (previously Accounting for Uncertainties in Income Taxes - an interpretation of FASB Statement No. 48 ("FIN 48") effective January 1, 2009. FASB ASC 740 requires that the Company recognize the financial statement effects of a tax position when it is more likely than not, based on the technical merits, that the position will be sustained upon examination.

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

Balance at December 31, 2015	$	1,068
Additions based on tax positions related to prior year		(9)
Additions based on tax positions related to current year		68
Balance at December 31, 2016		1,127
Additions based on tax positions related to prior year		(67)
Additions based on tax positions related to current year		-
Balance at December 31, 2017	$	1,060

There were no interest or penalties related to unrecognized tax benefits. Substantially all of the unrecognized tax benefit, if recognized to offset future taxable income would affect the Company’s tax rate. The Company does not anticipate that the amount of existing unrecognized tax benefits will significantly increase or decrease within the next 12 months. Because of net operating loss carryforwards, substantially all of the Company’s tax years remain open to federal tax and state tax examination.

The Company files income tax returns in the U.S. federal jurisdiction and California. Federal and California corporation income tax returns beginning with the 2001 tax year remain subject to examination by the Internal Revenue Service and the California Franchise Tax Board, respectively.

12. Employee Benefit Plan

The Company has established a 401(k) tax-deferred savings plan (the “401(k) Plan”), which permits participants to make contributions by salary deduction pursuant to Section 401(k) of the Internal Revenue Code. The Company is responsible for administrative costs of the 401(k) Plan. The Company may, at its discretion, make matching contributions to the 401(k) Plan. No employer contributions have been made to date.

13. Litigation

Bankruptcy Proceeding

The Company filed for protection under Chapter 11 of Title 11 of the United States Bankruptcy Code on December 29, 2015. See Note 2 for additional information related to the bankruptcy.

Securities Class Action Litigation

On December 18, 2015, a putative class action lawsuit (captioned *Li v. KaloBios Pharmaceuticals, Inc. et al.*, 5:15-cv-05841-EJD) was filed against the Company in the United States District Court for the Northern District of California (the "Class Action Court"), alleging violations of the federal securities laws by the Company, Herb Cross and Martin Shkreli, the Company's former Chairman and Chief Executive Officer. On December 23, 2015, a putative class action lawsuit was filed against the Company in the Class Action Court (captioned *Sciabacucchi v. KaloBios Pharmaceuticals, Inc. et al.*, 3:15-cv-05992-CRB), similarly alleging violations of the federal securities laws by the Company and Mr. Shkreli. On December 31, 2015, a putative class action lawsuit was filed against the Company in the Class Action Court (captioned *Isensee v. KaloBios Pharmaceuticals, Inc. et al.*, Case No. 15-cv-06331-EJD) also alleging violation of the federal securities laws by the Company, a former officer and Mr. Shkreli. On April 18, 2016, and amended complaint was filed in the *Isensee* suit, adding Herb Cross and Ronald Martell as defendants. On April 28, 2016, the Class Action Court consolidated these cases (the "Securities Class Action Litigation") and appointed certain plaintiffs as the lead plaintiffs. The lead plaintiffs in the Securities Class Action Litigation were seeking damages of $20 million on behalf of all the affected members of the class represented in the Securities Class Action Litigation, (the "Securities Class Action Members").

On June 15, 2016, a settlement stipulation (the "Securities Class Action Settlement"), was approved by the Bankruptcy Court. Subject to the approval of the Class Action Court, the Securities Class Action Settlement required the Company to issue 300,000 shares of common stock and submit a payment of $0.3 million to the Securities Class Action Members and advance insurance proceeds of $1.25 million to the Securities Class Action Members (collectively, the consideration is the "Securities Class Action Settlement Consideration"). On January 20, 2017, the Class Action Court preliminarily approved the Securities Class Action Settlement and set a final settlement approval hearing for May 11, 2017. Subject to the final approval of the Securities Class Action Settlement, any Securities Class Action Member is entitled to share in the Securities Class Action Settlement Consideration. The Securities Class Action Settlement provides for releases and related injunctions to be granted for the benefit of, among others, the Company, Ronald Martell, Herb Cross and all of the Company's past, present and future directors, officers and employees, excluding Mr. Shkreli. Alternatively, Securities Class Action Members may exclude themselves from the Securities Class Action Settlement and are thereby not bound by the terms of the Securities Class Action Settlement nor entitled to receive any amount of the Securities Class Acton Settlement Consideration. Such Securities Class Action Members, to the extent they properly exclude themselves from the Securities Class Action Settlement and have timely and properly filed a proof of claim in the bankruptcy case, may have certain rights under the Plan with respect to such claims. Pursuant to the Plan and Confirmation Order, such claims are subordinated to the level of the Company's common stock that was issued and outstanding when the Company's bankruptcy case was filed. Such claims are also subject to the Company's objection.

The Company's agreement to the Securities Class Action Settlement was not in any way an admission of the Company's wrongdoing or liability. As of December 31, 2016, the 300,000 shares have been issued and the $0.3 million payment has been made.

PIPE Litigation

On January 7, 2016, certain investors (the "PIPE Claimants"), commenced an adversary proceeding (captioned *Gregory Rea, et al. v. KaloBios Pharmaceuticals, Inc.*, Adv. Pro. No. 16-50001 (LSS)) in the Bankruptcy Court against the Company alleging implied trust theories, breach of contract, fraud and violations of the federal securities laws in connection with the PIPE Claimants' purchase of the Company's common stock in the Private Placement (the "PIPE Litigation"). The PIPE Claimants also raised certain other objections to the Company's bankruptcy proceeding. The PIPE Claimants sought an aggregate total of approximately $6.9 million in damages.

On May 9, 2016, the Bankruptcy Court entered an order approving a settlement stipulation between the Company and the PIPE Claimants (the "Settlement Stipulation"). Under the Settlement Stipulation, in connection with the effectiveness of the Plan, and per the terms of the Settlement Stipulation, the Company became obligated to issue 327,608 shares to the PIPE Claimants and make a payment of $0.3 million to the PIPE Claimants for the purpose of satisfying expenses related to the PIPE Litigation. As of December 31, 2016, the 327,608 shares have been issued and the $0.3 million payment has been made.

Claim by Marek Biestek

Marek Biestek was a director of the Company who, while not a plaintiff in the above described PIPE Litigation, filed a proof of claim alleging damages from the PIPE transaction and filed an objection to the confirmation of the Plan. To resolve his objection to the Plan and his proof of claim, the Company settled with him individually by issuing him 3,750 additional shares of common stock. Mr. Biestek, as a former director of the Company, was excluded from the Securities Class Action Members and therefore received nothing from the Securities Class Action Litigation.

As of December 31, 2016, all of the above claims have been satisfied and shares issued.

Savant Litigation

On July 10, 2017, the Company filed a complaint against Savant Neglected Diseases, LLC ("Savant") in the Superior Court for the State of Delaware, New Castle County (the "Delaware Court"). *KaloBios Pharmaceuticals, Inc. v. Savant Neglected Diseases, LLC*, No. N17C-07-068 PRW-CCLD. The Company asserted breach of contract and declaratory judgment claims against Savant arising under the MDC Agreement. See Note 6 - "Savant Arrangements" for more information about the MDC Agreement. The Company alleges that Savant has breached its MDC Agreement obligations to pay cost overages that exceed a budgetary threshold as well as other related MDC Agreement representations and obligations. In the litigation, the Company has alleged that as of June 30, 2017, Savant was responsible for aggregate cost overages of approximately $3.4 million, net of a $0.5 million deductible under the MDC. The Company asserts that it is entitled to offset $2.0 million in milestone payments due Savant against the cost overages, such that as of June 30, 2017 Savant owed the Company approximately $1.4 million.

On July 12, 2017, Savant removed the case to the United States District Court for the District of Delaware, claiming that the action is related to or arises under the bankruptcy court case from which we emerged in July 2016. *In re KaloBios Pharmaceuticals, Inc.*, No. 15-12628-LSS (Bankr. D. Del.). On July 27, 2017, Savant filed an Answer and Counterclaims. Savant's filing alleges breaches of contracts under the MDC Agreement and the Security Agreement, claiming that we breached its obligations to pay the milestone payments and other related representations and obligations.

On August 1, 2017, the Company moved to remand the case back to the Delaware Superior Court. Briefing on that motion is completed and awaiting determination by the Bankruptcy Court.

On August 2, 2017, Savant sent a foreclosure notice to the Company, demanding that it provide the Collateral as defined in the Security Agreement for inspection and possession on August 9, 2017, with a public sale to be held on September 1, 2017. The Company moved for a Temporary Restraining Order (the "TRO") and Preliminary Injunction in the bankruptcy court on August 4, 2017. Savant responded on August 7, 2017. On August 7, 2017, the bankruptcy court granted the Company's motion for a TRO, entering an order prohibiting Savant from collecting on or selling the Collateral, entering our premises, issuing any default notices to us, or attempting to exercise any other remedies under the MDC Agreement or the Security Agreement. The parties have stipulated to continue the provisions of the TRO in full force and effect until further order of the appropriate court.

On January 22, 2018, Savant wrote to the Bankruptcy Court requesting dissolution of the TRO. On January 29, 2018, the Bankruptcy Court granted the Motion to Remand and denied Savant's request to dissolve the TRO, ordering that any request to dissolve the TRO be made to the Delaware Superior Court.

On February 13, 2018 Savant made a letter request to the Delaware Superior Court to dissolve the TRO. Also on February 13, 2018, Humanigen filed its Answer and Affirmative defenses to Savant's Counterclaims. On February 15, 2018 Humanigen filed a letter opposition to Savant's request to dissolve the TRO and requesting a status conference. There have been no further proceedings in this matter to date.

The $2.0 million in milestone payments due Savant are included in Accrued expenses in the accompanying balance sheet as of December 31, 2017. Recovery of the cost overages from Savant, if any, will be recorded in the period received.

14. Related Party Transactions

On May 24, 2016, the board of directors approved a one-time equity award (the "Equity Award") to each of Cameron Durrant, Ronald Barliant and David Moradi. On June 30, 2016, in accordance with the Plan, the Company issued an aggregate of 323,155 shares of common stock under the Equity Award. The Company recorded a charge of $1.5 million representing the fair value of the shares issued and classified $0.7 million and $0.8 million as Reorganization items, net and General and administrative expenses, respectively.

On June 30, 2016, in connection with the settlement of the Term Loan, as defined in Note 2 above, 2,115,432 shares of common stock were issued to certain Lenders in repayment of the Company's debt obligations who were deemed to be affiliates of the Company.

On December 21, 2016, the Company entered into a Credit and Security Agreement, as amended on March 21, 2017 and on July 8, 2017 as more fully described in Note 7, with certain lenders who were deemed to be affiliates of the Company.

On December 21, 2017, the Company entered into a Purchase Agreement and a Forbearance Agreement as more fully described in Note 10, with certain lenders and investors who were deemed to be affiliates of the Company.

15. Subsequent Events

On February 27, 2018 the Company closed the Restructuring Transaction describe in Note 10 and issued 91,815,517 shares of common stock in exchange for extinguishment of all outstanding term loans, accrued interest and fees totaling $18.4 million and received cash proceeds of $1.5 million. In addition, all of the Company's assets related to benznidazole were transferred to a new joint venture entity as contemplated in the Restructuring Transactions.

On March 12, 2018, the Company issued 2,445,557 shares of its common stock for total proceeds of $1.1 million to accredited investors.

EXHIBIT INDEX

Exhibit No.	Exhibit Description	Incorporated by Reference			Filed or Furnished Herewith
		Form	Date	Number	
2.1	Findings of Fact, Conclusions of Law, and Order Confirming Second Amended Chapter 11 Plan of Reorganization of the Registrant (incorporated by reference to Exhibit 2.1 to the Registrant's Current Report on Form 8-K (File No. 001-035798) filed on June 22, 2016).	8-K	June 22, 2016	2.1	
3.1	Amended and Restated Certificate of Incorporation of the Registrant (incorporated by reference to Exhibit 3.1 to the Registrant's Current Report on Form 8-K (File No. 001-035798) filed on July 6, 2016).	8-K	July 6, 2016	3.1	
3.2	Certificate of Amendment to the Amended and Restated Certificate of Incorporation of the Registrant (incorporated by reference to Exhibit 3.1 to the Registrant's Current Report on Form 8-K (File No. 001-035798) filed on August 7, 2017).	8-K	August 7, 2017	3.1	
3.3	Certificate of Amendment to the Amended and Restated Certificate of Incorporation of the Registrant, as amended (incorporated by reference to Exhibit 3.1 to the Registrant's Current Report on Form 8-K (File No. 001-035798) filed on February 28, 2018).	8-K	February 28, 2018	3.1	
3.4	Second Amended and Restated Bylaws of the Registrant (incorporated by reference to Exhibit 3.2 to the Registrant's Current Report on Form 8-K (File No. 001-035798) filed on August 7, 2017).	8-K	August 7, 2017	3.2	
4.1	Specimen of Stock Certificate evidencing shares of Common Stock (incorporated by reference to Exhibit 4.1 to the Registrant's Registration Statement on Form S-1 (File No. 333-184299) filed on January 15, 2013).	S-1	January 15, 2013	4.1	
4.2	Warrant to Purchase Stock, by and between the Registrant and MidCap Financial SBIC, LP, dated as of June 19, 2013 (incorporated by reference to Exhibit 10.2 to the Registrant's Current Report on Form 8-K (File No. 001-35798) filed on June 24, 2013).	8-K	June 24, 2013	10.2	
4.3	Registration Rights Agreement, dated December 3, 2015, between the Registrant and each of the several purchasers signatory thereto (incorporated by reference to Exhibit 4.1 to the Registrant's Current Report on Form 8-K (File No. 001-35798) filed on December 9, 2015).	8-K	December 9, 2015	4.1	
4.4	Common Stock Purchase Warrant, by and between the Registrant and Armistice Capital Fund, dated as December 4, 2015 (incorporated by reference to Exhibit 4.2 to the Registrant's Current Report on Form 8-K (File No. 001-35798) filed on December 9, 2015).	8-K	December 9, 2015	4.2	
4.5†	Common Stock Purchase Warrant, dated June 30, 2016, by and between the Registrant and Savant Neglected Diseases, LLC (incorporated by reference to Exhibit 4.1 to the Registrant's Quarterly Report on Form 10-Q (File No. 001-035798) filed on September 23, 2016, as amended by Amendment No. 1 filed on December 30, 2016).	10-Q	September 23, 2016	4.1	
4.6	Registration Rights Agreement, dated as of August 23, 2017, by and between the Registrant and Aperture Healthcare Ventures Ltd. (incorporated by reference to Exhibit 4.1 to the Registrant's Current Report on Form 8-K (File No. 001-035798) filed on August 25, 2017).	8-K	August 25, 2017	4.1	
10.1*	2012 Equity Incentive Plan, as amended and restated (incorporated by reference to Exhibit 10.2 to the Registrant's Quarterly Report on				

Form 10-Q (File No. 001-35798) filed on August 10, 2015).	10-Q	August 10, 2015	10.2	

10.2*	Amendment to the 2012 Equity Incentive Plan, dated as of September 13, 2016 (incorporated by reference to Exhibit 10.2 to the Registrant's Registration Statement on Form S-8 (File No. 333-214110) filed on October 14, 2016).	S-8	October 14, 2016	10.2
10.3*	Form of Notice of Grant and Stock Option Agreement under the 2012 Equity Incentive Plan (incorporated by reference to Exhibit 10.8 to the Registrant's Registration Statement on Form 10-12G (File No. 000-54735) filed on June 12, 2012).	10-12G	June 12, 2012	10.8
10.4*	Form of Notice of Grant and Stock Option Agreement under the 2012 Equity Incentive Plan (Outside Directors) (incorporated by reference to Exhibit 10.37 to the Registrant's Annual Report on Form 10-K (File No. 001-35798) filed on March 13, 2014).	10-K	March 13, 2014	10.37
10.5*	Form of Notice of Stock Unit Award under the 2012 Equity Incentive Plan (incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K (File No. 001-35798) filed on April 24, 2015).	8-K	April 24, 2015	10.1
10.6*	Form of Director and Officer Indemnification Agreement (incorporated by reference to Exhibit 10.11 to the Registrant's Registration Statement on Form 10-12G (File No. 000-54735) filed on June 12, 2012).	10-12G	June 12, 2012	10.11
10.7	Development, Commercialization, Collaboration and License Agreement, dated January 8, 2010, by and between the Registrant and Sanofi Pasteur S.A. (incorporated by reference to Exhibit 10.12 to the Registrant's Registration Statement on Form 10-12G/A (File No. 000-54735) filed on September 12, 2012).	10-12G/A	September 12, 2012	10.12
10.8	Development and License Agreement, dated May 11, 2004, by and between the Registrant and the Ludwig Institute for Cancer Research (incorporated by reference to Exhibit 10.13 to the Registrant's Registration Statement on Form 10-12G/A (File No. 000-54735) filed on August 7, 2012).	10-12G/A	August 7, 2012	10.13
10.9	License Agreement, dated April 7, 2006, by and between the Registrant and the Ludwig Institute for Cancer Research (incorporated by reference to Exhibit 10.14 to the Registrant's Registration Statement on Form 10-12G/A (File No. 000-54735) filed on August 7, 2012).	10-12G/A	August 7, 2012	10.14
10.10	Amendment to License Agreement, dated October 9, 2008, by and between the Registrant and the Ludwig Institute for Cancer Research (incorporated by reference to Exhibit 10.8 to the Registrant's Quarterly Report on Form 10-Q (File No. 001-35798) filed on May 8, 2014).	10-Q	May 8, 2014	10.8
10.11	Amendment to License Agreement, dated June 8, 2011, by and between the Registrant and the Ludwig Institute for Cancer Research (incorporated by reference to Exhibit 10.9 to the Registrant's Quarterly Report on Form 10-Q (File No. 001-35798) filed on May 8, 2014).	10-Q	May 8, 2014	10.9
10.12†	Non-Exclusive License Agreement, dated October 15, 2010, by and between the Registrant, BioWa, Inc. and Lonza Sales AG (incorporated by reference to Exhibit 10.16 to the Registrant's Registration Statement on Form 10-12G/A (File No. 000-54735) filed on September 12, 2012).	10-12G/A	September 12, 2012	10.16
10.13†	License Agreement, dated March 16, 2007, by and between the Registrant and Novartis International Pharmaceutical Ltd. (incorporated by reference to Exhibit 10.17 to the Registrant's Registration Statement on Form 10-12G/A (File No. 000-54735) filed on August 7, 2012).	10-12G/A	August 7, 2012	10.17
10.14†*	Incentive Bonus Plan (incorporated by reference to Exhibit 10.38 to the Registrant's Annual Report on Form 10-K (File No. 001-35798) filed on March 13, 2014).	10-K	March 13, 2014	10.38

10.15	Termination Agreement, by and between the Registrant and Sanofi Pasteur S.A., dated as of July 24, 2014 (incorporated by reference to Exhibit 10.1 to the Registrant's Quarterly Report on Form 10-Q (File No. 001-35798) filed on November 6, 2014).	10-Q	November 6, 2014	10.1
10.16	Amendment to Termination Agreement, by and between the Registrant and Sanofi Pasteur S.A., dated as of July 24, 2014 (incorporated by reference to Exhibit 10.1 to the Registrant's Quarterly Report on Form 10-Q (File No. 001-35798) filed on May 11, 2015).	10-Q	May 11, 2015	10.1
10.17†	Securities Purchase Agreement, dated as of December 3, 2015, between the Registrant and each purchaser identified on the signature pages thereto (incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K (File No. 001-35798) filed on December 9, 2015).	8-K	December 9, 2015	10.1
10.18†	Amendment No. 1 to Securities Purchase Agreement, dated as of December 15, 2015, between the Registrant and each purchaser identified on the signature pages thereto (incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K (File No. 001-35798) filed on December 16, 2015).	8-K	December 16, 2015	10.1
10.19†	Services Agreement, dated December 3, 2015, by and between Turing Pharmaceuticals, LLC and the Registrant (incorporated by reference to Exhibit 10.2 to the Registrant's Current Report on Form 8-K (File No. 001-35798) filed on December 9, 2015).	8-K	December 9, 2015	10.2
10.20†	Binding Letter of Intent, dated February 29, 2016, between the Registrant and Savant Neglected Diseases, LLC (incorporated by reference to Exhibit 10.1 to the Registrant's Quarterly Report on Form 10-Q (File No. 001-35798) filed on September 23, 2016).	10-Q	September 23, 2016	10.1
10.21	Debtor in Possession Credit and Security Agreement, dated as of April 1, 2016, by and among the Registrant, Black Horse Capital Master Fund Ltd., Black Horse Capital LP, Cheval Holdings, Ltd. and Nomis Bay LTD (incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K (File No. 001-035798) filed on April 7, 2016).	8-K	April 7, 2016	10.1
10.22	Intellectual Property Security Agreement, dated April 1, 2016, by the Registrant in favor of Black Horse Capital Master Fund Ltd., as Administrative Agent (incorporated by reference to Exhibit 10.2 to the Registrant's Current Report on Form 8-K (File No. 001-035798) filed on April 7, 2016).	8-K	April 7, 2016	10.2
10.23	Securities Purchase Agreement, dated as of April 1, 2016, by and among the Registrant, Black Horse Capital Master Fund Ltd., Black Horse Capital LP, Cheval Holdings, Ltd. and Nomis Bay LTD (incorporated by reference to Exhibit 10.7 to the Registrant's Current Report on Form 8-K (File No. 001-035798) filed on April 7, 2016).	8-K	April 7, 2016	10.7
10.24	Corporate Governance Agreement, dated as of June 29, 2016, between the Registrant and Martin Shkreli (incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K (File No. 001-035798) filed on July 6, 2016).	8-K	July 6, 2016	10.1
10.25†	Agreement for the Manufacture, Development and Commercialization of Benznidazole for Human Use, dated as of June 30, 2016, between the Registrant and Savant Neglected Diseases, LLC (incorporated by reference to Exhibit 10.9 to the Registrant's Quarterly Report on Form 10-Q (File No. 001-035798) filed on September 23, 2016, as amended by Amendment No. 1 filed on December 30, 2016).	10-Q/A	December 30, 2016	10.9
10.26*	Letter Agreement, dated March 1, 2016, between the Registrant and Cameron Durrant, M.D. (incorporated by reference to Exhibit 10.2 to the Registrant's Quarterly Report on Form 10-Q (File No. 001-035798) filed on September 23, 2016).	10-Q	September 23, 2016	10.2

10.27*	Employment Agreement, dated as of September 13, 2016, by and between the Registrant and Cameron Durrant, MD (incorporated by reference to Exhibit 10.2 to the Registrant's Quarterly Report on Form 10-Q (File No. 001-035798) filed on November 10, 2016).	10-Q	November 10, 2016	10.2	
10.28	Credit and Security Agreement, dated as of December 21, 2016, by and among the Registrant, Black Horse Capital Master Fund Ltd., Black Horse Capital LP, Cheval Holdings, Ltd. and Nomis Bay LTD (incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K (File No. 001-035798) filed on December 23, 2016).	8-K	December 23, 2016	10.1	
10.29	Intellectual Property Security Agreement, dated December 21, 2016, by the Registrant in favor of Black Horse Capital Master Fund Ltd., as Administrative Agent (incorporated by reference to Exhibit 10.2 to the Registrant's Current Report on Form 8-K (File No. 001-035798) filed on December 23, 2016).	8-K	December 23, 2016	10.2	
10.30	Engagement Agreement, dated as of May 24, 2016, by and between the Registrant and David L. Tousley (incorporated by reference to Exhibit 10.40 to the Registrant's Annual Report on Form 10-K (File No. 001-035798) filed on March 9, 2017).	10-K	March 9, 2017	10.40	
10.31	Amendment to the Credit and Security Agreement dated March 21, 2017, by and among the Registrant, Black Horse Capital Master Fund Ltd., Black Horse Capital LP, Cheval Holdings, Ltd. and Nomis Bay LTD (incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K (File No. 001-035798) filed on March 23, 2017).	8-K	March 23, 2017	10.1	
10.32	Second Amendment to the Credit and Security Agreement, dated as of July 8, 2017, by and among the Registrant, Black Horse Capital Master Fund Ltd., Black Horse Capital LP, Cheval Holdings, Ltd. And Nomis Bay LTD (incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K (File No. 001-035798) filed on July 12, 2017).	8-K	July 12, 2017	10.1	
10.33	Common Stock Purchase Agreement, dated as of August 23, 2017 by and between the Registrant and Aperture Healthcare Ventures Ltd. (incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K (File No. 001-035798) filed on August 25, 2017).	8-K	August 25, 2017	10.1	
10.34†	Offer Letter, dated August 16, 2017, by and between the Registrant and Greg Jester.				Furnished herewith
10.35+	Securities Purchase and Loan Satisfaction Agreement dated as of December 21, 2017, by and among the Registrant, Black Horse Capital Master Fund Ltd., Black Horse Capital LP, Cheval Holdings, Ltd. and Nomis Bay LTD.				Furnished herewith
10.36+	Forbearance and Loan Modification Agreement dated as of December 21, 2017, by and among the Registrant, Black Horse Capital Master Fund Ltd., Black Horse Capital LP, Cheval Holdings, Ltd. and Nomis Bay LTD.				Furnished herewith
21.1	List of Subsidiaries				Furnished herewith
23.1	Consent of Horne LLP				Furnished herewith
31.1	Certification of Chief Executive Officer pursuant to Rule 13a-14(a) or 15d-14(a) of the Securities Exchange Act of 1934, as amended.				Furnished herewith
31.2	Certification of Chief Financial Officer pursuant to Rule 13a-14(a) or 15d-14(a) of the Securities Exchange Act of 1934, as amended.				Furnished herewith
32.1**	Certification of Chief Executive Officer pursuant to 18 U.S.C. §1350.				Furnished herewith

32.2**	Certification of Chief Financial Officer pursuant to 18 U.S.C. §1350.	Furnished herewith

101.INS	XBRL Instance Document
101.SCH	XBRL Taxonomy Extension Schema
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document
101.LAB	XBRL Taxonomy Extension Label Linkbase Document
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document

†Confidential treatment has been granted with respect to certain portions of this exhibit. Omitted portions have been filed separately with the Securities and Exchange Commission.

*Indicates management contract or compensatory plan

**The certifications attached as Exhibits 32.1 and 32.2 that accompanies 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 Registrant under the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended, whether made before or after the date of this Annual Report on Form 10-K, irrespective of any general incorporation language contained in such filing.

Exhibit 10.34

August 16, 2017

Greg Jester
39 Lawton Avenue
Stamford, CT 06907

Dear Greg:

Humanigen Inc. (the "Company") is pleased to offer you employment on the following terms:

1. **Position**. Your title will be Chief Financial Officer, and you will report to the Company's CEO. This is a full-time position. By signing this letter agreement, you confirm to the Company that you have no contractual commitments or other legal obligations that would prohibit you from performing your duties for the Company.

2. **Cash Compensation**. The Company will pay you a starting salary at the rate of $290,000 per year, payable in accordance with the Company's standard payroll schedule. This salary will be subject to adjustment pursuant to the Company's employee compensation policies in effect from time to time. You will be eligible to participate in the Company's annual Bonus Plan as in effect from time to time. The Bonus Plan (if any) is approved by the Company's Board of Directors, and bonuses (if any) will be awarded based on the achievement of Company and individual criteria established by the Company. Your maximum bonus (if any) will be equal to 50% of your earnings for the bonus period. Such Bonus may be a mix of cash and stock, as determined by the Board in its sole discretion. The determinations of the Company with respect to your bonus will be final and binding. In the event that there is any conflict between this letter agreement and the Bonus Plan, the Bonus Plan, as interpreted and administered by the Company, will govern. Your position is classified as exempt and therefore you will not be eligible to earn overtime.

3. **Employee Benefits**. As a regular employee of the Company, you will be eligible to participate in a number of Company-sponsored benefits, including medical and dental benefits, flexible spending account and 401(k) plan, subject to the terms and conditions of the plans and programs pursuant to which such benefits are provided. In addition, you will be entitled to paid vacation in accordance with the Company's vacation policy as in effect from time to time.

4. **Stock Options**. Subject to the approval of the Company's Board of Directors or its Compensation Committee, you will be granted an option to purchase 150,000 shares of the Company's Common Stock. The exercise price per share will be determined by the Company's Board of Directors or its Compensation Committee on the date of option grant. The option will be subject to the terms and conditions applicable to options granted under the Company's 2012 Equity Incentive Plan (the "Plan"), as described in the Plan and the applicable Stock Option Agreement.

5. **Proprietary Information and Inventions Agreement**. As is required for all Company employees, you will be required, as a condition of your employment with the Company, to sign the Company's standard Proprietary Information and Inventions Agreement, a copy of which is attached hereto as **Exhibit A**.

6. **Employment Relationship**. Your employment with the Company is for no specific period of time. Your employment with the Company will be "at will," meaning that either you or the Company may terminate your employment at any time and for any reason, with or without cause. Any contrary representations that may have been made to you are superseded by this letter agreement. This is the full and complete agreement between you and the Company on this term. Although your job duties, title, compensation and benefits, as well as the Company's personnel policies and procedures, may change from time to time, the "at will" nature of your employment may only be changed in an express written agreement signed by you and a duly authorized officer of the Company (other than you).

7. **Outside Activities**. While you render services to the Company, you agree that you will not engage in any other employment, consulting or other business activity without the prior written consent of the Company. While you render services to the Company, you also will not assist any person or entity in competing with the Company, in preparing to compete with the Company or in hiring any employees or consultants of the Company.

8. **Taxes**. All forms of compensation referred to in this letter agreement are subject to reduction to reflect applicable withholding and payroll taxes and other deductions required by law. You agree that the Company does not have a duty to design its compensation policies in a manner that minimizes your tax liabilities, and you will not make any claim against the Company or its Board of Directors related to tax liabilities arising from your compensation.

9. **Interpretation, Amendment and Enforcement**. This letter agreement and **Exhibit A** constitute the complete agreement between you and the Company, contain all of the terms of your employment with the Company and supersede any prior agreements, representations or understandings (whether written, oral or implied) between you and the Company. This letter agreement may not be amended or modified, except by an express written agreement signed by both you and a duly authorized officer of the Company. The terms of this letter agreement and the resolution of any disputes as to the meaning, effect, performance or validity of this letter agreement or arising out of, related to, or in any way connected with, this letter agreement, your employment with the Company or any other relationship between you and the Company (the "Disputes") will be governed by California law, excluding laws relating to conflicts or choice of law. You and the Company submit to the exclusive personal jurisdiction of the federal and state courts located in Santa Clara County in connection with any Dispute or any claim related to any Dispute.

10. **Arbitration**. Any controversy or claim arising out of this letter agreement and any and all claims relating to your employment with the Company will be settled by final and binding arbitration. The arbitration will take place in San Mateo County or, at your option, the County in which you primarily worked when the arbitrable dispute or claim first arose. The arbitration will be administered by the American Arbitration Association under its National Rules for the Resolution of Employment Disputes. The arbitration will be governed by and subject to the Federal Arbitration Act. Any award or finding will be confidential. You and the Company agree to provide one another with reasonable access to documents and witnesses in connection with the resolution of the dispute. You and the Company will share the costs of arbitration equally, except that the Company will bear the cost of the arbitrator's fee and any other type of expense or cost that you would not be required to bear if you were to bring the dispute or claim in court. Each party will be responsible for its own attorneys' fees, and the arbitrator may not award attorneys' fees unless a statute or contract at issue specifically authorizes such an award. This Section 10 does not apply to claims for workers' compensation benefits or unemployment insurance benefits. Injunctive relief and other provisional remedies will be available in accordance with Section 1281.8 of the California Code of Civil Procedure.

* * * * *

We hope that you will accept our offer to join the Company. You may indicate your agreement with these terms and accept this offer by signing and dating both the enclosed duplicate original of this letter agreement and the enclosed Proprietary Information and Inventions Agreement and returning them to me. This offer, if not accepted, will expire at the close of business on August 24, 2017. As required by law, your employment with the Company is contingent upon your providing legal proof of your identity and authorization to work in the United States. Your employment is also contingent upon your starting work with the Company on or before September 5, 2017.

If you have any questions, please call me at.

Very truly yours,

Humanigen, Inc.

By: /s/ Cameron Durrant
Title: Chief Executive Officer

I have read and accept this employment offer:

/s/ Greg Jester
Signature of Greg Jester

Dated: August 22, 2017

Attachment

Exhibit A: Proprietary Information and Inventions Agreement

Exhibit 10.35

SECURITIES PURCHASE AND LOAN SATISFACTION AGREEMENT

BY AND AMONG

HUMANIGEN, INC.,

BLACK HORSE CAPITAL MASTER FUND LTD,

BLACK HORSE CAPITAL LP,

CHEVAL HOLDINGS, LTD,

and

NOMIS BAY LTD

DATED AS OF DECEMBER 21, 2017

SECURITIES PURCHASE AND LOAN SATISFACTION AGREEMENT

This Securities Purchase and Loan Satisfaction Agreement (this "Agreement") is dated as of December 21, 2017 by and among Humanigen, Inc., a Delaware corporation (the "Company"), Black Horse Capital Master Fund Ltd ("BH Master Fund"), Black Horse Capital LP ("BH Capital"), Cheval Holdings, Ltd ("Cheval" and collectively with BH Master Fund and BH Capital, the "Black Horse Entities"), and Nomis Bay Ltd ("Nomis") Each of the Black Horse Entities and Nomis shall each individually be referred to herein as a "Purchaser" and collectively be referred to herein as the "Purchasers").

WHEREAS, the Company desires to raise additional capital for the continued operation and development of the Company;

WHEREAS, the Company, the Black Horse Entities, and Nomis are parties to that certain Credit and Security Agreement dated December 21, 2016 (the "Credit and Security Agreement"; each of the Black Horse Entities and Nomis in their capacities as lenders under the Credit and Security Agreement shall individually be referred to herein as a "Lender" and collectively be referred to herein as the "Lenders");

WHEREAS, the Company is in default under the Credit and Security Agreement due to, without limitation, the Company's failure to repay the obligations thereunder (the "Obligations") under in full at their maturity date of December 1, 2017 (the "Existing Default");

WHEREAS, the Existing Default has not been cured, waived or excused by the Lenders at any time or in any manner; and that there are no claims, demands, offsets or defenses at law or in equity that would defeat or diminish each Lender's present and unconditional right to collect any of the Obligations, and to proceed to enforce the rights and remedies available to Lenders under the Credit and Security Agreement or otherwise at law;

WHEREAS, concurrently with the execution of this Agreement, the Lenders and the Company have executed the Forbearance and Loan Modification Agreement (as defined herein);

WHEREAS, subject to the terms and conditions set forth in this Agreement, Forbearance and Loan Modification Agreement, the Benz Entity Operating Agreement and the other Transaction Documents, in lieu of the Lenders exercising their rights and remedies under the Credit and Security Agreement or otherwise at law, the Company desires at the Closing Date to issue to the Lenders, and the Lenders have agreed to accept, the New Lender Securities (as defined herein) in satisfaction of the Obligations, upon all of the terms and conditions set forth herein; and

WHEREAS, as of the Closing Date, Cheval desires to make a significant investment in the Company, and to implement such investment, Cheval desires to purchase from the Company, and the Company desires to issue and sell to Cheval, upon the terms and conditions set forth herein, the Securities (as defined herein), in each case upon all of the terms and conditions of this Agreement.

NOW, THEREFORE, IN CONSIDERATION of the mutual covenants contained in this Agreement, and for other good and valuable consideration the receipt and adequacy of which are hereby acknowledged, the Company and each Purchaser, intending to be legally bound, agree as follows:

ARTICLE I.
DEFINITIONS

1.1 Definitions. In addition to the terms defined elsewhere in this Agreement, for all purposes of this Agreement, the following terms have the meanings set forth in this Section 1.1:

"Action" means collectively, any action, suit, inquiry, notice of violation, proceeding or investigation pending against the Company or any of its properties or assets before or by any court, arbitrator, governmental or administrative agency or regulatory authority (federal, state, county, local or foreign).

"Affiliate" means any Person that, directly or indirectly through one or more intermediaries, controls or is controlled by or is under common control with a Person as such terms are used in and construed under Rule 405 under the Securities Act.

"Adverse Claim" means, with respect to any Claim or any interest therein or any Proceeds thereof, (i) any mortgage, deed of trust, lien, pledge, hypothecation, encumbrance, charge or security interest in, on or affecting such Claim or any interest therein or any Proceeds thereof, (ii) the interest of a vendor or a lessor under any conditional sale agreement, capital lease or title retention agreement (or any financing lease having substantially the same economic effect as any of the foregoing) relating to such Claim or any interest therein or any Proceeds thereof, (iii) any purchase option, call or similar right of a third party with respect to such Claim or any interest therein or any Proceeds thereof and (iv) any other claim that a claimant has a property interest in such Claim or any interest therein or any Proceeds thereof and that it is a violation of the rights of the claimant for another person to hold, transfer, or deal with such Claim or any interest therein or any Proceeds thereof.

"Bankruptcy Case" means the bankruptcy case of the Company, as debtor and debtor in possession, which was commenced by the Company's filing in the United States Bankruptcy Court for the District of Delaware of a voluntary petition for bankruptcy relief under chapter 11 of the Bankruptcy Code. The Bankruptcy Case is captioned as Case No. 15-12628 (LSS).

"Bankruptcy Court" means the United States Bankruptcy Court for the District of Delaware presiding over the Bankruptcy Case.

"Benz Assets" means all of the assets of the Company related to Benznidazole that will become Contributed Assets, as defined in the Benz Entity Operating Agreement, including without limitation, all of the Company's rights (but not the Company's liabilities or obligations) pursuant to the MDC Agreement, and all Claims related to or arising in connection with Benznidazole, including the Chemo Claims and Savant Litigation.

"Benz Entity" shall have the meaning set forth in Section 2.4(a).

"Benz Entity Operating Agreement" means the Limited Liability Company Operating Agreement of the Benz Entity, substantially in the form attached hereto as Exhibit A.

"Bill of Sale, Assignment and Assumption Agreement" means that certain Bill of Sale, Assignment and Assumption Agreement between the Company and the Benz Entity substantially in the form attached to the Benz Entity Operating Agreement.

"Board of Directors" means the board of directors of the Company.

"Bridge Loan" shall have the meaning set forth in Section 2.1.

"Business Day" means any day except any Saturday, any Sunday, any day which is a federal legal holiday in the United States or any day on which banking institutions in the State of New York are authorized or required by law or other governmental action to close.

"Cash Purchase Price" shall have the meaning set forth in Section 2.2(c)(ii).

"Charter Amendment" means the effective Proposed Charter Amendment.

"Chemo Claims" means all claims, causes of action, judgments and demands, arbitrations, regulatory proceedings, settlement negotiations or other dispute resolution mechanisms of whatever kind or description, in each case whether choate or inchoate, known or unknown, contingent or non-contingent, against any, each and/or all of Savant, Chemo Group, Chemo Research S.L, Exeltis USA, Inc., Mundo Sano, Drugs for Neglected Diseases Initiative, Instituto de Efectividad Clinica y Sanitaria, Dr. Sergio Sosa-Estani and their respective affiliates or collaborators (including, without limitation, Claims arising out of or related to potential misappropriation or misuse of the Company's trade secrets in connection with submissions to the FDA, the FDA issuance of market approval of the Compound or the FDA issuance of a Voucher).

"Claim Advances" means all amounts advanced to the Company or the Benz Entity for further payment, or paid directly, to counsel to the Company or the Benz Entity at Nomis' request, during the period prior to the Closing, in connection with investigating the Claims or in furtherance of settlement discussions with Savant (including any payments of the Company's outstanding and unpaid legal fees owed to Kaplan Rice LLP and Richards Layton & Finger, PA).

"Claim Defect" means, with respect to any Claim, (i) any right or interest of any Person in respect of such Claim or any part thereof, the effect of which is or would be to materially reduce, impair or otherwise materially or prejudicially affect such Claim or any part thereof; (ii) any claim or action of any Person whatsoever in respect of such Claim or any part thereof, the effect of which, if determined adversely, is or would be to materially reduce, impair or otherwise materially and prejudicially affect such Claim or any part thereof; or (iii) any right of set-off, counterclaim, cross-claim or impairment of any Person in respect of such Claim or any part thereof.

"Claims" means all claims, causes of action, judgments and demands, arbitrations, regulatory proceedings, settlement negotiations or other dispute resolution mechanisms of whatever kind or description of the Company against third parties that arise out of or relate to the Benz Assets (regardless of whether or not such claims, demands and causes of action have been asserted by the Company), in each case whether choate or inchoate, known or unknown, contingent or non-contingent, including without limitation, the Chemo Claims and Savant Litigation.

"Claims Reversion" shall have the meaning set forth in Section 2.4(g).

"Closing" means the closing of the purchase and sale of the Securities and related transactions pursuant to Section 2.2.

"Closing Date" shall have the meaning set forth in Section 2.2.

"Commission" means the United States Securities and Exchange Commission.

"Common Stock" means the common stock of the Company, par value $0.001 per share.

"Company" shall have the meaning set forth in the preamble of this Agreement.

"Contract" means any agreement, instrument, license, document, real or personal property lease, employee benefit or welfare plan or other business or commercial arrangement (in each case, including any extension, renewal, amendment or other modification thereof) to which the Company is a party or by which the Company is bound or to which the Company is subject or which pertains to the business or properties of the Company.

"Credit and Security Agreement" shall have the meeting set forth in the recitals of this Agreement.

"Drug Application" means any new drug application ("NDA"), abbreviated new drug application ("ANDA"), investigational new drug application ("IND"), and/or biologics license application ("BLA"), as well as any product license application for any Product, as appropriate, as those terms are defined by the FDA.

"Environmental Legal Requirements" means all Legal Requirements relating to pollution or protection of human health or the environment (including ambient air, surface water, groundwater, land surface or subsurface strata), including laws relating to Hazardous Materials into the environment, or otherwise relating to the manufacture, processing, distribution, use, treatment, storage, disposal, transport or handling of Hazardous Materials, as well as all authorizations, codes, decrees, demands, or demand letters, injunctions, judgments, licenses, notices or notice letters, orders, permits, plans or regulations, issued, entered, promulgated or approved thereunder.

"Exchange Act" means the Securities Exchange Act of 1934, as amended, and the rules and regulations promulgated thereunder.

"FCPA" means the Foreign Corrupt Practices Act of 1977, as amended.

"FDA" means the United States Food and Drug Administration.

"FDCA" means the United States Federal Food, Drug and Cosmetic Act, as amended, and the regulations thereunder.

"Final Order" means any order entered by the Bankruptcy Court, or any other court exercising jurisdiction over the subject matter and the parties, that has not been stayed, reversed, modified, or vacated, and as to which: (i) there has not been filed and is not pending any appeal or petition for writ of certiorari; (ii) there has not been filed and is not pending any motion for stay, rehearing, reargument, reconsideration, or other motion (collectively, a "Tolling Motion") that tolls the running of the time period within which a notice of appeal, petition for writ of certiorari, or a Tolling Motion must be filed; and (iii) the time within which a Tolling Motion, notice of appeal, or petition for writ of certiorari must be filed has expired without any Tolling Motion, notice of appeal, or petition for writ of certiorari having been filed.

"Forbearance and Loan Modification Agreement" means the Forbearance and Loan Modification Agreement attached hereto as Exhibit B, which has been executed by the Lenders and the Company concurrently with the execution of this Agreement.

"FTC" means the United States Federal Trade Commission.

"GAAP" means United States generally accepted accounting principles applied on a consistent basis during the periods involved.

"Governmental Approval" means any consent, authorization, approval, order, license, franchise, permit, certificate, accreditation, registration, filing or notice, of, issued by, from or to, or other act by or in respect of, any Governmental Entity.

"Governmental Entity" means any government, agency, governmental department, commission, board, bureau, court, arbitration panel or instrumentality of the United States of America or any state or other political subdivision thereof (whether now or hereafter constituted and/or existing), including, without limitation, the Bankruptcy Court, and any entity exercising executive, legislative, judicial, regulatory or administrative functions of or pertaining to government.

"Hazardous Materials" means any chemicals, pollutants, contaminants, or toxic or hazardous substances or wastes.

"Healthcare Regulatory Legal Requirements" means the Federal Food, Drug and Cosmetic Act (21 U.S.C. § 301 et seq.), the Federal Anti-kickback Statute (42 U.S.C. § 1320a-7b(b)), Physician Payment Sunshine Act (42 U.S.C. § 1320a-7h), the civil False Claims Act (31 U.S.C. §§ 3729 et seq.), the administrative False Claims Legal Requirement (42 U.S.C. § 1320a-7b(a)), the Anti-Inducement Legal Requirement (42 U.S.C. § 1320a-7a(a)(5)), the Health Insurance Portability and Accountability Act of 1996 (42 U.S.C. § 1320d et seq.), as amended by the Health Information Technology for Economic and Clinical Health Act of 2009, the exclusion laws, Social Security Act § 1128 (42 U.S.C. § 1320a-7), Medicare (Title XVIII of the Social Security Act), Medicaid (Title XIX of the Social Security Act), and the regulations promulgated pursuant to such laws, and comparable state laws, and all other local, state, federal, national, supranational and foreign laws, manual provisions, policies and administrative guidance relating to the regulation of the Company.

"Indebtedness" shall have the meaning ascribed to such term in Section 4.1(w).

"Intellectual Property" means, with respect to any Person, all United States and foreign patents, Patent Applications and like protections, including improvements, divisions, continuation, renewals, reissues, extensions and continuations in part of the same, trademarks, trade names, trade styles, trade dress, service marks, logos and other business identifiers and, to the extent permitted under applicable law, any applications therefore, whether registered or not, and the goodwill of the business of such Person connected with and symbolized thereby, copyright rights, copyright applications, copyright registrations and like protections in each work of authorship and derivative works, whether published or unpublished, technology, know-how and processes, operating manuals, trade secrets, clinical and non-clinical data, computer hardware and software, rights to unpatented inventions and all applications and licenses therefor, used in or necessary for the conduct of business by such Person and all claims for damages by way of any past, present or future infringement of any of the foregoing.

"Intellectual Property Rights" shall have the meaning ascribed to such term in Section 4.1(o).

"Knowledge" or "Knowledge of the Company" means the actual knowledge without investigation of (i) Dr. Cameron Durrant, in his capacity as a Director of the Company or as the Company's Chief Executive Officer, (ii) Morgan Lam, in his capacity as the Company's Chief Scientific Officer and otherwise as an employee of the Company, and (iii) Greg Jester in his capacity as the Company's Chief Financial Officer and otherwise as an employee of the Company.

"Legal Requirements" means all federal, state, foreign and local laws, statutes, codes, rules, regulations, ordinances, orders, Proceedings and the like of any Governmental Entity, including common law, including, without limitation, Environmental Legal Requirements, Drug Regulatory Legal Requirements and Healthcare Regulatory Legal Requirements.

"Liens" means a lien, charge, pledge, security interest, encumbrance, right of first refusal, preemptive right or other restriction.

"Loan Satisfaction" means the Termination and Release Agreement, substantially in the form attached hereto as Exhibit C.

"Market", "Marketed" or "Marketing" means to study, investigate, develop, manufacture, test, sell, or market any Product pursuant to a preclinical or clinical trial, Drug Application or other Governmental Approval issued by the FDA or any state Board of Pharmacy or Department of Health.

"Material Adverse Claim Effect" means, with respect to any event or circumstance and the Company, one or more of (i) the impairment of its ability to perform any of its obligations under this Agreement or the Benz Entity Operating Agreement, (ii) the impairment of the rights or remedies available under this Agreement or the Benz Entity Operating Agreement to the Benz Entity or Nomis and (iii) a material adverse effect on any Claim or the value or collectability thereof.

"Material Contract" means any contract required to be filed by the Company with the Commission under Item 601(b)(10) of Regulation S-K.

"MDC Agreement" means the Agreement for the Manufacture, Development and Commercialization of Benznidazole for Human Use entered into as of June 30, 2016, by and between Savant and the Company.

"New Black Horse Securities" shall have the meaning set forth in Section 2.2(b).

"New Lender Securities" shall have the meaning set forth in Section 2.2(a).

"Order" means any decision, injunction, judgment, order, decree, ruling, or verdict entered or issued by any Government Entity.

"Party" means each of the Black Horse Entities, Nomis, and the Company.

"Parties" mean collectively, the Black Horse Entities, Nomis, and the Company.

"Person" means an individual or corporation, partnership, trust, incorporated or unincorporated association, joint venture, limited liability company, joint stock company, government (or an agency or subdivision thereof) or other entity of any kind.

"Product(s)" mean any product Marketed by the Company or any of its Subsidiaries or its contractors on behalf of Company as of the date hereof or at any date thereafter, and includes the products listed on Schedule 4.1(aa).

"Proceeds" means, collectively: (i) any and all gross, pre-tax monetary awards, damages, recoveries, judgments or other property or value awarded to or recovered by or on behalf of (or reduced to a debt owed to) any Person, on account or as a result or by virtue (directly or indirectly) of a Claim, whether by negotiation, arbitration, mediation, diplomatic efforts, lawsuit, settlement, or otherwise, and includes all of such Person's legal and/or equitable rights, title and interest in and/or to any of the foregoing, whether in the nature of ownership, lien, security interest or otherwise; (ii) any consequential, rescissionary, punitive, exemplary or treble damages, pre-judgment interest (including damages comparable to pre-judgment interest), post-judgment interest, penalties, and attorneys' fees and other fees and costs awarded or recovered on account thereof; and (iii) any recoveries against attorneys, accountants, experts, directors, officers or other related parties in connection with any of the foregoing or the pursuit of the Claim. For the avoidance of doubt, "Proceeds" includes (without limitation) any and all of the foregoing in the form of cash, real estate, negotiable instruments, intellectual or intangible property, choses in action, contract rights, membership rights, subrogation rights, annuities, claims, refunds, and any other rights to payment of cash and/or transfer(s) of things of value or other property (including property substituted therefor), whether delivered or to be delivered in a lump sum or in installments, in relation to any claim or negotiation with any Person in relation to the Claim.

"Proceeding" means an action, claim, suit, investigation or proceeding (including, without limitation, an informal investigation or partial proceeding, such as a deposition), whether commenced or threatened.

"Proposed Charter Amendment" means the proposed amendments to the Company's certificate of incorporation to increase the number of authorized shares of common stock to two hundred and twenty five million (225,000,000) and to authorize the issuance of blank check preferred stock.

"Purchase Price" means an aggregate amount equal to the sum of the amount satisfied pursuant to the Loan Satisfaction plus the Cash Purchase Price.

"Registration Rights Agreement" means the Registration Rights Agreement, substantially in the form attached hereto as Exhibit D.

"Registration Statement" means a registration statement covering the resale of the Securities by the Purchasers.

"Required Approvals" shall have the meaning set forth in Section 4.1(e).

"Required Permit(s)" means a permit (a) issued or required under Legal Requirements applicable to the business of Company or any of its subsidiaries or contractors or necessary in the investigation, testing, manufacture, sale, or marketing of goods or services under Legal Requirements applicable to the business of Company or any of its subsidiaries or contractors or any Drug Application (including without limitation, at any point in time, all licenses, approvals and permits issued by FDA or any applicable Governmental Entity necessary for the investigation, testing, manufacture, sale, or marketing of any Product by Company as such activities are being undertaken by Company with respect to any Product at any time); or (b) issued by any Person from which Company or any of its contractors have received an accreditation.

"Rule 144" means Rule 144 promulgated by the Commission pursuant to the Securities Act, as such Rule may be amended or interpreted from time to time, or any similar rule or regulation hereafter adopted by the Commission having substantially the same purpose and effect as such Rule.

"Rule 2004 Discovery Motion" means a motion presented to the Bankruptcy Court pursuant to Rule 2004 of the Federal Rules of Bankruptcy Procedure, requesting permission to take discovery related to the Claims.

"Rule 2004 Discovery Order" means a Final Order of the Bankruptcy Court granting or denying the Rule 2004 Discovery Motion.

"Savant" means Savant Neglected Diseases, LLC.

"Savant Litigation" means the pending litigation that has been brought in connection with the MDC Agreement and any additional Claims that the Company may assert against Savant.

"Schedules" means the Disclosure Schedules of the Company delivered concurrently herewith.

"SEC Reports" shall have the meaning ascribed to such term in Section 4.1(h).

"Securities" means, collectively, the New Lender Securities and the New Black Horse Securities.

"Securities Act" means the Securities Act of 1933, as amended, and the rules and regulations promulgated thereunder.

"Subsidiary" means any subsidiary of the Company as set forth on Schedule 4.1(a) and shall, where applicable, also include any direct or indirect subsidiary of the Company formed or acquired after the date hereof.

"Transaction Documents" means this Agreement, the Loan Satisfaction, the Forbearance and Loan Modification Agreement, the Registration Rights Agreement, the Benz Entity Operating Agreement, the Bill of Sale, Assignment and Assumption Agreement, and any other documents or agreements executed in connection with the issuance of Securities and assignment of property contemplated hereunder.

"Transfer Agent" means Computershare, Inc., the current transfer agent of the Company, with a mailing address of 250 Royall Street, Canton, MA 02021, and any successor transfer agent of the Company.

"Voucher" means a priority review voucher issued by the FDA or otherwise under the authority of the United States Department of Health and Human Services.

ARTICLE II.
TRANSACTIONS; CLOSING

2.1 Bridge Loan. Upon the execution of this Agreement and before the Closing, the Company may, at its election, request a bridge loan from Cheval in the amount of one million, five hundred thousand dollars ($1,500,000) (the "Bridge Loan"). If the Company makes such a request, then the Bridge Loan shall be made pursuant to the terms and conditions of the Forbearance and Loan Modification Agreement.

2.2 Closing. The Closing shall occur, upon the terms and subject to the conditions set forth herein, on the first business day after the satisfaction or waiver of the conditions set forth in Section 2.3 (such date, the "Closing Date"). On the Closing Date:

(a) In satisfaction of the Original Term Loan, the Additional Term Loan and the Grid Loan (each as defined in the Forbearance and Loan Modification Agreement), (A) the Company agrees to issue, and the Lenders, severally and not jointly, agree to accept, an aggregate of 59,786,848 shares of Common Stock (collectively, the "New Lender Securities") and (B) the Company agrees to assign, subject to Section 4.4 of the Benz Entity Operating Agreement, the Contributed Assets (as defined in the Benz Entity Operating Agreement) directly to the Benz Entity, at the direction, and on behalf, of Nomis. At the Closing, the Company shall deliver the New Lender Securities to each Lender in such amounts as set forth on Schedule 2.2(a).

(b) The Company agrees to sell, and Cheval agrees to purchase, an additional 32,028,669 shares of Common Stock (collectively, the "New Black Horse Securities"). At the Closing, the Company shall deliver the New Black Horse Securities to Cheval in such amounts as set forth on Schedule 2.2(b).

(c) The Purchasers agree to pay the Purchase Price to the Company as follows:

(i) As consideration for the New Lender Securities issued to Nomis, Nomis shall provide the Company with the Loan Satisfaction.

(ii) As consideration for the New Lender Securities issued to each of the Black Horse Entities, the Black Horse Entities shall provide the Company with the Loan Satisfaction.

(iii) As consideration for the New Black Horse Securities, Cheval shall transfer to the Company an amount equal to three million US dollars ($3,000,000.00) *minus* the amount of principal balance of the Bridge Loan (such amount, the "Cash Purchase Price") via wire transfer of immediately available funds.

2.3 Closing Conditions.

(a) The obligations of the Company hereunder in connection with the Closing are subject to the following conditions being met (or waived by the Company in writing):

(i) the accuracy in all material respects on the Closing Date of the representations and warranties (or, in the case of any representation or warranty that is already qualified by materiality, the accuracy in all respects of such representation or warranty) of the Purchasers contained herein (unless herein required as of a specific date, in which case they shall be accurate in all material respects as of such date);

(ii) all obligations, covenants and agreements of each Purchaser required to be performed at or prior to the Closing Date shall have been performed in all material respects;

(iii) Cheval shall have paid the Cash Purchase Price, and the Lenders shall have delivered the Loan Satisfaction;

(iv) the Proposed Charter Amendment shall have become effective; and

(v) each of Nomis and the Black Horse Entities shall have delivered each of the Transaction Documents to which each is a party, and such other documents or instruments as the Company reasonably requests and as are reasonably necessary to effect the transactions contemplated by this Agreement.

(b) The obligations of Nomis hereunder in connection with the Closing are subject to the following conditions being met (or waived by Nomis in writing):

(i) the accuracy in all material respects on the Closing Date of the representations and warranties (or, in the case of any representation or warranty that is already qualified by materiality, the accuracy in all respects of such representation or warranty) of the Company contained in Sections 4.1(c), (d), (e), (f), (g), (h), (i), (j), and (k) and in Section 4.3 herein (unless herein required as of a specific date, in which case they shall be accurate in all material respects as of such date);

(ii) there be no motion pending for, nor shall there have occurred (a) the appointment of a Chapter 11 Trustee for the Company; (b) the conversion of the Company's pending bankruptcy case to a Chapter 7 case; (c) filing of any additional or subsequent bankruptcy proceeding; or (d) the pursuit of an action under state law for the appointment of a receiver, assignee for the benefit of creditors, dissolution, or reorganization;

(iii) a Forbearance Default (as defined in the Forbearance Agreement) shall not have occurred;

(iv) The Rule 2004 Discovery Motion shall have been scheduled and heard by the Bankruptcy Court on or before March 15, 2018;

(v) all obligations, covenants and agreements of the Company required to be performed at or prior to the Closing Date, including without limitation those set forth in Section 2.4, shall have been performed in all material respects;

(vi) the Company shall have delivered the executed (a) the Bill of Sale and Assignment and Assumption Agreement, (b) the Benz Entity Operating Agreement, and (c) the Loan Satisfaction;

(vii) the Proposed Charter Amendment shall have become effective, and the Company shall have delivered a certificate of an officer of the Company, given on behalf of the Company, certifying that attached to such certificate are true, correct and complete copies of the Company's (A) certificate of incorporation, including the Charter Amendment, certified by the Delaware Secretary of State, (B) bylaws or similar organizational documents, and (C) resolutions of the Board of Directors of the Company authorizing this Agreement and the other Transaction Documents and the consummation of the transactions contemplated herein and therein;

(viii) the Company shall have delivered the New Lender Securities to Nomis in the amount set forth on Schedule 2.2(a);

(ix) Dr. Cameron Durrant and Mr. Morgan Lam shall enter into consulting agreements with the Benz Entity in the forms previously agreed; and

(x) the Company and each of the Black Horse Entities shall have delivered all other Transaction Documents to which each is a party and such other documents or instruments as Nomis reasonably requests and as are reasonably necessary to effect the transactions contemplated by this Agreement.

(c) The obligations of the Black Horse Entities hereunder in connection with the Closing are subject to the following conditions being met (or waived by each of the Black Horse Entities in writing):

(i) the accuracy in all material respects on the Closing Date of the representations and warranties (or, in the case of any representation or warranty that is already qualified by materiality, the accuracy in all respects of such representation or warranty) of the Company contained in Sections 4.1(c), (d), (e), (f), (g), (h), (i), (j), and (k) herein (unless herein required as of a specific date, in which case they shall be accurate in all material respects as of such date);

(ii) there be no motion pending for, nor shall there have occurred (a) the appointment of a Chapter 11 Trustee for the Company; (b) the conversion of the Company's pending bankruptcy case to a Chapter 7 case; (c) filing of any additional or subsequent bankruptcy proceeding; or (d) the pursuit of an action under state law for the appointment of a receiver, assignee for the benefit of creditors, dissolution, or reorganization;

(iii) a Forbearance Default (as defined in the Forbearance Agreement) shall not have occurred;

(iv) The Rule 2004 Discovery Motion shall have been scheduled and heard by the Bankruptcy Court on or before March 15, 2018;

(v) all obligations, covenants and agreements of the Company required to be performed at or prior to the Closing Date shall have been performed in all material respects;

(vi) the Proposed Charter Amendment shall have become effective, and the Company shall have delivered a certificate of an officer of the Company, given on behalf of the Company, certifying that attached to such certificate are true, correct and complete copies of the Company's (A) certificate of incorporation, including the Charter Amendment, certified by the Delaware Secretary of State, (B) bylaws or similar organizational documents, and (C) resolutions of the Board of Directors of the Company authorizing this Agreement and the other Transaction Documents and the consummation of the transactions contemplated herein and therein;

(vii) the Company shall have delivered the New Lender Securities to the Black Horse Entities in the amounts set forth on Schedule 2.2(a) and the New Black Horse Securities to Cheval; and

(viii) the Company and Nomis each shall have delivered all Transaction Documents to which each is a party, and such other documents or instruments as the Black Horse Entities reasonably request and as are reasonably necessary to effect the transactions contemplated by this Agreement.

2.4 Assignment of Benznidazole Assets; Certain Covenants Related Thereto.

(a) At the Closing, the Company, at the direction and on behalf of Nomis, will transfer and assign the Benz Assets, subject to Section 4.4 of the Operating Agreement, to an entity to be formed and capitalized by Nomis (the "Benz Entity").

(b) As soon as practicable following the execution of this Agreement, counsel to the Company shall file the Rule 2004 Discovery Motion. If the Rule 2004 Discovery Motion is granted, such counsel shall commence such discovery promptly thereafter. All such discovery and settlement negotiations shall be performed in accordance with a litigation budget to be agreed upon by Nomis, which shall have the rights to (a) monitor and provide input into such discovery; (b) approve, in its sole discretion, the scope and cost of all discovery that it agrees to fund; and (c) approve any settlement with Savant.

(c) Nomis shall have (i) 90 days (subject to extension as provided below) from the date of entry of the Rule 2004 Discovery Order granting the Rule 2004 Discovery Motion or (ii) 180 days from the Closing Date if either a Rule 2004 Discovery Order is entered denying the Rule 2004 Discovery Motion or a Rule 2004 Discovery Order has not been entered on or before the Closing Date (in either case under clauses (i) or (ii) of this Section 2.4(c) , the "Nomis Review Period"), to decide, in its sole discretion, to elect (or to cause the Benz Entity) to keep the Benz Assets, including the Claims (a "Positive Election").

(d) If Nomis makes a Positive Election, Nomis will assume (or cause the Benz Entity to assume) and Nomis shall pay certain legal fees and expenses of the Company (in the amount set forth in the letter from Kaplan Rice LLP to the Company dated December 8, 2017) presently owed to Kaplan Rice LLP and Richards Layton & Finger, PA ("RLF") (such amounts, the "Outstanding Legal Fees"). The Nomis Review Period may be extended for up to an additional 90 days in the event (i) an objection is filed to the Rule 2004 discovery requests or, in the judgment of Nomis, in its sole discretion, any respondent otherwise fails to substantially respond to the Rule 2004 discovery requests, so that the Company or the Benz Entity may make motion to the Bankruptcy Court and obtain ruling and response to such discovery requests or (ii) either the Company or the Benz Entity needs to effectuate process in any foreign country to enforce the Rule 2004 discovery requests. For the avoidance of doubt, the second 90-day shall not be in addition to the 180-day period in the event that either a Rule 2004 Discovery Order is entered denying the Rule 2004 Discovery Motion or a Rule 2004 Discovery Order has not been entered on or before the Closing Date.

(e) Regardless of whether Nomis makes a Positive Election, Nomis or the Benz Entity shall pay all Claim Advances from the time this Agreement is executed until the earlier of (a) the expiration of the Nomis Review Period or (b) the delivery by Nomis to the Company of a Positive Election or a declination to proceed with a Positive Election (including, if a Positive Election is made, any payments of the Outstanding Legal Fees required to induce Kaplan Rice and RLF to continue to represent the Company, Nomis or the Benz Entity in the discovery processes described above or to represent the Company in any settlement discussions with Savant). Until the Closing, such Claim Advances will be provided as secured loans, as provided in the Forbearance and Loan Modification Agreement. In addition, Nomis shall have the right, in its sole discretion and at its sole expense, to identify other counsel, reasonably satisfactory to the Company, to represent the Company, Nomis or the Benz Entity in the discovery processes or to represent the Company in any settlement discussions with Savant in the event that an arrangement, satisfactory to Nomis in its sole discretion, can't be reached with Kaplan Rice LLP or RLF to continue to act as counsel in such matters.

(f) Promptly after the date hereof, Kaplan Rice LLP shall send a letter to the FDA, substantially in the form previously agreed to among the Parties. The Company shall cooperate fully in permitting counsel to the Company or the Benz Entity as described above, and Nomis and its attorneys and representatives, to make full investigation of the Claims, and upon request will afford Nomis full access, following advance notice of any such request, to counsel, consultants, employees and officers of the Company, as needed. Nomis understands that the Company may attempt to resolve certain claims against it before and/or during the Nomis Review Period, and/or any extension thereof.

(g) If, at or prior to the end of the Nomis Review Period (as it may be extended), Nomis makes a Positive Election: (i) Nomis will assume and pay all the Outstanding Legal Fees; (ii) any amounts realized from the Claims or the other Benz Assets will be paid as set forth in the Benz Entity Operating Agreement; (iv) Nomis shall have full control, in its sole discretion, over the management of the Benz Entity, any development of or realization on the Benz Assets and the prosecution of the Claims, including without limitation any determination to (x) discontinue and/or settle at any time the prosecution of the Claims and (y) so long as there is no direct liability to the Company, to settle the Savant Litigation; and (v) the Company will cooperate with the Benz Entity in order for it to realize on the Benz Assets, including the successful prosecution of the Claims in a manner and on a schedule that does not interfere with the Company's primary business operations. In furtherance and not in limitation of the foregoing clause (f):

- The Company shall join the Benz Entity as a co-plaintiff in bringing any claims if requested by the Benz Entity except the Company shall not be or become a party to any litigation in which any of the following is a defendant: the United States Food and Drug Administration, the World Health Organization and the Drugs for Neglected Diseases Initiative;

- The Company will consent to, and waive any conflict of interest in connection with, the representation by RLF and Kaplan Rice LLP of the Benz Entity as well as the Company;

- The Company will request of and authorize each of Cameron Durrant and Morgan Lam to enter into a Consulting Agreement in the form of Exhibit E; and

- If requested, the Company will use commercially reasonable efforts to take such steps as may be reasonably requested by the Benz Entity to make available the consulting services of Ted Shih, Steven Pal, Marcia Gaido, Facundo Garcia Bournissen and/or Matthew and Mary Lo (which steps may take the form of including the existing consulting and/or confidentiality agreements with such persons in the Benz Assets).

(h) Upon completion of the Nomis Review Period, if Nomis in its sole discretion elects not to make a Positive Election, the Benz Entity will transfer and assign the Benz Assets, including the Claims, to the Company or its designee (a "Claims Reversion"). Following any Claims Reversion, the transferee will have the right to seek and find a third party to fund the Claims on whatever terms negotiated and accepted by the transferee; provided, however, that the Parties agree and acknowledge that, following any Claims Reversion, (A) the transferee shall have no obligation to seek any such litigation funding, and (B) the transferee shall be entitled, in its sole discretion to discontinue and/or settle at any time the prosecution of the Claims and to settle the Savant Litigation. If, following a Claims Reversion, the transferee proposes to accept terms from a third party to fund the Claims, the transferee shall provide written notice to Nomis of the terms proposed to be accepted, and Nomis shall have a right for ten days to elect to fund the Claims on the same terms as the third party and, if Nomis so elects, Nomis will proceed with such funding of the Claims. If Nomis does not elect to fund the claims on the same terms as the third party, Nomis will thereafter have no separate interest in the Claims, and any proceeds of the Claims that are not paid to the third party pursuant to any such agreement with a third party will be retained by the transferee to be paid, applied or used as the transferee shall determine, except that the transferee will reimburse Nomis solely from such proceeds from the Claims, and not from any other funds or assets of the transferee, for any documented expenses incurred by Nomis or the Benz Entity in connection with the Rule 2004 discovery or in furtherance of settlement discussions with Savant from which the transferee determines it has received benefit in the successful pursuit of the Claims and/or the settlement discussions with Savant.

(i) In the event that, after the Closing Date, any provision of this Section 2.4 conflicts with a provision of the Benz Entity Operating Agreement that addresses the same subject matter, the provision of the Benz Entity Operating Agreement shall prevail.

2.5 Other Agreements.

(a) Concurrently with the Closing, the Parties shall enter into the Registration Rights Agreement.

(b) Concurrently with the execution of this Agreement, the Company shall deliver to the Purchasers documentation of the Company's Board of Directors' approval and recommendation of the Proposed Charter Amendment.

(c) Concurrently with the execution of this Agreement, each of the Black Horse Entities and Nomis shall deliver to the Company a written consent approving the Proposed Charter Amendment (the "Stockholder Approval").

2.6 Failure to Close. If, on March 31, 2018, or such later date as the parties hereto may agree in writing, any of the Closing Conditions set forth in Section 2.3 have not been satisfied or waived in writing, then this Agreement shall automatically terminate and be of no further force or effect.

ARTICLE III.

COVENANTS

3.1 Operation and Maintenance of the Business. Prior to the Closing, unless the Company has received the prior consent or waiver of the Purchasers, and subject to the terms and conditions of the other Transaction Documents, the Company will:

(a) conduct its business and operations only in the ordinary course of business;

(b) use commercially reasonable efforts, consistent with sound business practice, to keep in full force and effect its corporate existence and all material rights, permits, franchises, Intellectual Property Rights, Material Contracts and contractual rights relating or pertaining to its business, the termination of which other than pursuant to its terms in the ordinary course of business would be materially adverse to the Company;

(c) maintain its material assets as is reasonably necessary for the conduct of its businesses consistent with then-present needs;

(d) maintain its books, accounts and records consistent with sound business practice, and not make or institute any material change in its methods of purchase, sale, management, accounting or operation;

(e) maintain all of its material insurance policies in effect as of the date hereof or reasonable replacement policies therefor;

(f) pay and discharge all material taxes due and owing by the Company before the same becomes delinquent and before penalties accrue thereon, unless and to the extent such taxes are being contested in good faith by appropriate procedures and adequate accruals or reserves (as determined in accordance with GAAP) have been established on the books and financial statements of the Company for such taxes;

(g) as promptly as practicable, prepare, file with the Commission and, after clearing any comments of the Commission staff thereon, issue an information statement to all holders of stock of the Company to inform them of the approval of the Board and stockholder action to approve the Proposed Charter Amendment and related matters, and within one business day after the required period after the issuance of the information statement, cause the Proposed Charter Amendment to become effective.

3.2 Information

(a) Access. Subject to Section 3.2(b), upon reasonable prior notice and at reasonable times, in connection with this Agreement, the Company will provide to representatives of the Purchasers and each of their agents, employees and accounting, tax, legal and other advisors, except where such provision would cause the Company to violate existing Contracts or waive legal privilege:

(i) access to the offices, assets, suppliers, employees and other Persons having business dealings with the Company; provided, however, that the Parties shall mutually agree upon the timing and manner of any communications between Purchasers and any such suppliers, employees and other Persons having business dealings with the Company;

(ii) access to all books, records (except employee medical records or other records including personally identifiable information or information otherwise restricted from disclosure under applicable privacy laws or regulations), financial statements and agreements (including any agreements with related parties) of the Company and such other relevant information and materials relating to the financial condition, assets, liabilities and business of the Company as may be reasonably requested (including the ability to make copies and abstracts thereof);

(iii) access to each report, schedule, registration statement and other document filed by the Company pursuant to the requirements of federal or state securities laws (including the ability to make copies and abstracts thereof);

(iv) access to operating reports, financial reporting packages and other operational and/or financial information sent to management or the Board of Directors or to the banks with whom the Company maintains credit facilities or lines of credit (including the ability to make copies and abstracts thereof); and

(v) the opportunity to discuss the affairs of the Company with the officers and employees of the Company; provided that no investigation pursuant to this Section 3.2(a) shall affect any representation, warranty, covenant or agreement made by the Company herein or the conditions to the obligations of the Purchasers to consummate the transactions contemplated in this Agreement.

(b) Confidentiality. The Purchasers agree that, after the Closing, the Company shall have no obligation to provide any information, records or other access by the Company to a Purchaser pursuant to Section 3.2(a) except pursuant to the terms and conditions of a customary non-disclosure agreement to be entered into between the Company and such Purchaser (each, a "Non-Disclosure Agreement").

3.3 Governmental Approvals and Filings.

(a) In furtherance of the Parties' obligations pursuant to this Agreement, each Party shall use commercially reasonable efforts to prepare and agrees to file, promptly following the execution of this Agreement, any materials and information required to be filed with or provided to any Governmental Entity with respect to the transactions contemplated by the Transaction Documents. Each of Nomis, the Black Horse Entities, and the Company shall use commercially reasonable efforts to promptly supply any additional information as may be required or requested by any Governmental Entity in connection with the transactions contemplated by the Transaction Documents. Each of Nomis, the Black Horse Entities, and the Company shall use commercially reasonable efforts to take such actions and shall file and use commercially reasonable efforts to have declared effective or approved all documents and notifications with any Governmental Entity as may be necessary and advisable or may be reasonably requested under applicable Legal Requirements for the consummation of the transactions contemplated by the Transaction Documents. Each Party shall, (a) promptly notify the other Party of any material communication between that Party and any Governmental Entity in respect of any filings or investigation relating to the transactions contemplated hereby, (b) subject to applicable Legal Requirements, discuss with and permit the other Party (and its counsel) to review in advance, and consider in good faith the other Party's reasonable comments in connection with any proposed communication to any Governmental Entity relating to any filing or investigation in connection with the transactions contemplated hereby, and (c) not participate or agree to participate in any substantive meeting, telephone call or discussion with any Governmental Entity in respect of any filings or investigation in connection with the transactions contemplated hereby unless it consults with the other Party in advance and, to the extent permitted by such Governmental Entity, gives the other Party the opportunity to attend and participate in such meeting, telephone call or discussion.

(b) Acknowledgment. The Purchasers acknowledge and agree that the purchase of the Securities by the Purchasers as contemplated by the terms and conditions set forth in this Agreement, is not subject to the terms of the Hart-Scott-Rodino Antitrust Improvements Act of 1976, as amended, and the rules and regulations promulgated thereunder.

ARTICLE IV.
REPRESENTATIONS AND WARRANTIES

4.1 Representations and Warranties of the Company to the Purchasers. Except as set forth in the Schedules, which Schedules shall be deemed a part hereof and shall qualify any representation or warranty or otherwise made herein to the extent of the disclosure contained in the corresponding section of the Schedules or that it is readily apparent from the face of such Schedules that a disclosure on such Schedule is applicable to such representation or warranty, or as set forth in the SEC Reports, and subject, in each applicable case, to the Savant Impairments (as defined in the Benz Entity Operating Agreement), the Company hereby makes the following representations and warranties to each Purchaser:

(a) Subsidiaries. All of the direct and indirect subsidiaries of the Company are set forth on Schedule 4.1(a). The Company owns, directly or indirectly, all of the capital stock or other equity interests of each Subsidiary. None of the Subsidiaries of the Company own any Intellectual Property Rights related to the Products, hold any material Intellectual Property Rights of the Company or hold any other assets with a value in excess of $5,000, and the Subsidiaries are treated as inactive by the Company and not used in the ordinary course of business.

(b) Organization and Qualification. The Company is an entity duly incorporated or otherwise organized, validly existing and as of the Closing Date will be in good standing under the laws of the jurisdiction of its incorporation or organization, with the requisite power and authority to own and use its properties and assets and to carry on its business as currently conducted. The Company is not in violation or in default of any of the provisions of its certificate or articles of incorporation, bylaws or other organizational or charter documents. As of the Closing Date, the Company will be duly qualified to conduct business and in good standing as a foreign corporation or other entity in each jurisdiction in which the nature of the business conducted or property owned by it makes such qualification necessary.

(c) Authorization; Enforcement. The Company has the requisite corporate power and authority to enter into and, subject to obtaining the Stockholder Approval and the effectiveness of the Proposed Charter Amendment, to consummate the transactions contemplated by this Agreement and each of the other Transaction Documents and otherwise to carry out its obligations hereunder and thereunder. The execution and delivery of this Agreement and each of the other Transaction Documents by the Company and the consummation by it of the transactions contemplated hereby and thereby, have been duly authorized by all necessary action on the part of the Company and, except for obtaining the Stockholder Approval and effecting the Proposed Charter Amendment, no further action is required by the Company, the Board of Directors or the Company's stockholders in connection herewith or therewith other than in connection with the Required Approvals. This Agreement and each other Transaction Document to which it is a party has been (or upon delivery will have been) duly executed by the Company and, when delivered in accordance with the terms hereof and thereof, will constitute the valid and binding obligation of the Company enforceable against the Company in accordance with its terms, except (i) as limited by any applicable bankruptcy, insolvency and other similar Legal Requirements affecting the enforcement of creditors' rights generally, (ii) as limited by laws relating to the availability of specific performance, injunctive relief or other equitable remedies, and (iii) insofar as indemnification and contribution provisions may be limited by applicable law.

(d) No Conflicts. Subject to obtaining the Stockholder Approval and the effectiveness of the Proposed Charter Amendment, the execution, delivery and performance by the Company of this Agreement and the other Transaction Documents to which it is a party, the issuance and sale of the Securities, the assignment of the Contributed Assets (subject to Section 4.4 of the Benz Entity Operating Agreement), and the consummation by it of the transactions contemplated hereby and thereby do not and will not (i) conflict with or violate any provision of the Company's or any Subsidiary's certificate or articles of incorporation, bylaws or other organizational or charter documents, or (ii) conflict with, or constitute a default (or an event that with notice or lapse of time or both would become a default) under, result in the creation of any Lien upon any of the properties or assets of the Company or any Subsidiary, or, except as set forth on Schedule 4.1(d), give to others any rights of termination, amendment, acceleration or cancellation (with or without notice, lapse of time or both) of, any agreement, credit facility, debt or other instrument (evidencing a Company or Subsidiary debt or otherwise) or other understanding to which the Company or any Subsidiary is a party or by which any property or asset of the Company or any Subsidiary is bound or affected, or (iii) subject to the Required Approvals, conflict with or result in a violation of any Legal Requirements of any Governmental Entity to which the Company or any Subsidiary is subject (including federal and state securities laws and regulations), or by which any property or asset of the Company is bound or affected.

(e) Filings, Consents and Approvals. The Company is not required to obtain any consent, waiver, authorization or order of, give any notice to, or make any filing or registration with, any Governmental Entity or other Person in connection with the execution, delivery and performance by the Company of the Transaction Documents, other than: (i) the filing of the Proposed Charter Amendment with the secretary of state of the State of Delaware as contemplated herein, (ii) the filing of the information statement with the Commission, including such notice as is required to be provided to non-consenting stockholders of the Company under Delaware law to inform them of the Stockholder Approval and the Proposed Charter Amendment; (iii) the filings required with the Commission related to the issuance of the Securities, execution of this Agreement and the other Transaction Documents and the Closing of the transactions contemplated herein and therein; (iv) such filings as are required to be made under applicable state securities laws; (v) such filings as are required to be made in accordance with the rules of the OTCQB Venture Market; and (vi) such consents, waivers, authorizations or notices as may be required to transfer and assign the Contributed Assets, subject to Section 4.4 of the Benz Entity Operating Agreement, to the Benz Entity (collectively, the "Required Approvals").

(f) Issuance of the Securities. Subject to the effectiveness of the Proposed Charter Amendment, the Securities issued pursuant to this Agreement will be duly authorized and, when issued and paid for in accordance with the applicable Transaction Documents, will be duly and validly issued, fully paid and nonassessable, free and clear of all Liens.

(g) Capitalization. The capitalization of the Company set forth in the SEC Reports is true, accurate and complete as of the date hereof. The Company has not issued any capital stock since its most recently filed periodic report under the Exchange Act, other than pursuant to the exercise of employee stock options under the Company's stock option plans outstanding as of the date of the most recently filed periodic report under the Exchange Act. No Person has any right of first refusal, preemptive right, right of participation, or any similar right to participate in the transactions contemplated by the Transaction Documents. The issuance and sale of the Securities will not obligate the Company to issue, or give rise to any Person's right to purchase, shares, or other securities to any Person (other than the Purchasers) and, except as set forth on Schedule 4.1(g), will not result in a right of any holder of Company securities to adjust the exercise, conversion, exchange or reset price under any of such securities. Except as set forth on Schedule 4.1(g), all of the outstanding shares of capital stock of the Company are duly authorized, validly issued, fully paid and nonassessable, have been issued in compliance with all Legal Requirements, and none of such outstanding shares was issued in violation of any preemptive rights or similar rights to subscribe for or purchase securities. Subject to the effectiveness of the Proposed Charter Amendment, no further approval or authorization of any stockholder, the Board of Directors, or any third party is required for the issuance and sale of the Securities. Except as set forth in the SEC Reports, there are no stockholders agreements, voting agreements or other similar agreements with respect to the Company's capital stock to which the Company is a party or between or among any of the Company's stockholders.

(h) SEC Reports; Financial Statements. Since January 1, 2017, the Company has timely filed all reports, schedules, forms, statements and other documents required to be filed by the Company under Section 13(a) or 15(d) of the Exchange Act (the foregoing materials, including the exhibits thereto and documents incorporated by reference therein, being collectively referred to herein as the "SEC Reports").

(i) Material Changes; Undisclosed Events, Liabilities or Developments. Since the date of the latest financial statements included within the SEC Reports, except as specifically disclosed in a subsequent SEC Report filed prior to the date hereof or in the Schedules, (a) the Company has not incurred any liabilities (contingent or otherwise) other than (1) trade payables and accrued expenses incurred in the ordinary course of business, or costs related to this Agreement, and (2) liabilities not required to be reflected in the Company's financial statements pursuant to GAAP or disclosed in filings made with the Commission or in the Schedules, (b) the Company has not altered its method of accounting, (c) the Company has not declared or made any dividend or distribution of cash or other property to its stockholders or purchased, redeemed or made any agreements to purchase or redeem any shares of its capital stock and (d) the Company has not issued any equity securities to any officer, director or Affiliate, except pursuant to existing Company stock option plans. The Company does not have pending before the Commission any request for confidential treatment of information. Except for the issuance of the Securities contemplated by this Agreement and the consummation of the other transactions contemplated hereby and by the other Transaction Documents and events disclosed in the Schedules and SEC Reports, other than immaterial matters, no event, liability, fact, circumstance, occurrence or development has occurred or exists or is reasonably expected to occur or exist with respect to the Company or its business, prospects, properties, operations, assets or financial condition that would be required to be disclosed by the Company under applicable securities laws as of the date of this Agreement.

(j) Litigation. Except for Actions disclosed in the Schedules or the SEC Reports, and except for the Bankruptcy Case, there is no Action or Proceeding, which adversely affects or challenges the legality, validity or enforceability of any of the Transaction Documents or the Securities. Except as set forth on Schedule 4.1(j), neither the Company, nor any Subsidiary, nor, any current director or officer thereof, is or has been the subject of any Action, or, any Proceeding, involving a claim of violation of or liability under federal or state securities laws or a claim of breach of fiduciary duty. There has not been, and there is not pending or contemplated, any investigation by the Commission involving the Company or any current director or officer of the Company. Except as set forth on Schedule 4.1(j), the Commission has not issued any stop order or other order suspending the effectiveness of any registration statement filed by the Company or any Subsidiary under the Exchange Act or the Securities Act.

(k) Creditors' Claims. Except as set forth on Schedule 4.1(k)(i), there are no unsecured creditors, other than claims of vendors in the ordinary course of business, whose claims against the Company have not been satisfied. Schedule 4.1(k)(ii) lists creditors of the Company who have executed releases in exchange for a payment in satisfaction of their claim against the Company.

(l) Labor Relations. No material labor dispute exists or, to the Knowledge of the Company, is imminent with respect to any of the employees of the Company. None of the Company's employees is a member of a union that relates to such employee's relationship with the Company, and the Company is not a party to a collective bargaining agreement, and the Company believes that its relationships with its employees are in good standing. To the Knowledge of the Company, no executive officer of the Company or any Subsidiary is, or is now expected to be, in violation of any material term of any Material Contract, employment contract, confidentiality, disclosure or proprietary information agreement or non-competition agreement, or any other Contract or any restrictive covenant in favor of any third party, and the continued employment of each such executive officer does not subject the Company or any of its Subsidiaries to any liability with respect to any of the foregoing matters. The Company is in compliance with all applicable Legal Requirements relating to employment and employment practices, terms and conditions of employment and wages and hours.

(m) Compliance. Except as set forth on Schedule 4.1(m) or in the Schedules, and except for any breaches, defaults, violations, or rights of termination, neither the Company nor any Subsidiary: (a) is in default under or in violation of (and no event has occurred that has not been waived that, with notice or lapse of time or both, would result in a default by the Company or any Subsidiary under), nor has the Company or any Subsidiary received notice of a claim that, as of the date hereof, it is in default under or that it is in violation of, any Contract to which it is a party or by which it or any of its properties is bound (whether or not such default or violation has been waived), (b) is in violation of any judgment, decree or Order of any Governmental Entity, or (c) is in violation of any Legal Requirements, including without limitation all foreign, federal, state and local laws relating to taxes, environmental protection, occupational health and safety, product quality and safety and employment and labor matters.

(n) Title to Assets. Except as set forth on Schedule 4.1(n), the Company and its Subsidiaries have good and valid title in all material personal property owned by them, free and clear of all Liens, except for (a) Liens as do not materially affect the value of such property and do not materially interfere with the use made and proposed to be made of such property by the Company and the Subsidiaries, and (b) Liens for the payment of federal, state or other taxes, for which appropriate reserves have been made in accordance with GAAP and, the payment of which is neither delinquent nor subject to penalties. Any real property and facilities held under lease by the Company and the Subsidiaries are held by them under valid, subsisting and enforceable leases with which the Company and the Subsidiaries are in compliance in all material respects. The Company does not currently own any real property.

(o) Intellectual Property.

(i) Except as set forth on Schedule 4.1(o), Company is sole owner of all Intellectual Property Rights (defined herein) and has had executed all of the appropriate paperwork to establish ownership in Company, or Company has rights to use, all Intellectual Property, and other intellectual property rights and similar rights necessary or required for use in connection with its business as described in the SEC Reports (collectively, the "Intellectual Property Rights"). All Intellectual Property existing as of the Closing Date, as applicable, which is issued, registered or pending with any United States or foreign Governmental Entity (including, without limitation, any and all applications for the registration of any Intellectual Property with any such United States or foreign Governmental Entity) and all licenses under which Company is the licensee of any such registered Intellectual Property (or any such application for the registration of Intellectual Property) owned by another Person are set forth in Schedule 4.1(o). Such Schedule 4.1(o) indicates in each case whether such registered Intellectual Property (or application therefore) is owned or licensed by Company, and in the case of any such licensed registered Intellectual Property (or application therefore), lists the name and address of the licensor and the name and date of the agreement pursuant to which such item of Intellectual Property is licensed pursuant to which such item of Intellectual Property is licensed and whether or not such license is an exclusive license and indicates whether there are any purported restrictions in such license on the ability of Company to grant a security interest in and/or to transfer any of its rights as a licensee under such license. Except as indicated on Schedule 4.1(o), Company is the sole and exclusive owner of the entire and unencumbered right, title and interest in and to each such registered Intellectual Property (or application therefore) purported to be owned by Company, free and clear of any Liens and/or licenses in favor of third parties or agreements or covenants not such sue third parties for infringement. Company is not party to, nor bound by, any material license or other agreement with respect to which Company is the licensee that prohibits or otherwise restricts Company from granting a security interest in Company's interest in such license or agreement or other property.

(ii) Except as set on Schedule 4.1(o), Company has not received a notice (written or otherwise) that any of, the Intellectual Property Rights has expired, terminated or been abandoned, or is expected to expire or terminate or be abandoned, within five (5) years from the date of this Agreement. Except as set forth on Schedule 4.1(o), Company has not received, since the date of the latest financial statements included within the SEC Reports, a written notice of a claim or otherwise has any Knowledge that the Intellectual Property Rights violate or infringe upon the rights of any Person. Except as set forth on Schedule 4.1(o), all such Intellectual Property Rights are enforceable and there is no existing infringement by another Person of any of the Intellectual Property Rights. Except as set forth on Schedule 4.1(o), Company's patents are being maintained, and the required United States and foreign maintenance fees or annuities (if any) are being paid. Company has taken reasonable security measures to protect the secrecy, confidentiality and value of all of its Intellectual Property Rights. Except as set forth on Schedule 4.1(o), Company has entered into binding, written agreements with every current and former employee of Company, and with every current and former independent contractor, whereby such employees and independent contractors (i) assign to Company any ownership interest and right they may have in the Intellectual Property Rights; and (ii) acknowledge Company's exclusive ownership of the Intellectual Property Rights. Except as set forth on Schedule 4.1(o), no third party possesses rights to Intellectual Property Rights that, if exercised, could enable such party to develop products competitive to the Products.

(iii) Except as set forth on Schedule 4.1(o), Company has duly and properly filed or caused to be filed with the U.S. Patent and Trademark Office (the "PTO") and applicable foreign and international patent authorities all material patent applications as listed on Schedule 4.1(o) and owned by Company (the "Patent Applications"). Except as set forth on Schedule 4.1(o), Company has not been notified of any inventorship or ownership challenges nor has any interference been declared or provoked which has not been finally resolved. Except as set forth on Schedule 4.1(o), no opposition filings or invalidation filings have been submitted which have not been finally resolved in connection with any of Company's patents and Patent Applications in any jurisdiction where Company has applied for, or received, a patent.

(p) Insurance. The Company is insured by insurers of recognized financial responsibility against such losses and risks and in such amounts as are prudent and customary in the business in which the Company is engaged, including, but not limited to, directors and officers insurance coverage.

(q) Transactions with Affiliates and Employees. Except as set forth in the SEC Reports, or as set forth in Schedule 4.1(q), none of the current officers or directors of the Company and, none of the employees of the Company is presently a party to any transaction with the Company (other than for services as employees, officers and directors), including any Contract or other arrangement providing for the furnishing of services to or by, providing for rental of real or personal property to or from, providing for the borrowing of money from or lending of money entity in which any officer, director, or any such employee has a substantial interest or is an officer, director, trustee, stockholder, member or partner.

(r) Certain Fees. Except as set forth in Schedule 4.1(r), no brokerage or finder's fees or commissions are or will be payable by the Company or any Subsidiary to any broker, financial advisor or consultant, finder, placement agent, investment banker, bank or other Person with respect to the transactions contemplated by the Transaction Documents. The Purchasers shall have no obligation with respect to any fees or with respect to any claims made by or on behalf of other Persons for fees of a type contemplated in this Section that may be due in connection with the transactions contemplated by the Transaction Documents.

(s) Investment Company. The Company is not, and immediately after receipt of payment for the Securities, will not be, an "investment company" within the meaning of the Investment Company Act of 1940, as amended.

(t) Registration Rights. Other than each of the Purchasers, except as set forth on Schedule 4.1(t), no Person has any right to cause the Company to effect the registration under the Securities Act of any Securities of the Company.

(u) Listing and Maintenance Requirements. The Company's capital stock is registered pursuant to Section 12(b) or 12(g) of the Exchange Act, and the Company has taken no action designed to terminate, or is likely to have the effect of, terminating the registration of the capital stock under the Exchange Act nor has the Company received any notification that the Commission is contemplating terminating such registration. Except as set forth on Schedule 4.1(u), the Company has not, in the 12 months preceding the date hereof, received notice from any trading market on which the capital stock is or has been listed or quoted to the effect that the Company is not in compliance with the listing or maintenance requirements of such trading market, if any.

(v) No Anti-Takeover Plan. There are no registration or anti-dilution rights, and there is no control share acquisition, voting trust, proxy, rights plan, plan, scheme, device, or arrangement, commonly known as a "poison pill" or "anti-takeover plan", or other agreement, arrangement or understanding to which the Company or any Subsidiary is a party or by which they are bound with respect to any capital stock of the Company or any Subsidiary. No state takeover statute or similar statute or regulation applies or purports to apply to this Agreement or any of the transactions contemplated by this Agreement. Stockholders of the Company or any Subsidiary will not be entitled to dissenters' rights under applicable state law in connection with the transactions contemplated hereunder.

(w) Indebtedness. Except for (a) Indebtedness (as defined herein) incurred by the Company (1) under the Credit and Security Agreement or (2) in the ordinary course of business and not considered past due or delinquent under the trade terms applicable to such Indebtedness and (b) amounts owed to vendors of the Company as set forth on Schedule 4.1(w), all outstanding secured and unsecured Indebtedness of the Company or any Subsidiary, or for which the Company or any Subsidiary has commitments is current and in good standing. For the purposes of this Agreement, "Indebtedness" means (i) any liabilities for borrowed money or amounts owed, (ii) all guaranties, endorsements and other contingent obligations in respect of indebtedness of others, whether or not the same are or should be reflected in the Company's balance sheets (or the notes thereto), and (iii) the present value of any lease payments under leases required to be capitalized in accordance with GAAP.

(x) Tax Status. The Company and its Subsidiaries each (i) has made or filed all United States federal and state income and all foreign income and franchise tax returns, reports and declarations required by any jurisdiction to which it is subject, (ii) has paid all taxes and other governmental assessments and charges that are material in amount, shown or determined to be due on such returns, reports and declarations and (iii) has set aside on its books provision reasonably adequate for the payment of all material taxes for periods subsequent to the periods to which such returns, reports or declarations apply. There are no unpaid taxes in any material amount claimed to be due by the taxing authority of any jurisdiction, and the officers of the Company know of no basis for any such claim.

(y) Foreign Corrupt Practices. Neither the Company nor any Subsidiary, nor to the Knowledge of the Company, any agent or other person acting on behalf of the Company or any Subsidiary, has (i) directly or indirectly, used any funds for unlawful contributions, gifts, bribe, rebate, payoff, commissions, promotional allowances, entertainment, influence payments, kickback or other unlawful expenses or other payment or economic benefit to any Person, private or public, in the United States, its territories, or any foreign jurisdiction, regardless of what form, whether in money, property, or service, (ii) made any unlawful payment to foreign or domestic government officials or employees or to any foreign or domestic political parties or campaigns from corporate funds, (iii) failed to disclose fully any contribution made by the Company or any Subsidiary (or made by any person acting on its behalf of which the Company is aware) which is in violation of law, (iv) violated in any material respect any provision of FCPA; (v) established or maintained any fund or asset that has not been recorded in the books and records of Company; or (vi) aided, abetted, caused (directly or indirectly), participated in, or otherwise conspired with, any Person to violate the terms of any judgment, sentence, order or decree of any court or Governmental Entity.

(z) Regulation M Compliance. The Company has not, and no one acting on its behalf has, (i) taken, directly or indirectly, any action designed to cause or to result in the stabilization or manipulation of the price of any security of the Company to facilitate the sale or resale of any of the Securities, (ii) sold, bid for, purchased, or paid any compensation for soliciting purchases of, any of the Securities, or (iii) paid or agreed to pay to any Person any compensation for soliciting another to purchase any other securities of the Company, other than, in the case of clauses (ii) and (iii), compensation paid to the Company's placement agent, if any, in connection with the placement of the Securities.

(aa) Regulatory Compliance. Schedule 4.1(aa) lists all Products other than any Products associated with the Benz Assets. With respect to all Products, the Company has only engaged in Marketing activities pursuant to and within the scope of all required Governmental Approvals, and in compliance with the FDCA and applicable state laws. The clinical trials conducted by and on behalf of Company as part of its Marketing activities with respect to the Products have been and continue to be conducted in accordance with any and all approved protocols, and no Governmental Entity or institutional review board has issued notice to Company demanding the termination, suspension, material modification, or clinical hold of any such Marketing activities. There are no pending or threatened criminal, civil, or administrative investigations or actions pertaining to the Company's Marketing activities, and Company is not a party to any consent decree with any Governmental Entity. The Company has not received nor is it aware of any warning letters, pending or unremediated FDA inspection violations, quarantine, or other notice of wrongdoing or prohibition on future Marketing activities supplied by the FDA or any state board of pharmacy or department of health. The handling of all biological and pharmaceutical materials, have been and are being conducted in all material respects in accordance with the FDCA and applicable state laws. The Company is not directly, nor indirectly by any through its officers, directors, employees, agents or contractors, debarred, suspended, or excluded from participation in the Medicare or Medicaid programs, or any other state or federal health care program.

(bb) Regulatory Developments. All material Required Permits related to the Marketing of the Products are listed on Schedule 4.1(bb).

(cc) Office of Foreign Assets Control. Neither the Company nor any Subsidiary, nor any current director, officer, agent, employee nor any affiliate of the Company or any Subsidiary is currently subject to any U.S. sanctions administered by the Office of Foreign Assets Control of the U.S. Treasury Department ("OFAC").

(dd) U.S. Real Property Holding Corporation. The Company is not and has never been a U.S. real property holding corporation within the meaning of Section 897 of the Internal Revenue Code of 1986, as amended, and the Company shall so certify upon Purchaser's request.

(ee) Bank Holding Company Act. Neither the Company nor any of its Subsidiaries, nor any of its Affiliates, is subject to the Bank Holding Company Act of 1956, as amended (the "BHCA") and to regulation by the Board of Governors of the Federal Reserve System (the "Federal Reserve"). Neither the Company nor any of its Subsidiaries, nor any of its Affiliates owns or controls, directly or indirectly, five percent (5%) or more of the outstanding shares of any class of voting securities or twenty-five percent or more of the total equity of a bank or any entity that is subject to the BHCA and to regulation by the Federal Reserve. Neither the Company nor any of its Subsidiaries, nor any of its Affiliates exercises a controlling influence over the management or policies of a bank or any entity that is subject to the BHCA and to regulation by the Federal Reserve.

(ff) Money Laundering. The operations of the Company and its Subsidiaries are and have been conducted at all times in compliance with applicable financial record-keeping and reporting requirements of the Currency and Foreign Transactions Reporting Act of 1970, as amended, applicable money laundering statutes and applicable rules and regulations thereunder (collectively, the "Money Laundering Laws"), and no Action or Proceeding by or before any court or governmental agency, authority or body or any arbitrator involving the Company with respect to the Money Laundering Laws is pending or, threatened.

(gg) Environmental Legal Requirements. The Company (i) is in compliance with all Environmental Legal Requirements; (ii) has received all permits licenses or other approvals required of it under applicable Environmental Legal Requirements to conduct its business; and (iii) is in compliance with all terms and conditions of any such permit, license or approval.

4.2 Representations and Warranties of the Purchasers. Each Purchaser, for itself and for no other Purchaser, hereby represents and warrants as of the date hereof and as of the Closing Date to the Company as follows (unless as of a specific date therein):

(a) Each Purchaser is either an individual or an entity duly incorporated or formed, validly existing and in good standing under the laws of the jurisdiction of its incorporation or formation with full right, corporate, partnership, limited liability company or similar power and authority to enter into and to consummate the transactions contemplated by this Agreement and otherwise to carry out its obligations hereunder. The execution and delivery of this Agreement and performance by such Purchaser of the transactions contemplated by this Agreement have been duly authorized by all necessary corporate, partnership, limited liability company or similar action, as applicable, on the part of such Purchaser. Each Transaction Document to which it is a party has been duly executed by such Purchaser, and when delivered by such Purchaser in accordance with the terms hereof, will constitute the valid and legally binding obligation of such Purchaser, enforceable against it in accordance with its terms, except: (i) as limited by general equitable principles and applicable bankruptcy, insolvency, reorganization, moratorium and other laws of general application affecting enforcement of creditors' rights generally, (ii) as limited by laws relating to the availability of specific performance, injunctive relief or other equitable remedies and (iii) insofar as indemnification and contribution provisions may be limited by applicable law.

(b) Own Account. Each Purchaser understands that the Securities are "restricted securities" and have not been registered under the Securities Act or any applicable state securities law and is acquiring the Securities as principal for its own account and not with a view to or for distributing or reselling such Securities or any part thereof in violation of the Securities Act or any applicable state securities law, has no present intention of distributing any of such Securities in violation of the Securities Act or any applicable state securities law and has no direct or indirect arrangement or understandings with any other persons to distribute or regarding the distribution of such Securities in violation of the Securities Act or any applicable state securities law (this representation and warranty not limiting such Purchaser's right to sell the Securities pursuant to the Registration Statement or otherwise in compliance with applicable federal and state securities laws).

(c) Purchaser Status. At the time each Purchaser was offered the Securities, it was, and as of the date hereof it is, an "accredited investor" as defined in Rule 501(a)(1), (a)(2), (a)(3), (a)(7) or (a)(8) under the Securities Act.

(d) Experience of Each Purchaser. Each Purchaser, either alone or together with its representatives, has such knowledge, sophistication and experience in business and financial matters so as to be capable of evaluating the merits and risks of the prospective investment in the Securities, and has so evaluated the merits and risks of such investment. Each Purchaser is able to bear the economic risk of an investment in the Securities and, at the present time, is able to afford a complete loss of such investment.

(e) Compliance. No part of the funds being used by Cheval to acquire the Securities has been, or shall be, directly or indirectly derived from, or related to, any activity that may contravene United States federal or state or non-United States laws or regulations, including, without limitation, the Currency and Foreign Transactions Reporting Act of 1970, as amended, applicable money laundering statutes and applicable rules and regulations thereunder.

The Company acknowledges and agrees that the representations contained in this Section 4.2 shall not modify, amend or affect such Purchaser's right to rely on the Company's representations and warranties contained in this Agreement or any representations and warranties contained in any other Transaction Document or any other document or instrument executed and/or delivered in connection with this Agreement or the consummation of the transaction contemplated hereby, provided, however, that the Company is relying on the representations contained in this Section 4.2 for purposes of making its representations that the issuance of the Securities will comply with all applicable Legal Requirements.

4.3 Representations and Warranties of the Company to Nomis. Except as set forth in the Schedules, which Schedules shall be deemed a part hereof and shall qualify any representation or warranty or otherwise made herein to the extent of the disclosure contained in the corresponding section of the Schedules or that it is readily apparent from the face of such Schedules that a disclosure on such Schedule is applicable to such representation or warranty, or as set forth in the SEC Reports, and subject, in each applicable case, to the Savant Impairments (as defined in the Benz Entity Operating Agreement), the Company hereby makes the following representations and warranties to Nomis:

(a) The Company is the sole legal and beneficial owner of, and has good title to, each Claim free and clear of any Adverse Claim.

(b) The Company has not disposed of, transferred, encumbered or assigned all or any portion of any Claim (or any interest therein) or any Proceeds thereof, whether by way of security or otherwise.

(c) The Company has not taken any steps or executed any documents which could reasonably be expected, either individually or in the aggregate, to have a Material Adverse Claim Effect. To the Knowledge of the Company there is no asserted or unasserted claim, lien or judgment against it, which could reasonably be expected, either individually or in the aggregate, to have a Material Adverse Claim Effect.

(d) The Company has not set off or agreed to set off any amounts against any Claim, and there exist no rights of set-off or similar rights against the Company that could permit any set-off of or counterclaim against any Claim.

(e) To the Knowledge of the Company, no Claim or any portion thereof is subject to any Claim Defect or is otherwise invalid or void.

(f) The Company has disclosed or made available to Nomis, Kaplan Rice LLP or RLF, as applicable, all documentation and other information in its possession or control relevant to each Claim, and all such documentation and information so provided or made available has been provided or made available in its true, complete and correct form.

(g) The Company has full power and authority to transfer and assign, subject to Section 4.4 of the Benz Entity Operating Agreement, the Contributed Assets to the Benz Entity at the direction, and on behalf of, Nomis, and has obtained all necessary corporate and other authorizations to do so, it being agreed and acknowledged by Nomis that, to the extent applicable or relevant to any such transfer or assignment, the Benz Entity will be an Affiliate of the Company for purposes of making any such assignment.

ARTICLE V.
OTHER AGREEMENTS OF THE PARTIES

5.1 Furnishing of Information. Until the time that no Purchaser owns Securities originally acquired by such Purchaser pursuant to this Agreement, the Company covenants to use reasonable efforts to timely file (or obtain extensions in respect thereof and file within the applicable grace period) all reports required to be filed by the Company after the date hereof pursuant to the Exchange Act even if the Company is not then subject to the reporting requirements of the Exchange Act.

5.2 Securities Laws Disclosure; Publicity. The Company shall (a) issue a press release disclosing the material terms of the transactions contemplated hereby and (b) file a Current Report on Form 8-K with the Commission within the time and with the disclosures required by the Exchange Act. The Company and each Purchaser shall consult with each other in issuing any other press releases with respect to the transactions contemplated hereby, and neither the Company nor any Purchaser shall issue any such press release nor otherwise make any such public statement without the prior written consent of the Company, with respect to any press release of any Purchaser, or without the prior consent of each Purchaser, with respect to any press release of the Company, which consent shall not unreasonably be withheld or delayed, except if such disclosure is required by applicable Legal Requirements (including as required in order to comply with filing requirements under any competition, antitrust, or merger control law or to respond to a request for information or documents by a Governmental Entity investigating the transactions described herein), in which case the disclosing party shall promptly provide the other party with prior notice of such public statement or communication. The obligations under this section shall survive the Closing.

5.3 Equal Treatment of Purchasers. No consideration shall be offered or paid to any Person to amend or consent to a waiver or modification of any provision of any of this Agreement unless the same consideration is also offered to all of the Parties to this Agreement. For clarification purposes, this provision constitutes a separate right granted to each Purchaser by the Company and negotiated separately by each Purchaser, and is intended for the Company to treat the Purchasers as a class and shall not in any way be construed as the Purchasers acting in concert or as a group with respect to the purchase, disposition or voting of Securities or otherwise.

5.4 Securities Laws. The Securities will be issued at Closing pursuant to the exemption from registration provided by Section 4(a)(2) under the Securities Act, and thereafter may only be sold or otherwise transferred by the Purchasers in compliance with state and federal securities laws. In connection with any transfer of Securities other than pursuant to an effective registration statement, to the Company or to an Affiliate of a Purchaser, the Company may require the transferor thereof to provide to the Company an opinion of counsel selected by the transferor and reasonably acceptable to the Company, the form and substance of which opinion shall be reasonably satisfactory to the Company, to the effect that such transfer does not require registration of such transferred Securities under the Securities Act. Each Purchaser agrees the Securities may be imprinted, or a book entry notation may be made, with a restricted legend to the effect of the foregoing.

ARTICLE VI.

INDEMNIFICATION

6.1 Survival. The representation and warranties, covenants and agreements contained herein shall survive the Closing and shall remain in full force and effect for a period of twenty four months following the Closing Date.

6.2 Indemnification by Company. Subject to the terms and conditions of this Article VI, the Company shall indemnify and defend each Purchaser and their respective managers, directors, officers, employees, stockholders, members, representatives, agents, and Affiliates (collectively, the "Purchaser Indemnitees") against, and shall hold each of them harmless from and against, and shall pay and reimburse each of them for, any and all losses, claims, demands, suits and actions in law or in equity (including reasonable costs, expenses and reasonable attorneys' fees incurred in connection with the same), in each case incurred or sustained by, or imposed upon, the Purchaser Indemnitees based upon, arising out of, with respect to or by reason of:

(a) any material inaccuracy in or breach of any of the representations or warranties (or, in the case of any representation or warranty that is already qualified by materiality, any inaccuracy in or breach of such representation or warranty) of the Company contained in this Agreement or in any certificate or instrument delivered by or on behalf of the Company pursuant to this Agreement; or

(b) any material breach or non-fulfillment of any covenant, agreement or obligation to be performed by the Company pursuant to this Agreement.

6.3 Payments. The Company shall be required to pay or be liable to the Purchaser Indemnitees for all such losses arising from Section 6.2 from the first dollar. For the purpose of this Article VI, any inaccuracy in or breach of any representation or warranty shall be determined without regard to any materiality or other similar qualification contained in or otherwise applicable to such representation or warranty. Once a loss is agreed to by the Company or finally adjudicated to be payable, the Company shall satisfy its obligations within thirty (30) days of such agreement or final, non-appealable adjudication by wire transfer of immediately available funds. The parties hereto agree that should the Company not make full payment of any such obligations within such thirty (30) day period, any amount payable shall accrue interest from and including the date of agreement of the Company or final, non-appealable adjudication and including the date such payment has been made at a rate per annum equal to five (5) percent. Such interest shall be calculated daily on the basis of a 365-day year and the actual number of days elapsed, without compounding.

6.4 Limitation on Certain Damages. Notwithstanding any provision or agreement herein to the contrary, amounts payable to Nomis based upon losses incurred or sustained by, or imposed upon, Nomis arising out of, with respect to or by reason of a material inaccuracy or breach of any of the representations or warranties made by the Company in Section 4.3 hereof shall be limited to actual payments or disbursements made by Nomis in respect of or related to (i) the Claims (including, without limitation, all Outstanding Claims Advances and Future Nomis Claim Advances, as defined in the Benz Entity Operating Agreement) and (ii) the negotiation, preparation and execution of the Transaction Documents and the term sheet and due diligence related thereto; provided, that to the extent such disbursements are made for the reimbursement or payment of professional services to Hahn & Hessen LLP in connection with the negotiation, preparation or execution of the transactions contemplated by the Transaction Documents and the term sheet and due diligence related thereto, such amount of damages shall be further limited to an amount not to exceed $150,000.00).

ARTICLE VII.
MISCELLANEOUS

7.1 Fees and Expenses. The Company shall pay all Transfer Agent fees, stamp taxes and other taxes and duties levied in connection with (i) the delivery of any Securities to the Purchasers and (ii) the assignment of the Benz Assets to the Benz Entity at the direction, and on behalf, of Nomis.

7.2 Entire Agreement. The Transaction Documents, as well as any Non-Disclosure Agreement, together with the exhibits and schedules thereto, contain the entire understanding of the Parties with respect to the subject matter hereof and thereof and supersede all prior agreements and understandings, oral or written, with respect to such matters, which the Parties acknowledge have been merged into such documents, exhibits and schedules.

7.3 Notices. Any and all notices or other communications or deliveries required or permitted to be provided hereunder shall be in writing and shall be deemed given and effective on the earliest of: (a) the date of transmission, if such notice or communication is delivered via email at the email address set forth on the signature pages attached hereto at or prior to 5:30 p.m. (Eastern time) on a Business Day, (b) the next Business Day after the date of transmission, if such notice or communication is delivered via email at the email address set forth on the signature pages attached hereto on a day that is not a Business Day or later than 5:30 p.m. (Eastern time) on any Business Day, (c) the second (2nd) Business Day following the date of mailing, if sent by U.S. nationally recognized overnight courier service or (d) upon actual receipt by the party to whom such notice is required to be given. The address for such notices and communications shall be as set forth on the signature pages attached hereto.

7.4 Amendments; Waivers. No provision of this Agreement may be waived, modified, supplemented or amended except in a written instrument signed, in the case of an amendment, by the Company and the Purchasers or, in the case of a waiver, by the Party against whom enforcement of any such waived provision is sought. No waiver of any default with respect to any provision, condition or requirement of this Agreement shall be deemed to be a continuing waiver in the future or a waiver of any subsequent default or a waiver of any other provision, condition or requirement hereof, nor shall any delay or omission of any Party to exercise any right hereunder in any manner impair the exercise of any such right.

7.5 Headings. The headings herein are for convenience only, do not constitute a part of this Agreement and shall not be deemed to limit or affect any of the provisions hereof.

7.6 Successors and Assigns. This Agreement shall be binding upon and inure to the benefit of the Parties and their successors and permitted assigns. The Company may not assign this Agreement or any rights or obligations hereunder without the prior written consent of each Purchaser (other than by merger). Any Purchaser may assign any or all of its rights under this Agreement to any Person, provided however, that any such assignment or transfer shall not relieve such Purchaser of its respective obligations hereunder.

7.7 No Third-Party Beneficiaries. This Agreement is intended for the benefit of the Parties and their respective successors and permitted assigns and is not for the benefit of, nor may any provision hereof be enforced by, any other Person other than the Benz Entity.

7.8 Governing Law. All questions concerning the construction, validity, enforcement and interpretation of the Transaction Documents shall be governed by and construed and enforced in accordance with the internal laws of the State of Delaware, without regard to the principles of conflicts of law thereof. Each Party agrees that all legal proceedings concerning the interpretations, enforcement and defense of the transactions contemplated by the Transaction Documents (whether brought against a Party hereto or its respective affiliates, directors, officers, shareholders, partners, members, employees or agents) shall be commenced exclusively in the United States Federal Court for the District of Delaware. Each Party hereby irrevocably submits to the exclusive jurisdiction of the United States Federal Court for the District of Delaware for the adjudication of any dispute hereunder or in connection herewith or with any transaction contemplated hereby or discussed herein (including with respect to the enforcement of any of the Transaction Documents), and hereby irrevocably waives, and agrees not to assert in any Action or Proceeding, any claim that it is not personally subject to the jurisdiction of any such court, that such Action or Proceeding is improper or is an inconvenient venue for such proceeding. Each Party hereby irrevocably waives personal service of process and consents to process being served in any such Action or proceeding by mailing a copy thereof via registered or certified mail or overnight delivery (with evidence of delivery) to such Party at the address in effect for notices to it under this Agreement and agrees that such service shall constitute good and sufficient service of process and notice thereof. Nothing contained herein shall be deemed to limit in any way any right to serve process in any other manner permitted by law. If any Party shall commence an Action or Proceeding to enforce any provisions of the Transaction Documents, then, the prevailing Party in such Action or Proceeding shall be reimbursed by the other Party for its reasonable attorneys' fees and other costs and expenses incurred with the investigation, preparation and prosecution of such Action or Proceeding.

7.9 Execution. This Agreement may be executed in two or more counterparts, all of which when taken together shall be considered one and the same agreement and shall become effective when counterparts have been signed by each Party and delivered to each other Party, it being understood that the Parties need not sign the same counterpart. In the event that any signature is delivered by facsimile transmission or by e-mail delivery of a ".pdf" format data file, such signature shall create a valid and binding obligation of the Party executing (or on whose behalf such signature is executed) with the same force and effect as if such facsimile or ".pdf" signature page were an original thereof.

7.10 Severability. If any term, provision, covenant or restriction of this Agreement is held by a court of competent jurisdiction to be invalid, illegal, void or unenforceable, the remainder of the terms, provisions, covenants and restrictions set forth herein shall remain in full force and effect and shall in no way be affected, impaired or invalidated, and the Parties shall use their commercially reasonable efforts to find and employ an alternative means to achieve the same or substantially the same result as that contemplated by such term, provision, covenant or restriction. It is hereby stipulated and declared to be the intention of the Parties that they would have executed the remaining terms, provisions, covenants and restrictions without including any of such that may be hereafter declared invalid, illegal, void or unenforceable.

7.11 Replacement of Securities. If any certificate or instrument evidencing any Securities is mutilated, lost, stolen or destroyed, the Company shall issue or cause to be issued in exchange and substitution for and upon cancellation thereof (in the case of mutilation), or in lieu of and substitution therefor, a new certificate or instrument, but only upon receipt of evidence reasonably satisfactory to the Company of such loss, theft or destruction. The applicant for a new certificate or instrument under such circumstances shall also pay any reasonable third-party costs (including customary indemnity) associated with the issuance of such replacement Securities.

7.12 Remedies. In addition to being entitled to exercise all rights provided herein or granted by law, including recovery of damages, each of the Purchasers and the Company will be entitled to specific performance under the Transaction Documents. The Parties agree that monetary damages may not be adequate compensation for any loss incurred by reason of any breach of obligations contained in the Transaction Documents and hereby agree to waive and not to assert in any Action for specific performance of any such obligation the defense that a remedy at law would be adequate.

7.13 Independent Nature of Purchasers' Obligations and Rights. The obligations of each Purchaser under any Transaction Document are several and not joint with the obligations of any other Purchaser, and no Purchaser shall be responsible in any way for the performance or non-performance of the obligations of any other Purchaser under any Transaction Document. Nothing contained herein or in any other Transaction Document, and no action taken by any Purchaser pursuant hereto or thereto, shall be deemed to constitute the Purchasers as a partnership, an association, a joint venture or any other kind of entity, or create a presumption that the Purchasers are in any way acting in concert or as a group with respect to such obligations or the transactions contemplated by the Transaction Documents. Each Purchaser shall be entitled to independently protect and enforce its rights including, without limitation, the rights arising out of this Agreement or out of the other Transaction Documents, and it shall not be necessary for any other Purchaser to be joined as an additional party in any proceeding for such purpose. Each Purchaser has been represented by its own separate legal counsel in its review and negotiation of the Transaction Documents. It is expressly understood and agreed that each provision contained in this Agreement and in each other Transaction Document is between the Company and a Purchaser, solely, and not between the Company and the Purchasers collectively and not between and among the Purchasers.

7.14 Saturdays, Sundays, Holidays, etc. If the last or appointed day for the taking of any action or the expiration of any right required or granted herein shall not be a Business Day, then such action may be taken or such right may be exercised on the next succeeding Business Day.

7.15 Construction. The Parties agree that each of them and/or their respective counsel have reviewed and had an opportunity to revise the Transaction Documents and, therefore, the normal rule of construction to the effect that any ambiguities are to be resolved against the drafting party shall not be employed in the interpretation of the Transaction Documents or any amendments thereto. In addition, each and every reference to share prices and shares of New Common Stock in any Transaction Document shall be subject to adjustment for reverse and forward stock splits, stock dividends, stock combinations and other similar transactions of the New Common Stock that occur after the date of this Agreement.

7.16 **WAIVER OF JURY TRIAL. IN ANY ACTION, SUIT, OR PROCEEDING IN ANY JURISDICTION BROUGHT BY ANY PARTY AGAINST ANY OTHER PARTY, EACH OF THE PARTIES KNOWINGLY AND INTENTIONALLY, TO THE GREATEST EXTENT PERMITTED BY APPLICABLE LAW, HEREBY ABSOLUTELY, UNCONDITIONALLY, IRREVOCABLY AND EXPRESSLY WAIVES FOREVER TRIAL BY JURY.**

(Signature Pages Follow)

IN WITNESS WHEREOF, the Parties have caused this Securities Purchase and Loan Satisfaction Agreement to be duly executed by their respective authorized signatories as of the date first indicated above.

COMPANY:

HUMANIGEN, INC.

By: /s/ Dr. Cameron Durrant
Name: Dr. Cameron Durrant
Title: Chief Executive Officer

Address for Notice:

1000 Marina Blvd #250
Brisbane, CA 940005-1878
Attn: Dr. Cameron Durrant
E-mail: cdurrant@humanigen.com

with a copy (which copy shall not constitute notice to the Company) to:

Polsinelli PC
1401 Eye Street, NW
Suite 800
Washington, DC 20005
Attention: Kevin L. Vold
Telephone: 202-626-8357
Email: kvold@polsinelli.com

[REMAINDER OF PAGE INTENTIONALLY LEFT BLANK
SIGNATURE PAGE FOR PURCHASERS FOLLOWS]

PURCHASER SIGNATURE PAGES TO SECURITIES PURCHASE AND LOAN SATISFACTION AGREEMENT

IN WITNESS WHEREOF, the undersigned have caused this Securities Purchase and Loan Satisfaction Agreement to be duly executed by their respective authorized signatories as of the date first indicated above.

Name of Purchaser: NOMIS BAY LTD

Signature of Authorized Signatory of Purchaser: /s/ Peter Poole
Name of Authorized Signatory: Peter Poole
Title of Authorized Signatory: Director
Email Address of Authorized Signatory:

Address for Notice to Purchaser:

Wessex House, 3rd Floor
45 Reid Street
Hamilton HM12
Bermuda

with a copy (which copy shall not constitute notice to the Purchaser) to:

Hahn & Hessen LLP
488 Madison Avenue
New York, New York 10022
Attention: Gilbert Backenroth, Esq. and Don D. Grubman, Esq.
Don D. Grubman Esq.
Telephone: 212-478-7200
Email: gbackenroth@hahnhessen.com
Email: dgrubman@hahnhessen.com

[SIGNATURE PAGES CONTINUE]

PURCHASER SIGNATURE PAGES TO SECURITIES PURCHASE AND LOAN SATISFACTION AGREEMENT

IN WITNESS WHEREOF, the undersigned have caused this Securities Purchase and Loan Satisfaction Agreement to be duly executed by their respective authorized signatories as of the date first indicated above.

Name of Purchaser: CHEVAL HOLDINGS, LTD

Signature of Authorized Signatory of Purchaser: /s/ Dale Chappell
Name of Authorized Signatory: Dale Chappell
Title of Authorized Signatory: Director
Email Address of Authorized Signatory: dchappell@chevalholdingsltd.com
Facsimile Number of Authorized Signatory: (646) 786-4044

Address for Notice to Purchaser:

Cheval Holdings, Ltd
P.O. Box 309G, Ugland House
Georgetown, Grand Cayman
Cayman Islands, KY1-1104
Attn: Dale Chappell

with a copy (which copy shall not constitute notice to the Purchasers) to:

Quarles & Brady LLP
300 North LaSalle Street
Suite 4000
Chicago, IL 60654
Attn: Faye Feinstein, Esq.
Facsimile: (312) 623-1723
E-mail: faye.feinstein@quarles.com

[SIGNATURE PAGES CONTINUE]

PURCHASER SIGNATURE PAGES TO SECURITIES PURCHASE AND LOAN SATISFACTION AGREEMENT

IN WITNESS WHEREOF, the undersigned have caused this Securities Purchase and Loan Satisfaction Agreement to be duly executed by their respective authorized signatories as of the date first indicated above.

Name of Purchaser: BLACK HORSE CAPITAL MASTER FUND LTD.

Signature of Authorized Signatory of Purchaser: /s/ Dale Chappell
Name of Authorized Signatory: Dale Chappell
Title of Authorized Signatory: Director
Email Address of Authorized Signatory: dchappell@blackhorsecap.com
Facsimile Number of Authorized Signatory: (646) 786-4044

Address for Notice to Purchaser:

Black Horse Capital Master Fund Ltd.
c/o Opus Equum, Inc.
P.O. Box 788
Dolores, CO 81323
Attn: Dale Chappell

with a copy (which copy shall not constitute notice to the Purchasers) to:

Quarles & Brady LLP
300 North LaSalle Street
Suite 4000
Chicago, IL 60654
Attn: Faye Feinstein, Esq.
Facsimile: (312) 623-1723
E-mail: faye.feinstein@quarles.com

PURCHASER SIGNATURE PAGES TO SECURITIES PURCHASE AND LOAN SATISFACTION AGREEMENT

IN WITNESS WHEREOF, the undersigned have caused this Securities Purchase and Loan Satisfaction Agreement to be duly executed by their respective authorized signatories as of the date first indicated above.

Name of Purchaser: BLACK HORSE CAPITAL LP

Signature of Authorized Signatory of Purchaser: /s/ Dale Chappell
Name of Authorized Signatory: Dale Chappell
Title of Authorized Signatory: Manager of the General Partnership
Email Address of Authorized Signatory: dchappell@blackhorsecap.com
Facsimile Number of Authorized Signatory: (646) 786-4044
Address for Notice to Purchaser:

Black Horse Capital LP
c/o Opus Equum, Inc.
P.O. Box 788
Dolores, CO 81323
Attn: Dale Chappell

with a copy (which copy shall not constitute notice to the Purchasers) to:

Quarles & Brady LLP
300 North LaSalle Street
Suite 4000
Chicago, IL 60654
Attn: Faye Feinstein, Esq.
Facsimile: (312) 623-1723
E-mail: faye.feinstein@quarles.com

Address for Delivery of Securities to Purchaser (if not same as address for notice):

Exhibit 10.36

FORBEARANCE AND LOAN MODIFICATION AGREEMENT

THIS FORBEARANCE AND LOAN MODIFICATION AGREEMENT (this "Agreement") is made and entered into as of December 21, 2017 (the "Effective Date"), by and among the following parties (each a "Party" and collectively the "Parties"):

HUMANIGEN, INC., a Delaware corporation, f/k/a KaloBios Pharmaceuticals, Inc., as borrower ("Borrower");

BLACK HORSE CAPITAL MASTER FUND LTD., as agent for Lenders, defined below (in such capacity, "Agent");

The following four (4) lenders (each a "Lender" and collectively "Lenders"):

BLACK HORSE CAPITAL MASTER FUND LTD. ("BHCMF");

BLACK HORSE CAPITAL LP ("BHC");

CHEVAL HOLDINGS, LTD. ("Cheval"); and

NOMIS BAY LTD. ("Nomis").

By this Agreement, the Parties confirm and agree as follows:

SECTION 1. RECITALS.

1.1 Borrower, Agent and Lenders are parties to that Credit and Security Agreement dated as of December 21, 2016 (the "Original Credit Agreement"), as amended by letter agreements dated March 21, 2017 (the "First Modification"), July 8, 2017 (the "Second Modification"), October 26, 2017, and November 16, 2017 (the Original Credit Agreement, as modified and amended by the foregoing modifications and amendments and as further modified and amended by this Agreement and as further modified and amended from time to time in writing, the "Credit Agreement"). Capitalized terms used herein, but not defined herein, shall have the meanings given to those terms in the Credit Agreement.

1.2 Pursuant to the terms of the Original Credit Agreement, Lenders provided to Borrower a loan in an amount of $3,315,217 (the "Original Term Loan"), as evidenced by the following notes (the "Original Term Loan Notes"):

(a) $663,043.00 note in favor of BHCMF dated December 21, 2016;

(b) $284,114.00 note in favor of BHC dated December 21, 2016;

(c) $710,451.00 note in favor of Cheval dated December 21, 2016; and

(d) $1,657,609.00 note in favor of Nomis dated December 21, 2016.

1.3 Pursuant to the terms of the First Amendment, Lenders provided to Borrower an additional loan in an amount of $5,978,260 (the "Additional Term Loan"), as evidenced by the following notes (the "Additional Term Loan Notes"):

(a) $1,195,652.00 note in favor of BHCMF dated March 21, 2016;

(b) $512,337.00 note in favor of BHC dated March 21, 2016;

(c) $1,281,141.00 note in favor of Cheval dated March 21, 2016; and

(d) $2,989,130.00 note in favor of Nomis dated March 21, 2016.

1.4 Pursuant to the terms of the Second Amendment, Lenders provided to Borrower an additional loan in a maximum amount of $5,434,783 (the "Grid Loan"), as evidenced by the following notes (the "Grid Loan Notes"):

(a) $654,380.05 note in favor of BHCMF dated July 11, 2017;

(b) $432,576.60 note in favor of BHCMF dated August 11, 2017;

(c) $280,401.85 note in favor of BHC dated July 11, 2017;

(d) $185,359.07 note in favor of BHC dated August 11, 2017;

(e) $701,168.22 note in favor of Cheval dated July 11, 2017;

(f) $463,505.83 note in favor of Cheval dated August 11, 2017;

(g) $1,635,950.12 note in favor of Nomis dated July 13, 2017; and

(h) $1,081,441.50 note in favor of Nomis dated August 15, 2017.

As of the Effective Date, the actual principal amount advanced pursuant to the Grid Loan is $5,434,783.24.

1.5 Borrower is in Default under the Financing Documents due to Borrower's failure to repay the Original Term Loan Notes, the Additional Term Loan Notes and the Grid Loan Notes in full at their Maturity Date, as extended to December 1, 2017 (the "Payment Default"). Borrower, Agent and Lenders also acknowledge that other Defaults or Events of Default presently may exist under the Financing Documents in addition to the Payment Default (the Payment Default and all such other Defaults and Events of Default that presently exist, collectively, the "Existing Defaults").

1.6 Borrower acknowledges that such Existing Defaults have not been cured, waived or excused by Agent or Lenders at any time or in any manner; and that there are no claims, demands, offsets or defenses at law or in equity that would defeat or diminish Agent's and each Lender's present and unconditional right to collect any of the Obligations, and to proceed to enforce the rights and remedies available to Agent and Lenders as provided in any of the Financing Documents or otherwise at law.

1.7 Borrower has requested that Agent and Lenders provide Borrower a period of forbearance that will enable Borrower, at or prior to the expiration of such forbearance period, to close certain transactions involving the purchase of additional securities, the assignment of certain assets and the satisfaction or cancellation of all of the Obligations, together with certain other Obligations (such transactions, collectively, the "Settlement Transaction") pursuant to that certain Securities Purchase Agreement and Loan Satisfaction Agreement dated of even date herewith by and among Borrower and the Lenders (the "Settlement Agreement").

1.8 In response to Borrower's request, and in reliance upon Borrower's representations made to Agent and Lenders in support thereof and the other terms and conditions of this Agreement, Agent and Lenders are willing to forbear during the Forbearance Period (as defined below) from the further exercise of their rights and remedies under the Financing Documents, upon and subject to the terms and conditions set forth herein, all as more particularly set forth and described in this Agreement. The "Forbearance Period" as used herein shall refer to that period beginning on the Effective Date and (unless terminated earlier pursuant to the terms of Section 2.1 below) terminating on the earliest of (i) the closing date for the Settlement Transaction, (ii) the termination of the Settlement Transaction in accordance with the terms of the Settlement Agreement and (iii) March 31, 2018.

1.9 Borrower also has requested additional loan advances from certain Lenders, consisting of (a) a $1,500,000.00 loan from Cheval (the "Bridge Loan"), and (b) a loan or loans from Nomis (the "Claims Advances Loan(s)").

1.10 Cheval is willing to provide the Bridge Loan and Nomis is willing to provide the Claims Advances Loans, subject to the express requirements of this Agreement, including without limitation the preferred priority in Collateral granted to the Bridge Loan and the Claims Advances Loans pursuant to the terms of this Agreement. Additionally, Cheval, Nomis and Borrower desire to have the Bridge Loan and the Claims Advances Loans treated as advances pursuant to the Term Loan. The other Lenders and Agent are willing to agree to the preferred priority in Collateral and treatment of the Bridge Loan and the Claims Advances Loans as advances pursuant to the Term Loan, subject to the express requirements of this Agreement.

SECTION 2. FORBEARANCE

2.1 So long as no Event of Default (other than the Existing Defaults) shall occur on or after the date hereof under any of Section 9.1(d), (e), (f), (h), (i), (j), (k), (l) or (n) of the Credit Agreement (any such occurrence, a "Forbearance Default"), and otherwise subject to and upon all the terms and conditions set forth herein, Agent and Lenders agree that during the Forbearance Period, except as otherwise set forth in Section 2.2, they shall refrain from exercising their default rights and remedies in connection with the Existing Defaults. Notwithstanding the preceding grant of forbearance with respect to the Existing Defaults, Borrower understands, acknowledges and agrees that: (i) neither Agent nor any Lender has waived the Existing Defaults; and (ii) the Term Loan is not hereby reinstated or extended and will remain in default throughout the Forbearance Period. For the avoidance of doubt, the Forbearance Period will expire automatically and without notice immediately upon the occurrence of any Forbearance Default.

2.2 The preceding grant of forbearance with respect to the Existing Defaults shall not apply to the right of Agent and Lenders to assess interest on the Term Loan and the Note at the Default Interest Rate. Borrower acknowledges that interest shall accrue at the Default Interest Rate on the Term Loan and the Note at all times after December 1, 2017 until the Term Loan is paid in full.

SECTION 3. MODIFICATION OF TERM LOAN AND CREDIT AGREEMENT

3.1 Modification of Term Loan. The Term Loan is hereby modified to include the additional loans provided for below, each of which shall be deemed to be part of the Term Loan and shall be subject to all of the terms and conditions of this Agreement and the Credit Agreement that are applicable to the Term Loan:

(a) Bridge Loan. Cheval, severally, and not jointly with the other Lenders, agrees to advance to Borrower the Bridge Loan in the principal amount of $1,500,000.00. The Bridge Loan shall be made in a single advance and shall be evidenced by a new promissory note in substantially the form attached hereto as Exhibit A (the "Bridge Note"). The Bridge Loan shall be one of the Obligations of Borrower under the Credit Agreement. Borrower acknowledges that the Bridge Note is issued under the Term Loan and, therefore, (i) shall be immediately due and payable, subject to the agreement of the Agent and Lenders to forbear during the Forbearance Period, and (ii) shall accrue interest at the Default Interest Rate at all times until paid in full.

(b) Claims Advances Loans. Nomis, severally, and not jointly with the other Lenders, agrees, on an uncommitted basis and in its sole discretion, to advance to Borrower from time to time Claims Advances Loans. The Claims Advances Loans may be advanced directly to the Borrower or to designees of the Borrower (including without limitation the Designated Lawyers (as defined below) or the Benz Entity (as defined below)) but shall in any case be Obligations of the Borrower under the Credit Agreement. Notwithstanding anything to the contrary contained in the Credit Agreement, including Section 4.7 thereof, proceeds of the Claims Advances Loans shall be used solely to investigate the Benz Claims (as defined below) or in furtherance or settlement discussions with Savant (as defined below) or in payment of the Designated Lawyers (as defined below). The Claims Advances Loans may consist of multiple advances (and such advances may be made to Borrower or to third parties at the direction of Borrower) and shall be evidenced by a new promissory note in substantially the form attached hereto as Exhibit B (the "Claims Advances Note"). Borrower acknowledges that the Claims Advances Note is issued under the Term Loan and, therefore, (i) shall be immediately due and payable, subject to the agreement of the Agent and Lenders to forbear during the Forbearance Period, and (ii) shall accrue interest at the Default Interest Rate at all times until paid in full.

3.2 Reserved.

3.3 Modification of Credit Agreement Definitions.

(a) The definition of "Note" in the Credit Agreement is hereby modified to include, severally and collectively, the Original Term Loan Notes, the Additional Term Loan Notes, the Grid Loan Notes, the Bridge Note and the Claims Advances Note.

(b) The definition of "Term Loan" in the Credit Agreement is hereby modified to refer to a term loan facility, allowing for the issuance of various loans under such facility, including, without limitation, the Original Term Loan, the Additional Term Loan, the Grid Loan, the Bridge Loan and the Claims Advances Loans, with each loan issued under such facility evidenced by one or more promissory notes, including, without limitation, the Original Term Loan Notes, the Additional Term Loan Notes, the Grid Loan Notes, the Bridge Note and the Claims Advances Note.

SECTION 4. AMENDMENT TO SPECIFIC PROVISIONS OF THE CREDIT AGREEMENT AND AGREEMENTS REGARDING COLLATERAL PRIORITY

4.1 Definitions. The Credit Agreement is hereby amended by amending and restating the following defined terms:

(a) "Acceleration Event" means the occurrence of an Event of Default in respect of which Agent, or Agent at the direction of Required Lenders, has declared all or any portion of the Obligations to be immediately due and payable pursuant to Section 9.2; Notwithstanding the foregoing, any Forbearance Default shall automatically be an Acceleration Event (without any election of Agent or Required Lenders) pursuant to which all Obligations shall be immediately due and payable.

(b) "Collateral" means all real and personal property of the Borrower and its estate of any kind or nature whatsoever, tangible or mixed, now existing or hereafter acquired or created, including, without limitation: (a) Accounts; (b) money of every kind; (c) Intellectual Property; (d) Chattel Paper; (e) Commercial Tort Claims; (f) Deposit Accounts; (g) Documents: (h) Electronic Chattel Paper; (i) Equipment; (j) Fixtures; (k) General Intangibles; (l) Goods; (m) Instruments; (n) Inventory; (o) Investment Property; (p) Letter-of-Credit Rights; (q) Payment Intangibles; (r) Promissory Notes; (s) Securities Entitlements; (t) Securities Accounts; (u) Software; (v) Supporting Obligations; (w) Tangible Chattel Paper; (x) all other personal property not otherwise described in clauses (a) through (w) above; and (y) all accessions to, substitutions and replacements for and Proceeds and products of the foregoing, together with all books and records, customer lists, credit files, computer files, programs, printouts and other computer materials and records related thereto and any General Intangibles at any time evidencing or relating to any of the foregoing and all collateral security and guarantees given by any Person with respect to any of the foregoing. Notwithstanding the foregoing, the term "Collateral" and the component definitions thereof shall not include and, this Agreement shall not, at any time, constitute a grant of security interest in the Capital Stock of any Foreign Subsidiary, other than sixty-five percent (65%) in total voting power of such Capital Stock and one hundred percent (100%) of non-voting Capital Stock. Without limiting the foregoing, the term "Collateral" expressly includes the following commercial tort claims: (i) the Chemo Claims and (ii) the Savant Litigation. Without limiting the foregoing, the parties acknowledge that the Collateral includes, without limitation, all of the Benz Collateral and Non-Benz Collateral. Terms used in the foregoing definition of Collateral that are not defined herein shall have the meanings given to those terms in the Uniform Commercial Code of the State of Delaware.

4.2 The Credit Agreement is hereby amended by adding the following defined terms in their correct alphabetical order:

(a) "Benz Claims" means all claims, causes of action, judgments and demands, arbitrations, regulatory proceedings, settlement negotiations or other dispute resolution mechanisms of whatever kind or description of the Borrower against third parties that arise out of or relate to the Benz Collateral (regardless of whether or not such claims, demands and causes of action have been asserted by the Borrower), in each case whether choate or inchoate, known or unknown, contingent or non-contingent, including without limitation, the Chemo Claims and Savant Litigation.

(b) "Benz Collateral" means the assets directly related to the Compound, the Product or the Business, including without limitation the Chemo Claims and the Savant Litigation and the other assets set forth on Exhibit B to the Benz Entity's Limited Liability Company Operating Agreement.

(c) "Benz Entity" means HN Joint Venture LLC.

(d) "Business" means the Borrower's business to the extent directly related to the Compound, the Product and the Benz Collateral.

(e) "Chemo Claims" means all claims, causes of action, judgments and demands, arbitrations, regulatory proceedings, settlement negotiations or other dispute resolution mechanisms of whatever kind or description, in each case whether choate or inchoate, known or unknown, contingent or noncontingent, against any, each and/or all of Savant, Chemo Group, Chemo Research S.L, Exeltis USA, Inc., Mundo Sano, Drugs for Neglected Diseases Initiative, Instituto de Efectividad Clinica y Sanitaria, Dr. Sergio Sosa-Estani and their respective affiliates or collaborators (including, without limitation, Benz Claims arising out of or related to potential misappropriation or misuse of the Borrower's trade secrets in connection with submissions to the FDA, the FDA issuance of market approval of the Compound or the FDA issuance of a Voucher).

(f) "Compound" means the compound known as benznidazole.

(g) "Designated Lawyers" means the lawyers designated by the Manager to act as counsel in connection with the Chemo Claims and/or Savant Litigation, which shall initially be Kaplan Rice LLP and Richards Layton & Finger, PA.

(h) "FDA" means the United States Food and Drug Administration.

(i) "Forbearance Default" shall have the meaning ascribed to such term in that certain Forbearance and Loan Modification Agreement, dated as of December 21, 2017, among the Borrower, the Agent and the Lenders.

(j) "MDC Agreement" means the Agreement for the Manufacture, Development and Commercialization of Benznidazole For Human Use entered into as of June 30, 2016, by and between Savant and the Borrower.

(k) "Non-Benz Collateral" means all Collateral, other than the Benz Collateral. Without limiting the foregoing, the parties acknowledge that the Non-Benz Collateral includes, without limitation, all assets relating to the monoclonal antibody platform including both lenzilumab, ifabotuzumab and their respective related patents and the intellectual property related to the Humaneered recombinant monoclonal antibody platform.

(l) "Product" means any pharmaceutical product that contains the Compound, either alone or in combination with other active ingredients.

(m) "Required Lenders" means Lenders holding greater than fifty percent (50%) of the outstanding principal amount of the Term Loan calculated without taking the Bridge Loan or the Claims Advances Loans into account (both as to holdings of a Lender and the outstanding principal amount of the Term Loan).

(n) "Savant" means Savant Neglected Diseases, LLC.

(o) "Savant Litigation" means the pending litigation that has been brought in connection with the MDC Agreement and any additional Benz Claims, causes of action that the Borrower may assert against Savant.

(p) "Voucher" means a priority review voucher issued by the FDA or otherwise under the authority of the United States Department of Health and Human Services to a Person as the sponsor of a neglected tropical disease product application.

4.3 Lien Subordination and Priority.

(a) Priority of Bridge Loan in Non-Benz Collateral. Each of Nomis, BHCMF, BHC and Cheval (with respect to all of its Term Loan interests other than the Bridge Loan) hereby agrees that all of its right, title and interest in and to the Non-Benz Collateral shall be and hereby are made subordinate, junior and inferior and postponed in priority, operation and effect to the right, title and interest of Cheval, solely with respect to, and to the extent of, the Bridge Loan, in and to the Non-Benz Collateral. Nomis, BHCMF, BHC and Cheval (with respect to all of its Term Loan interests other than the Bridge Loan) further agree that the liens in Cheval's favor in any Non-Benz Collateral shall at all times be prior to their liens in the Non-Benz Collateral, solely with respect to, and to the extent of, the Bridge Loan, without regard to the dates of any documents evidencing such liens or the dates of filing or recording of any financing statements or other lien instruments; provided, however, that, in the event that Nomis wishes to close the Settlement Transaction, but any of Cheval, BHCMF or BHC elects not to close the Settlement Transaction for any reason other than (i) the appointment of a Chapter 11 Trustee for the Borrower, (ii) the filing of a motion to appoint a Chapter 11 Trustee for the Borrower, (iii) the conversion of the Borrower's pending bankruptcy case to a Chapter 7 case, (iv) the filing of a motion to convert the Borrower's pending bankruptcy case to a Chapter 7 case, (v) the filing of any additional of subsequent bankruptcy proceedings, or (vi) the pursuit of an action under state law for the appointment of receiver, assignee for the benefit of creditors or a dissolution or reorganization, then the priorities set forth in this Section 4.3(a) shall be disregarded and each of Nomis, BHCMF, BHC and Cheval shall be *pari passu* in right of payment with respect to the Non-Benz Collateral..

(b) Priority of Claims Advances Loans in Benz Collateral. Each of Nomis (with respect to all of its Term Loan interests other than the Claims Advances Loans), BHCMF, BHC and Cheval hereby agree that all of its right, title and interest in and to the Benz Collateral shall be and hereby are made subordinate, junior and inferior and postponed in priority, operation and effect to the right, title and interest of Nomis, solely with respect to, and to the extent of, the Claims Advances Loans, in and to the Benz Collateral. Nomis (with respect to all of its Term Loan interests other than the Claims Advances Loans), BHCMF, BHC and Cheval further agree that the liens in Nomis' favor in any Benz Collateral shall at all times be prior to their liens in the Benz Collateral, solely with respect to, and to the extent of, the Claims Advances Loans, without regard to the dates of any documents evidencing such liens or the dates of filing or recording of any financing statements or other lien instruments.

(c) Overlapping Collateral. Agent and Lenders acknowledge that certain portions of the Collateral may relate to or be used in connection with both the Benz Collateral and the Non-Benz Collateral (the "Overlapping Collateral"). With respect to the Overlapping Collateral, and regardless of whether any such Overlapping Collateral is deemed to be Benz Collateral or Non-Benz Collateral, Agent and Lenders agree to cooperate in good faith with one another to accommodate the rights of each Lender, in connection with said Lender's own Collateral, to preserve an interest in and to obtain the benefits of the Overlapping Collateral.

4.4 In all other respects, except as expressly set forth to the contrary in Section 4.3 above, the rights of Lenders shall be on a pari passu basis with respect to all of the loans and notes issued under the Term Loan and all of the Collateral.

4.5 Agent and Borrower acknowledge the priorities set forth above in Sections 4.3 and 4.4. Borrower agrees not to take any action with respect to the Collateral that is inconsistent with the priorities set forth above.

4.6 Section 9.6 of the Credit Agreement is hereby amended and restated in its entirety to provide as follows:

"**Section 9.6** Application of Proceeds.

(a) Notwithstanding anything to the contrary contained in this Agreement, upon the occurrence and during the continuance of an Event of Default, Borrower irrevocably waives the right to direct the application of any and all payments at any time or times thereafter received by Agent from or on behalf of Borrower of all or any part of the Obligations, and, as between Borrower, on the one hand, and Agent and Lenders, on the other hand, Agent shall have the continuing and exclusive right to apply and to reapply any and all payments received against the Obligations in such manner as Agent may deem advisable notwithstanding any previous application by Agent.

(b) Following the occurrence and during the continuance of an Event of Default, but absent the occurrence and continuance of an Acceleration Event, Agent shall apply any and all payments received by Agent in respect of the Obligations, and any and all proceeds of Collateral received by Agent, in such order as Agent may from time to time elect.

(c) Notwithstanding anything to the contrary contained in this Agreement, (i) if an Acceleration Event shall have occurred, and so long as it continues, or (ii) if any property is sold or disposed of as a part of or in connection with any disposition permitted under any Financing Document, Agent shall apply any and all payments received by Agent in respect of the Obligations, as follows: (1) any and all proceeds of Non-Benz Collateral received by Agent, in the following order: *first*, to all fees, costs, indemnities, liabilities, obligations and expenses incurred by or owing to Agent in its capacity as Agent with respect to enforcing its rights and the rights of Lenders in the Non-Benz Collateral; *second*, to all fees, costs, indemnities, liabilities, obligations and expenses incurred by or owing to Cheval with respect to the Bridge Loan; *third*, to accrued and unpaid interest on the Bridge Loan (including any interest which, but for the provisions of the Bankruptcy Code, would have accrued on such amounts); *fourth*, to the principal amount of the Bridge Loan outstanding; *fifth*, to all fees, costs, indemnities, liabilities, obligations and expenses incurred by or owing to any Lender with respect to this Agreement, the other Financing Documents or the Collateral (other than in respect of the Bridge Loan); *sixth*, to accrued and unpaid interest on the Obligations (including any interest which, but for the provisions of the Bankruptcy Code, would have accrued on such amounts, but other than in respect of the Bridge Loan); *seventh*, to the principal amount of the Obligations outstanding (other than in respect of the Bridge Loan); and *eighth*, to any other indebtedness or obligations of Borrower owing to Agent or any Lender under the Financing Documents; provided, however, that, in the event that Nomis wishes to close the Settlement Transaction but any of Cheval, BHCMF or BHC elects not to close the Settlement Transaction for any reason other than (i) the appointment of a Chapter 11 Trustee for the Borrower, (ii) the filing of a motion to appoint a Chapter 11 Trustee for the Borrower, (iii) the conversion of the Borrower's pending bankruptcy case to a Chapter 7 case, (iv) the filing of a motion to convert the Borrower's pending bankruptcy case to a Chapter 7 case, (v) the filing of any additional of subsequent bankruptcy proceedings, or (vi) the pursuit of an action under state law for the appointment of receiver, assignee for the benefit of creditors or a dissolution or reorganization, then any and all proceeds of Non-Benz Collateral received by Agent shall be distributed in the following order: *first*, to all fees, costs, indemnities, liabilities, obligations and expenses incurred by or owing to Agent in its capacity as Agent with respect to enforcing its rights and the rights of Lenders in the Non-Benz Collateral; *second*, to all fees, costs, indemnities, liabilities, obligations and expenses incurred by or owing to any Lender with respect to this Agreement, the other Financing Documents or the Collateral; *third*, to accrued and unpaid interest on the Obligations (including any interest which, but for the provisions of the Bankruptcy Code, would have accrued on such amounts); *fourth*, to the principal amount of the Obligations outstanding; and *fifth*, to any other indebtedness or obligations of Borrower owing to Agent or any Lender under the Financing Documents; and (2) any and all proceeds of Benz Collateral received by Agent, in the following order: *first*, to all fees, costs, indemnities, liabilities, obligations and expenses incurred by or owing to Agent in its capacity as Agent with respect to enforcing its rights and the rights of Lenders in the Benz Collateral; *second*, to all fees, costs, indemnities, liabilities, obligations and expenses incurred by or owing to Nomis with respect to the Claims Advances Loans; *third*, to accrued and unpaid interest on the Claims Advances Loans (including any interest which, but for the provisions of the Bankruptcy Code, would have accrued on such amounts); *fourth*, to the principal amount of the outstanding Claims Advances Loans; *fifth*, to all fees, costs, indemnities, liabilities, obligations and expenses incurred by or owing to any Lender with respect to this Agreement, the other Financing Documents or the Collateral (other than in respect of the Claims Advances Loans); *sixth*, to accrued and unpaid interest on the Obligations (including any interest which, but for the provisions of the Bankruptcy Code, would have accrued on such amounts, but other than in respect of the Claims Advances Loans); *seventh*, to the principal amount of the Obligations outstanding (other than in respect of the Claims Advances Loans); and *eighth*, to any other indebtedness or obligations of Borrower owing to Agent or any Lender under the Financing Documents. Any balance remaining shall be delivered to Borrower or to whoever may be lawfully entitled to receive such balance or as a court of competent jurisdiction may direct. In carrying out the foregoing, (y) amounts received shall be applied in the numerical order provided until exhausted prior to the application to the next succeeding category, and (z) each of the Persons entitled to receive a payment in any particular category shall receive an amount equal to its Pro Rata Share of amounts available to be applied pursuant thereto for such category."

4.7 Section 10.9 of the Credit Agreement is hereby amended and restated in its entirety to provide as follows:

"Section 10.9 Collateral Matters. Lenders irrevocably authorize Agent, at its option and in its discretion, to release any Lien granted to or held by Agent under this Agreement or any Security Document (i) upon the payment in full of all Obligations or (ii) constituting property sold or disposed of as part of or in connection with any disposition permitted under the Settlement Agreement (it being understood and agreed that Agent may conclusively rely without further inquiry on a certificate of a Responsible Officer as to the sale or other disposition of property being made in full compliance with the provisions of the Settlement Agreement). Upon request by Agent at any time, Lenders will confirm Agent's authority to release particular types or items of Collateral pursuant to this Section 10.9."

SECTION 5. OTHER MODIFICATIONS, RATIFICATIONS AND AGREEMENTS.

5.1 This Agreement constitutes one of the Financing Documents. All references in the Financing Documents to any terms or provisions of the Credit Agreement, the Financing Documents or the Obligations modified by this Agreement are hereby modified to refer to those terms and provisions as modified by this Agreement. All references in each Financing Document to any other Financing Documents are hereby modified to refer to such Financing Documents as modified by this Agreement.

5.2 Borrower acknowledges that the indebtedness evidenced by the Note is just and owing, that the balance thereof is correctly shown in the records of Agent and each Lender as of the date hereof, and Borrower agrees to pay the indebtedness evidenced by the Note and the indebtedness secured by the Financing Documents, according to the terms thereof, subject only to the express agreements regarding forbearance provided for herein.

5.3 Borrower hereby reaffirms to Agent and each Lender each of the representations, warranties, covenants and agreements of Borrower set forth in the Note, the Credit Agreement and all other Financing Documents, with the same force and effect as if each were separately stated herein and made as of the date hereof.

5.4 Borrower hereby ratifies, reaffirms, acknowledges, and agrees that the Note, the Credit Agreement and the other Financing Documents represent valid, enforceable and collectible obligations of Borrower, and that there are no existing claims, defenses, personal or otherwise, or rights of setoff whatsoever with respect to any of these documents or instruments.

5.5 Borrower hereby expressly waives, releases and absolutely and forever discharges Agent and each Lender and, with respect to each of the foregoing, its present and former shareholders, directors, officers, members, managers, employees and agents, and their separate and respective heirs, personal representatives, successors and assigns, from any and all liabilities, claims, demands, damages, action and causes of action, whether known or unknown and whether contingent or matured, that Borrower may now have, or has had prior to the date hereof, or that may hereafter arise with respect to acts, omissions or events occurring prior to the date hereof and, without limiting the generality of the foregoing, from any and all liabilities, claims, demands, damages, actions and causes of action, known or unknown, contingent or matured, arising out of, or in any way connected with, the Obligations and the Financing Documents.

5.6 All terms, conditions and provisions of the Note, the Credit Agreement and the other Financing Documents are continued in full force and effect and shall remain unaffected and unchanged, except as otherwise expressly provided in this Agreement.

5.7 This Agreement in no way acts as a release or relinquishment of those liens, security interests and rights securing payment of the Obligations. Such liens, security interests and rights are hereby ratified, confirmed, renewed and extended by Borrower in all respects.

5.8 The agreements contained herein shall not be binding upon Agent or any Lender until this Agreement has been fully executed by all parties.

SECTION 6. GENERAL.

6.1 Borrower shall execute and deliver such additional documents and do such other acts as Lender may reasonably require to fully implement the intent of this Agreement.

6.2 Borrower hereby authorizes Agent to file, and Agent hereby agrees to file, appropriate UCC financing statement amendments in the appropriate jurisdictions relating to the Liens granted to Agent and Lenders under the Credit Agreement, which describe with sufficient specificity the Chemo Claims and Savant Litigation commercial tort claims.

6.3 Each Party shall pay all of its own costs and expenses, including, but not limited to, reasonable attorneys' fees incurred in connection with the preparation and negotiation of this Agreement.

6.4 No express or implied consent to any further modifications involving any of the matters set forth in this Agreement or to any modifications of the Financing Documents shall be inferred or implied by Agent or any Lender's execution of this Agreement. Further, Agent and Lenders' execution of this Agreement shall not constitute a waiver (either express or implied) of the requirement that any further modification of this Agreement, the Note, the Credit Agreement or any other Financing Documents shall require the express written approval of Lender; no such approval (either express or implied) has been given as of the date hereof.

6.5 Notwithstanding this or any prior forbearance, actual or implied, of any nature by Agent or any Lender, including but not limited to any acceptance of late payments, time is hereby declared to be of the essence hereof, and (except as expressly provided otherwise in this Agreement) of the Obligations, the Note, the Credit Agreement and all of the other Financing Documents. Each of Agent and Lenders require, and Borrower agrees to, strict performance of each and every covenant, condition, provision and agreement hereof, and (except as expressly provided otherwise in this Agreement) of the Obligations, the Note, the Credit Agreement and all of the other Financing Documents.

6.6 This Agreement shall be binding upon, and shall inure to the benefit of, the parties hereto and their heirs, personal representatives, successors and assigns.

6.7 This Agreement is made for the sole protection and benefit of the parties hereto, and no other person or entity shall have any right of action hereon.

6.8 This Agreement shall be governed by and construed according to the laws of the State of Delaware.

6.9 This Agreement may be executed in any number of counterparts. All counterparts are deemed to constitute one and the same instrument, and each counterpart is deemed to be an original of this Agreement. Delivery by any Party of an email or facsimile signature shall constitute effective delivery by said Party of a binding original signature to this Agreement.

[Signatures appear on following page.]

DATED as of the Effective Date indicated above.

BORROWER:

HUMANIGEN, INC., a Delaware corporation, f/k/a KaloBios Pharmaceuticals, Inc.

By: /s/ Dr. Cameron Durrant
Name: Dr. Cameron Durrant
Title: Chairman and Chief Executive Officer

ADMINISTRATIVEAGENT AND LENDER:

BLACK HORSE CAPITAL MASTER FUND LTD.

By: /s/ Dale Chappell
Name: Dale Chappell
Title: Director

LENDER:

BLACK HORSE CAPITAL LP

By: Black Horse Capital Management LLC, a Delaware limited liability company, its Managing General Manager

By: /s/ Dale Chappell
Name: Dale Chappell
Title: Manager

LENDER:

CHEVAL HOLDINGS, LTD.

By: /s/ Dale Chappell
Name: Dale Chappell
Title: Director

LENDER: NOMIS BAY LTD

By: /s/ Peter Poole
Name: Peter Poole
Title: Director

EXHIBIT A

(Form of Bridge Note)

Bridge Loan Note

$1,500,000.00 December __, 2017

FOR VALUE RECEIVED, HUMANIGEN, INC., a Delaware corporation, f/k/a KaloBios Pharmaceuticals, Inc. ("**Borrower**"), hereby unconditionally promises to pay to the order of **CHEVAL HOLDINGS, LTD.**, a _____ (together with its successors and assigns, "**Lender**") at the office of Lender at _____, or at such other place as Lender may from time to time designate in writing to Borrower, in lawful money of the United States of America and in immediately available funds, the principal sum of One Million Five Hundred Thousand and No/100 Dollars ($1,500,000.00), which amount is advanced by Lender to Borrower pursuant to the terms of that certain Credit and Security Agreement, dated as of December 21, 2016 (as amended, restated, supplemented or otherwise modified from time to time, the "**Credit Agreement**"), by and among Borrower, Lender, various other lenders as are, or may from time to time become, parties thereto as "**Lenders**" (including without limitation, Lender) and Black Horse Capital Master Fund Ltd., individually as a Lender, and as administrative agent (in such capacity and together with its successors and assigns, "**Agent**"). All capitalized terms used but not specifically defined in this Bridge Loan Note (this "**Note**") shall have the respective meanings ascribed to such terms in the Credit Agreement.

1. The outstanding principal balance of this Note shall be due and payable in full on the Maturity Date in accordance with the terms of the Credit Agreement.

2. This Note is issued in accordance with the provisions of the Credit Agreement and is entitled to the benefits and security of the Credit Agreement and the other Financing Documents, and reference is hereby made to the Credit Agreement for a statement of the terms and conditions under which the Bridge Loan evidenced hereby was made and is required to be repaid. In the event of any conflict between the terms and this Note and the terms of the Credit Agreement, the terms of the Credit Agreement shall prevail.

3. Borrower promises to pay interest from the date hereof until payment in full hereof on the unpaid principal balance of the Bridge Loan evidenced hereby at the per annum rate or rates set forth in the Credit Agreement. Interest on the unpaid principal balance of the Bridge Loan evidenced hereby shall be payable on the dates and in the manner set forth in the Credit Agreement. Interest as aforesaid shall be calculated in accordance with the terms of the Credit Agreement.

4. Upon and after the occurrence and during the continuation of an Event of Default, and as provided in the Credit Agreement, the Bridge Loan evidenced by this Note may be declared, and shall thereupon immediately become, due and payable without presentment, demand, protest, notice, or legal process of any kind whatsoever.

5. Payments received in respect of the Bridge Loan shall be applied as provided in the Credit Agreement.

6. Presentment, demand, protest and notice of presentment, demand, nonpayment and protest are each hereby waived by Borrower as provided in the Credit Agreement.

7. No waiver by Agent or any Lender of any one or more defaults by the undersigned in the performance of any of its obligations under this Note shall operate or be construed as a waiver of any future default or defaults, whether of a like or different nature, or as a waiver of any obligation of Borrower to any other Lender under the Credit Agreement.

8. No provision of this Note may be amended, waived or otherwise modified unless such amendment, waiver or other modification is in writing and is signed or otherwise approved by Borrower, the Required Lenders and any other Lender under the Credit Agreement to the extent required under Section 10.15 of the Credit Agreement. No failure or delay on the part of any Lender in exercising any right, power, or remedy under this Note (including, without limitation, the right to declare this Note due and payable) shall operate as a waiver of such right, power, or remedy.

9. **THIS NOTE SHALL BE GOVERNED BY, AND SHALL BE CONSTRUED AND ENFORCED IN ACCORDANCE WITH THE LAWS OF THE STATE OF DELAWARE WITHOUT REGARD TO CONFLICTS OF LAW PRINCIPLES.**

10. Whenever possible each provision of this Note shall be interpreted in such manner as to be effective and valid under applicable law, but in case any provision of or obligation under this Note shall be invalid, illegal or unenforceable in any jurisdiction, the validity, legality and enforceability of the remaining provisions or obligations, or of such provision or obligation in any other jurisdiction, shall not in any way be affected or impaired thereby.

11. Whenever in this Note reference is made to Agent, Lenders or Borrower, such reference shall be deemed to include, as applicable, a reference to their respective successors and assigns. The provisions of this Note shall be binding upon Borrower and its successors and assigns *except that* Borrower may not assign any of its rights or delegate any of its obligations under this Note without the prior written consent of Lenders. This Note shall inure to the benefit of Lender and its successors and assigns.

12. In addition to and without limitation of any of the foregoing, this Note shall be deemed to be a Financing Document and shall otherwise be subject to all of the general terms and conditions contained in Article 11 of the Credit Agreement, *mutatis mutandis*.

[SIGNATURE APPEARS ON FOLLOWING PAGE(S)]

IN WITNESS WHEREOF, INTENDING TO BE LEGALLY BOUND, AND INTENDING THAT THIS Note constitutes an agreement executed under seal, the undersigned has executed this Note under seal as of the day and year first hereinabove set forth.

BORROWER:

HUMANIGEN, INC., a Delaware corporation,
f/k/a KaloBios Pharmaceuticals, Inc.

By: _____
Name: Dr. Cameron Durrant
Title: Chairman and Chief Executive Officer

Address for Borrower:

1000 Marina Blvd #250
Brisbane, CA 94005-1878
Attn: Dr. Cameron Durrant
E-Mail: cdurrant@humanigen.com

EXHIBIT B

(Form of Claims Advances Note)

Claims Advances Note

$[_____] December __, 2017

FOR VALUE RECEIVED, HUMANIGEN, INC., a Delaware corporation, f/k/a KaloBios Pharmaceuticals, Inc. ("**Borrower**"), hereby unconditionally promises to pay to the order of **NOMIS BAY LTD.**, a Bermuda company (together with its successors and assigns, "**Lender**") at the office of Lender at Penboss Building, 50 Parliament Street, Hamilton HM12 Bermuda, or at such other place as Lender may from time to time designate in writing to Borrower, in lawful money of the United States of America and in immediately available funds, the aggregate unpaid principal amount of the portion of the Claims Advances made by Lender to Borrower from time to time as set forth on Exhibit A to this Claims Advances Note (this "**Note**") in accordance with the terms of that certain Credit and Security Agreement, dated as of December 21, 2016 (as amended, restated, supplemented or otherwise modified from time to time, the "**Credit Agreement**"), by and among Borrower, Lender, various other lenders as are, or may from time to time become, parties thereto as "**Lenders**" (including without limitation, Lender) and Black Horse Capital Master Fund Ltd., individually as a Lender, and as administrative agent (in such capacity and together with its successors and assigns, "**Agent**").

All capitalized terms used but not specifically defined in this Note shall have the respective meanings ascribed to them in the Credit Agreement.

1. The outstanding principal balance of the Claims Advances evidenced by this Note shall be due and payable or otherwise satisfied in full on the Termination Date or the Maturity Date in accordance with the terms of the Credit Agreement.

2. This Note is issued in accordance with the provisions of the Credit Agreement and is entitled to the benefits and security of the Credit Agreement and the other Financing Documents, and reference is hereby made to the Credit Agreement for a statement of the terms and conditions under which the Claims Advances evidenced hereby were made and are required to be repaid. In the event of any conflict between the terms and this Note and the terms of the Credit Agreement, the terms of the Credit Agreement shall prevail.

3. Borrower promises to pay interest from the date of each Claims Advance made pursuant to this Note until payment in full hereof on the unpaid principal balance of each such Claims Advance evidenced hereby at the per annum rate or rates set forth in the Credit Agreement. Interest on the unpaid principal balance of each Claims Advance evidenced hereby shall be payable on the dates and in the manner set forth in the Credit Agreement. Interest as aforesaid shall be calculated in accordance with the terms of the Credit Agreement.

4. Upon and after the occurrence and during the continuation of an Event of Default, and as provided in the Credit Agreement, all outstanding Claims Advances evidenced by this Note may be declared, and shall thereupon immediately become, due and payable without presentment, demand, protest, notice, or legal process of any kind whatsoever.

5. Payments received in respect of the Claims Advances shall be applied as provided in the Credit Agreement.

6. Presentment, demand, protest and notice of presentment, demand, nonpayment and protest are each hereby waived by Borrower as provided in the Credit Agreement.

7. No waiver by Agent or any Lender of any one or more defaults by the undersigned in the performance of any of its obligations under this Note shall operate or be construed as a waiver of any future default or defaults, whether of a like or different nature, or as a waiver of any obligation of Borrower to any other Lender under the Credit Agreement.

8. No provision of this Note may be amended, waived or otherwise modified unless such amendment, waiver or other modification is in writing and is signed or otherwise approved by Borrower, the Required Lenders and any other Lender under the Credit Agreement to the extent required under Section 10.15 of the Credit Agreement. No failure or delay on the part of any Lender in exercising any right, power, or remedy under this Note (including, without limitation, the right to declare this Note due and payable) shall operate as a waiver of such right, power, or remedy.

9. **THIS NOTE SHALL BE GOVERNED BY, AND SHALL BE CONSTRUED AND ENFORCED IN ACCORDANCE WITH THE LAWS OF THE STATE OF DELAWARE WITHOUT REGARD TO CONFLICTS OF LAW PRINCIPLES.**

10. Whenever possible each provision of this Note shall be interpreted in such manner as to be effective and valid under applicable law, but in case any provision of or obligation under this Note shall be invalid, illegal or unenforceable in any jurisdiction, the validity, legality and enforceability of the remaining provisions or obligations, or of such provision or obligation in any other jurisdiction, shall not in any way be affected or impaired thereby.

11. Whenever in this Note reference is made to Agent, Lenders or Borrower, such reference shall be deemed to include, as applicable, a reference to their respective successors and assigns. The provisions of this Note shall be binding upon Borrower and its successors and assigns *except that* Borrower may not assign any of its rights or delegate any of its obligations under this Note without the prior written consent of Lenders. This Note shall inure to the benefit of Lender and its successors and assigns.

12. In addition to and without limitation of any of the foregoing, this Note shall be deemed to be a Financing Document and shall otherwise be subject to all of the general terms and conditions contained in Article 11 of the Credit Agreement, *mutatis mutandis*.

[SIGNATURE APPEARS ON FOLLOWING PAGE(S)]

IN WITNESS WHEREOF, INTENDING TO BE LEGALLY BOUND, AND INTENDING THAT THIS Note constitutes an agreement executed under seal, the undersigned has executed this Note under seal as of the day and year first hereinabove set forth.

BORROWER:

HUMANIGEN, INC., a Delaware corporation,
f/k/a KaloBios Pharmaceuticals, Inc.

By: _____
Name: Dr. Cameron Durrant
Title: Chairman and Chief Executive Officer

Address for Borrower:

1000 Marina Blvd #250
Brisbane, CA 94005-1878
Attn: Dr. Cameron Durrant
E-Mail: cdurrant@humanigen.com

EXHIBIT A

Claims Advances under Claims Advances Note

Date of Claims Advance	Principal Amount of Claims Advance

EXHIBIT 21.1

Subsidiaries of Humanigen, Inc.

Name	State/Country of Incorporation/Formation	Status
KaloBios, Ltd.	United Kingdom	Inactive
Celscia Therapeutics, Inc.	Delaware	Inactive

EXHIBIT 23.1

Consent of Independent Registered Public Accounting Firm

We consent to the incorporation by reference in the Registration Statement (Nos. 333-183725, 333-194597, 333-202934, 333-206321, and 333-216799) on Form S-8 of Humanigen, Inc. of our report dated March 27, 2018, relating to the consolidated financial statements of Humanigen Inc., appearing in this Annual Report on Form 10-K of Humanigen, Inc. for the year ended December 31, 2017.

/s/ HORNE LLP

Ridgeland, Mississippi
March 27, 2018

EXHIBIT 31.1

CERTIFICATION PURSUANT TO
SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

CERTIFICATIONS

I, Cameron Durrant, certify that:

1. I have reviewed this Annual Report on Form 10-K of Humanigen, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(s) 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(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: March 23, 2018

/s/ Cameron Durrant
Cameron Durrant, Chief Executive Officer (Principal Executive Officer)

EXHIBIT 31.2

CERTIFICATION PURSUANT TO
SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

CERTIFICATIONS

I, Greg Jester, certify that:

1. I have reviewed this Annual Report on Form 10-K of Humanigen, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(s) 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(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: March 23, 2018

/s/ Greg Jester
Greg Jester, Chief Financial Officer (Principal Financial and Accounting Officer)

EXHIBIT 32.1

CERTIFICATION OF
CHIEF EXECUTIVE OFFICER
PURSUANT TO 18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

I, Cameron Durrant, certify, to the best of my knowledge, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that the Annual Report of Humanigen, Inc. on Form 10-K for the year ended December 31, 2017 fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934 and that information contained in such Annual Report of Humanigen, Inc. on Form 10-K fairly presents in all material respects the financial condition and results of operations of Humanigen, Inc.

By: /s/ Cameron Durrant

Name: Cameron Durrant
Title: Chief Executive Officer (Principal Executive Officer)
Date: March 23, 2018

EXHIBIT 32.2

CERTIFICATION OF
CHIEF FINANCIAL OFFICER
PURSUANT TO 18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

I, Greg Jester, certify, to the best of my knowledge, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that the Annual Report of Humanigen, Inc. on Form 10-K for the year ended December 31, 2017 fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934 and that information contained in such Annual Report of Humanigen, Inc. on Form 10-K fairly presents in all material respects the financial condition and results of operations of Humanigen, Inc.

By: /s/ Greg Jester

Name: Greg Jester
Title: Chief Financial Officer (Principal Financial and Accounting Officer)
Date: March 23, 2018