
**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION**

Washington, D.C. 20549

Form 10-K

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

For the year ended December 31, 2019

OR

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

For the period from to

Commission file number 0-17999

ImmunoGen, Inc.

Massachusetts
(State or other jurisdiction
of incorporation or organization)

04-2726691
(I.R.S. Employer
Identification No.)

830 Winter Street, Waltham, MA 02451
(Address of principal executive offices, including zip code)

(781) 895-0600
(Registrant's telephone number, including area code)

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

Title of Each Class	Trading Symbol(s)	Name of Each Exchange on Which Registered
Common Stock, \$.01 par value	IMGN	NASDAQ Global Select Market

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities

Act. Yes No

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the

Act. Yes No

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

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§229.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes No

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

Large accelerated filer
Non-accelerated filer

Accelerated filer
Smaller reporting company
Emerging growth company

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

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange

Act). Yes No

Aggregate market value, based upon the closing sale price of the shares as reported by the NASDAQ Global Select Market, of common stock held by non-affiliates at June 30, 2019: \$320,866,306 (excludes shares held by executive officers and directors). Exclusion of shares held by any person should not be construed to indicate that such person possesses the power, direct or indirect, to direct or cause the direction of management or policies of the registrant, or that such person is controlled by or under common control with the registrant. Common stock outstanding at March 4, 2020: 174,320,937 shares.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the definitive Proxy Statement on Schedule 14A to be delivered to shareholders in connection with the Annual Meeting of Shareholders to be held on June 17, 2020 are incorporated by reference into Part III of this report.

ImmunoGen, Inc.

Form 10-K

TABLE OF CONTENTS

<u>Item</u>		<u>Page Number</u>
	<u>Part I</u>	
<u>1.</u>	<u>Business</u>	3
<u>1A.</u>	<u>Risk Factors</u>	25
<u>1B.</u>	<u>Unresolved Staff Comments</u>	39
<u>2.</u>	<u>Properties</u>	39
<u>3.</u>	<u>Legal Proceedings; Executive Officers of the Registrant</u>	40
<u>4.</u>	<u>Mine Safety Disclosures</u>	40
	<u>Part II</u>	
<u>5.</u>	<u>Market for Registrant’s Common Equity, Related Stockholder Matters, and Issuer Purchases of Equity Securities</u>	41
<u>6.</u>	<u>Selected Financial Data</u>	42
<u>7.</u>	<u>Management’s Discussion and Analysis of Financial Condition and Results of Operations</u>	43
<u>7A.</u>	<u>Quantitative and Qualitative Disclosures About Market Risk</u>	57
<u>8.</u>	<u>Financial Statements and Supplementary Data</u>	58
<u>9.</u>	<u>Changes in and Disagreements with Accountants on Accounting and Financial Disclosure</u>	96
<u>9A.</u>	<u>Controls and Procedures</u>	96
<u>9B.</u>	<u>Other Information</u>	98
	<u>Part III</u>	
<u>10.</u>	<u>Directors, Executive Officers and Corporate Governance</u>	98
<u>11.</u>	<u>Executive Compensation</u>	98
<u>12.</u>	<u>Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters</u>	98
<u>13.</u>	<u>Certain Relationships and Related Transactions, and Director Independence</u>	98
<u>14.</u>	<u>Principal Accounting Fees and Services</u>	98
	<u>Part IV</u>	
<u>15.</u>	<u>Exhibits, Financial Statement Schedules</u>	98
<u>16.</u>	<u>Form 10-K Summary</u>	101
	<u>Signatures</u>	102

Incorporation of certain information by reference

In this Annual Report on Form 10-K, ImmunoGen, Inc. (ImmunoGen, Inc., together with its subsidiaries, is referred to in this document as “we”, “our”, “us”, “ImmunoGen”, or the “Company”), incorporates by reference certain information from parts of other documents filed with the Securities and Exchange Commission. The Securities and Exchange Commission allows us to disclose important information by referring to it in that manner. Please refer to all such information when reading this Annual Report on Form 10-K. All information is as of December 31, 2019 unless otherwise indicated. For a description of the risk factors affecting or applicable to our business, see “Risk Factors,” below.

Forward looking statements

This report includes forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. These statements relate to analyses and other information which are based on forecasts of future results and estimates of amounts that are not yet determinable. These statements also relate to our prospects, future developments, product candidates, and business strategies.

These forward-looking statements are identified by their use of terms and phrases, such as “anticipate,” “believe,” “could,” “estimate,” “expect,” “intend,” “may,” “plan,” “predict,” “project,” “will” and other similar terms and phrases, including references to assumptions. These statements are contained in the “Business,” “Risk Factors”, and “Management’s Discussion and Analysis of Financial Condition and Results of Operations” sections, as well as other sections of this report.

These forward-looking statements involve known and unknown risks, uncertainties, and other factors that may cause actual results to be materially different from those contemplated by our forward-looking statements. These known and unknown risks, uncertainties, and other factors are described in detail in the “Risk Factors” section and in other sections of this report. Except as required by law, we disclaim any intention or obligation to update or revise any forward-looking statements, whether as a result of new information, future events, or otherwise.

PART I

Item 1. *Business*

Company Overview

We are a clinical-stage biotechnology company focused on developing the next generation of antibody-drug conjugates, or ADCs, to improve outcomes for cancer patients. By generating targeted therapies with enhanced anti-tumor activity and favorable tolerability profiles, we aim to disrupt the progression of cancer and offer patients more good days. We call this our commitment to “target a better now.”

An ADC with our proprietary technology comprises an antibody that binds to a target found on tumor cells and is conjugated to one of our potent anti-cancer agents as a “payload” to kill the tumor cell once the ADC has bound to its target. ADCs are an expanding approach to the treatment of cancer, with seven approved products and the number of agents in development growing significantly in recent years.

We have established a leadership position in ADCs with a portfolio of differentiated product candidates to address both solid tumors and hematological malignancies.

Our lead program is mirvetuximab soravtansine, a first-in-class investigational ADC targeting folate-receptor alpha, or FR α , a cell-surface protein overexpressed in a number of epithelial tumors, including ovarian, endometrial, and non-small-cell lung cancers. In March of 2019, we announced that FORWARD I, our Phase 3 clinical trial evaluating mirvetuximab compared to chemotherapy in women with FR α -positive, platinum-resistant epithelial ovarian, primary peritoneal, or fallopian tube cancer, which we refer to collectively as PROC, did not meet the primary endpoint in either the entire treatment population or the pre-specified high FR α expression population. Data from FORWARD I did, however, show promising efficacy signals across a range of parameters in the pre-specified subset of patients with high FR α expression. In post hoc exploratory analyses using a PS2+ scoring method, in the FR α -high population scored by the PS2+ method, mirvetuximab was associated with longer progression free survival, or PFS, by blinded independent review committee, or BIRC, higher overall response rate, or ORR, and longer overall survival, or OS.

Following consultation with the U.S. Food and Drug Administration, or FDA, we will concurrently enroll two new trials of mirvetuximab: SORAYA, a single-arm clinical trial that, if successful, could lead to accelerated approval of mirvetuximab; and MIRASOL, a randomized Phase 3 clinical trial that, if successful, could lead to full approval of mirvetuximab. We anticipate enrolling our first patient in SORAYA during the first quarter of 2020, and expect to report top-line data from this trial in mid-2021. We opened enrollment in MIRASOL in December 2019 and expect to report

top-line data from this trial in the first half of 2022. If SORAYA is successful, we expect to submit an application for accelerated approval of mirvetuximab in the applicable patient population to the FDA during the second half of 2021 and to thereafter seek full approval on the basis of a confirmatory Phase 3 trial, MIRASOL.

We undertook a review of our operations during the second quarter of 2019 with the goals of prioritizing our portfolio and reducing our cost base to ensure that our cash resources will be sufficient to advance certain of our programs through the next stages of development. Based on the outcome of this operational review and subsequent consultation with FDA, we have established three strategic priorities for the business: (i) execute SORAYA and MIRASOL and pursue the development of additional indications for mirvetuximab in ovarian cancer; (ii) advance a select portfolio of three earlier-stage product candidates; and (iii) further strengthen our balance sheet and expand our capabilities through partnering. Consistent with these priorities, we have focused our operations on the following activities:

- open SORAYA and enroll patients in MIRASOL to support the potential for accelerated approval in 2022 and conversion to full approval in 2023;
- continue follow up in the ongoing Phase 1b FORWARD II companion trial of mirvetuximab in combination regimens and initiate additional combination trials to support expanded indications;
- continue IMG632 development in patients with acute myeloid leukemia, or AML, blastic plasmacytoid dendritic cell neoplasm, or BPDCN, and other CD123-positive hematologic malignancies in collaboration with Jazz Pharmaceuticals, PLC, or Jazz;
- advance two additional assets that demonstrate our continued innovation in ADCs: IMGC936, which is an investigational ADC directed to the novel solid tumor target, ADAM9, which we are co-developing with MacroGenics, Inc., or MacroGenics; and our next generation investigational anti-FR α ADC, IMG151, which is expected to enter preclinical development in 2020; and
- monetize our remaining portfolio and platform technologies through out-licensing transactions or asset sales.

Corresponding to the prioritization of our portfolio, we have reduced ongoing expenses through the discontinuation of our IMG779 development program, suspension of all other research activities, and a reduction in our workforce.

In January 2020, we announced the closing of a public offering of 24,523,750 shares of common stock at a price of \$4.25 per share. We received net proceeds from the offering of \$97.7 million after deducting underwriting discounts and offering expenses. We intend to use the net proceeds of the offering, together with its existing capital, to fund our operations, including, but not limited to, clinical trial activities, supply of drug substance and drug product, pre-commercialization activities, capital expenditures, and working capital.

Mirvetuximab soravtansine in ovarian cancer

Mirvetuximab is an investigational ADC targeting FR α . Mirvetuximab is designed to exhibit a differentiated profile with a distinct mechanism of action and is the first ADC to enter a pivotal trial for the treatment of ovarian cancer. It comprises an FR α -binding antibody, which targets the ADC to FR α -expressing cancer cells, conjugated to our potent DM4 payload agent that kills the targeted cancer cells. Based on our clinical experience to date, we have observed encouraging anti-tumor activity and tolerability with mirvetuximab in a range of settings within ovarian cancer, including as monotherapy and in combination with bevacizumab in patients with platinum-resistant disease and in combinations with bevacizumab and carboplatin in patients with platinum-sensitive disease. Mirvetuximab has been granted orphan drug designation in the United States and orphan medicinal product status in the European Union, in each case for the treatment of ovarian cancer. Mirvetuximab has also been granted Fast Track designation by the FDA for the treatment of patients with medium to high FR α -positive platinum-resistant epithelial ovarian cancer who received at least one but no more than three prior systemic treatment regimens and for whom single-agent chemotherapy is appropriate as the next line of therapy.

Mirvetuximab as monotherapy

We presented mature PFS and interim OS data from our Phase 3 FORWARD I clinical trial evaluating mirvetuximab compared to chemotherapy in women with FR α -positive, PROC cancer during an oral presentation at the annual European Society for Medical Oncology, or ESMO, Congress in September 2019. FORWARD I randomized 366 patients 2:1 to receive either mirvetuximab or the physician's choice of single-agent chemotherapy (pegylated liposomal doxorubicin, topotecan, or weekly paclitaxel). Eligibility criteria included patients with PROC that expressed medium or

high levels of FR α , who had been treated with up to three prior regimens. The primary endpoint of this trial was PFS, as assessed by BIRC. The primary endpoint was assessed using the Hochberg procedure in the entire trial population and in the subset of patients with high FR α expression. The Hochberg procedure enables the simultaneous testing of two overlapping populations. Under this statistical analysis plan, if the p-value of the primary endpoint in either population is greater than 0.05, the p-value in the other population needs to be less than or equal to 0.025 to achieve statistical significance.

The FORWARD I trial did not meet its primary endpoint of PFS in either the entire study population or in the pre-specified subset of patients with high FR α expression.

In the FORWARD I trial, mirvetuximab was well-tolerated. The most common drug-related adverse events included nausea (46% all grades; 1% grade 3 or greater), blurred vision (42% all grades; 2% grade 3 or greater), and keratopathy (33% all grades; 1% grade 3 or greater).

Key detailed safety and efficacy findings from FORWARD I included:

Safety: Compared with chemotherapy, mirvetuximab was associated with:

- fewer Grade \geq 3 treatment emergent adverse events, or TEAEs (46% vs. 61%);
- fewer dose reductions due to related TEAEs (20% vs. 31%); and
- fewer discontinuations due to related TEAEs (5% vs. 8%).

Efficacy: No significant difference in the primary endpoint of PFS was observed in the entire study population or in the FR α -high population.

- In the entire study population:
 - primary endpoint, PFS by BIRC (months): median PFS: 4.1 vs. 4.4, Hazard Ratio, or HR: 0.981, p-value 0.897;
 - ORR by BIRC: 22% vs. 12%, p-value 0.015; and
 - OS (as of August 2019) (months): median OS: 15.6 vs. 13.9, HR: 0.846, p-value 0.278
- In the pre-specified FR α -high population:
 - primary endpoint, PFS by BIRC (months): median PFS 4.8 vs. 3.3 months, HR: 0.693, p-value 0.049 (because the p-value in the entire population was greater than 0.05, under the Hochberg procedure, the p-value in the FR α -high population needed to be less than or equal to 0.025 to achieve statistical significance);
 - ORR by BIRC 24% vs. 10%, p-value 0.014; and
 - OS (as of August 2019) (months): median OS: 16.4 vs. 12.0, HR:0.678, p-value 0.048

FORWARD I post-hoc exploratory analyses

In post hoc exploratory analyses using a PS2+ scoring method, in the FR α -high population scored by PS2+, mirvetuximab was associated with:

- longer PFS by BIRC (5.6 months vs. 3.2 months);
- higher ORR (29% vs. 6%); and
- longer OS (median OS 16.4 months vs. 11.4 months) (as of August 2019).

FORWARD I learnings from post-hoc exploratory analyses

In light of the negative outcome in the FORWARD I trial, we undertook a comprehensive assessment of the factors that may have contributed to the trial results. We believe that the outcome of FORWARD I and our subsequent exploratory analyses of the data for this trial have allowed us to better design and implement clinical trials of mirvetuximab. The following summarizes what we believe to be the key factors that contributed to the FORWARD I outcome:

- *Patient Selection.* Previous clinical trials with mirvetuximab used a PS2+ scoring method to assess tumor samples for FR α expression to determine enrollment eligibility in the trial. The PS2+ scoring method assesses both intensity of staining (0, 1+, 2+, or 3+) and percentage of tumor cells staining at each

intensity, with at least 50% of cells with at least 2+ staining considered FR α medium and at least 75% of cells with at least 2+ staining considered FR α high. In preparation for potential launch of a companion diagnostic, a simplified scoring method to assess FR α expression, known as 10X scoring, was implemented for use in the FORWARD I trial. Eligibility for enrollment in FORWARD I was determined by scoring the percentage of the patient's tumor cells with positive membrane staining by $\leq 10X$ magnification without the need to separately assess the level of intensity of the staining. Reassessment of the FORWARD I tumor samples using the PS2+ scoring method suggests that the 10X scoring method inadvertently introduced a population of patients into FORWARD I with lower levels of FR α expression than intended and, for those patients with high levels of FR α expression upon re-scoring utilizing the PS2+ method, we observed efficacy outcomes for mirvetuximab in this post hoc exploratory analysis much more in line with our previous experience, with improved activity correlating with FR α expression and the strongest treatment effect observed in the PS2+ FR α high patient population. Based on this analysis, we will revert to PS2+ scoring for all subsequent trials.

- *Patient Population.* FORWARD I enrolled patients with both medium and high levels of FR α expression. Our exploratory analyses (including re-scoring the PS2+ method) suggest that, while mirvetuximab demonstrated activity in patients with medium levels of expression, in FR α high patients, mirvetuximab compared to chemotherapy was associated with longer PFS, higher ORR, and longer OS. Accordingly, SORAYA and MIRASOL will enroll only patients with high levels of FR α expression, as assessed by the PS2+ scoring method.
- *Statistical Design.* In order to evaluate patients with medium levels of FR α -expression, the statistical analysis plan for FORWARD I deployed the Hochberg procedure, with the potential need for alpha splitting when assessing the primary endpoint between the entire patient population and the subset of patients with high FR α expression. MIRASOL is designed to preserve the full alpha for the primary endpoint assessment in FR α high patients. With the benefit of data from FORWARD I (which targeted a HR of 0.58), MIRASOL is a slightly larger trial, designed with a target HR of 0.70.

With the benefit of the information obtained from these exploratory analyses, we believe that the patient selection and statistical design considerations we are implementing in MIRASOL and SORAYA will increase the likelihood of a positive outcome in these trials. Based upon the data generated to date in the mirvetuximab development program and our discussions with the FDA, we will pursue two trials of mirvetuximab as monotherapy, either one of which we believe would support the FDA's approval of the drug candidate.

Mirvetuximab single-arm pivotal trial (SORAYA)

In December 2019, we announced that the FDA advised us that a new single-arm trial in PROC could support accelerated approval for mirvetuximab, provided that ORR and DOR surpass those of the best available therapy at the time of regulatory action. The FDA further advised that prior to obtaining accelerated approval on the basis of a new single-arm trial, our planned confirmatory trial, MIRASOL, should be fully accrued. Based on this feedback, we plan to initiate SORAYA, a pivotal trial to evaluate mirvetuximab monotherapy in women with FR α -high PROC who have been previously treated with bevacizumab. SORAYA is a single-arm trial of mirvetuximab that is designed to enroll approximately 110 patients. Eligibility criteria include patients with PROC whose tumors express high levels of FR α using the PS2+ scoring method, and who have been treated with up to three prior regimens — at least one of which included bevacizumab. The primary endpoint of this trial is ORR by investigator assessment and the key secondary endpoint is DOR. We have reviewed the data generated from our previous trials with mirvetuximab, including a post hoc analysis of our Phase 3 FORWARD I trial using a PS2+ scoring method to assess tumor samples for FR α expression, and have identified 70 patients who we believe would have met the key eligibility criteria for SORAYA. Based on a pooled analysis of these 70 patients, the pooled ORR in these patients was 31.4% with a 95% CI (20.9%, 43.6%) with a median DOR of 7.8 months with a 95% CI (3.98, -). We believe that these data would compare favorably to the response rate seen with single agent chemotherapy in platinum resistant disease, which was 11.8% in the AURELIA trial comparing bevacizumab combined with chemotherapy versus a physician's choice of single-agent chemotherapy for PROC, and 12.2% in the CORAIL trial of lurbinectedin versus chemotherapy in patients with PROC, both of which included patients naïve to and previously treated with bevacizumab.

We anticipate enrolling the first patient in SORAYA during the first quarter of 2020 and expect to report topline data from the trial in mid-2021. If SORAYA is successful, we expect to submit an application for accelerated approval of mirvetuximab in this patient population to the FDA during the second half of 2021.

Mirvetuximab randomized Phase 3 trial (MIRASOL)

The findings of the FORWARD I exploratory analyses have informed the design of our planned Phase 3 trial of mirvetuximab in FR α -high patients. We received feedback from FDA and the European Medicines Agency on the design of this trial, which we call MIRASOL. MIRASOL is a randomized Phase 3 trial in which approximately 430 patients will be randomized 1:1 to receive either mirvetuximab or investigator's choice of single-agent chemotherapy (weekly paclitaxel, pegylated liposomal doxorubicin, or topotecan). Eligibility criteria include patients with platinum-resistant ovarian cancer whose tumors express high levels of FR α using the PS2+ scoring method, and who have been treated with up to three prior regimens. The primary endpoint of this trial is PFS by investigator assessment. The key secondary endpoints include ORR, OS, and patient-reported outcomes using the European Organization for Research and Treatment of Cancer (EORTC) QLQ-OV28 Abdominal/GI Symptom Scale.

In February 2020, we enrolled the first patient in MIRASOL and expect to report topline data from this trial in the first half of 2022. If successful, we believe that MIRASOL may support full approval of mirvetuximab, which could occur as early as 2023.

Mirvetuximab in combination therapy (FORWARD II)

Mirvetuximab is also being assessed in multiple combinations in FORWARD II, a Phase 1b/2 trial designed to expand the market opportunity into earlier lines of ovarian cancer. To date, we have presented combination data from more than 100 patients in cohorts combining mirvetuximab with pembrolizumab, bevacizumab, and carboplatin.

We presented mature data from the doublet cohort of mirvetuximab in combination with bevacizumab in patients with PROC at the American Society of Clinical Oncology, or ASCO, 2019 annual meeting. We observed encouraging anti-tumor activity with a trend toward durable responses with increasing FR α expression, and favorable tolerability data, including among the subset of patients who received up to two prior lines of therapy and had medium or high levels of FR α expression. Adverse events observed with the combination were as expected based on the side effects historically observed with each agent in the combination, and no new safety signals or clinically meaningful potentiation of known toxicities were observed. Based upon these data as well as previously reported outcomes with a carboplatin doublet, we moved forward with a cohort assessing a triplet combination of mirvetuximab plus carboplatin and bevacizumab in patients with recurrent platinum-sensitive epithelial ovarian cancer, fallopian tube cancer, and primary peritoneal cancer. We completed enrollment of the triplet in late 2018 and reported initial data from this cohort at ESMO in September 2019. We believe the initial data from the triplet combination of mirvetuximab demonstrated favorable anti-tumor responses as compared to those of other carboplatin and bevacizumab-based triplet trials. The combination of full dose mirvetuximab, carboplatin and bevacizumab was well tolerated and no new safety signals were seen. Adverse events observed with the triplet were as expected based on the side effects observed with each agent, with thrombocytopenia as the most common cause of drug-related discontinuations.

In addition, to address evolving treatment paradigms, we are conducting a second mirvetuximab plus bevacizumab cohort in patients with recurrent ovarian cancer for which we completed enrollment in the third quarter of 2019. We expect to present data from this cohort in mid-2020. In addition, working with our collaborators in Germany under an investigator-sponsored protocol, we plan to initiate a randomized controlled trial in the first half of 2020 comparing the combination of mirvetuximab plus carboplatin to investigator choice platinum-based therapy in recurrent, platinum-sensitive ovarian cancer.

IMGN632 — accelerating pipeline of earlier-stage antibody-drug conjugates

We have also developed a new class of investigational indolino-benzodiazepine DNA-acting cytotoxic payloads that we refer to as IGNs. Our IGNs are designed to alkylate DNA without cross-linking, which has provided a broad therapeutic index in preclinical models. Specifically, IGN ADCs have retained the anti-tumor potency of crosslinking drugs with less toxicity to normal cells in *in vitro* and animal models. These properties have allowed for repeat administration of ADCs with IGN payloads in clinical studies and as supported by preclinical data, suggest that IGNs may be able to be combined with other agents.

IMGN632 is an investigational ADC comprised of a high affinity antibody designed to target CD123 with site specific conjugation to our most potent IGN payload. We are advancing IMGN632 in clinical trials for patients with AML and BPDCN. We recently presented data from our Phase 1 clinical trial of IMGN632 in patients with relapsed or refractory adult AML and BPDCN. We have also determined a Phase 2 dose and schedule for IMGN632 and have initiated a clinical trial with combinations in AML as well as monotherapy in front-line patients with minimal residual disease following induction therapy. In addition, we continue to enroll BPDCN patients under our initial protocol.

Phase 1 data on IMG632 as a monotherapy in AML and BPDCN

In December 2019, we announced that new safety and efficacy findings from the dose escalation and expansion of the ongoing first-in-human trial of IMG632 in patients with relapsed/refractory AML and BPDCN were presented in an oral session at the American Society of Hematology, or ASH, annual meeting. We believe that these data demonstrate the potential of IMG632 to offer a new treatment option for patients with AML and BPDCN. With the benefit of a comprehensive assessment of IMG632's safety and clinical effect in this Phase 1 clinical trial across a wide range of doses and two schedules, we have selected a recommended Phase 2 dose and schedule that have been associated with anti-tumor activity, favorable tolerability, and the convenience of a short infusion that can be administered in an outpatient setting.

IMG632 was administered to 95 patients over six dose levels on the every three week schedule and over three dose levels on the fractionated schedule. IMG632 was well-tolerated over a broad range of doses. The most common treatment-related adverse event was infusion-related reactions (24% all grades, 8% Grade 3); none required IMG632 discontinuation. Single dose-limiting toxicities were seen at the higher dose levels tested: three reversible cases of veno-occlusive disease at greater than or equal to 0.18 mg/kg per cycle and one prolonged neutropenia at 0.3 mg/kg after two cycles. Based on the efficacy, safety, and pharmacokinetic data generated, the dose and schedule of 0.045 mg/kg given on day one every three weeks has been selected as the monotherapy recommended Phase 2 dose.

Across all dose levels and both schedules, of the AML patients assessable for clinical effect (n=71), 38 (54%) had a reduction in bone marrow blasts and 13 (18%) achieved a response, including two complete remissions, or CR, and ten with incomplete recovery, or CRi, and one morphologic leukemia free state, or MLFS, in heavily pretreated patients. The vast majority of these responders (92%) had failed prior intensive therapies, including three with prior transplant, 69% had failed two to three prior lines of therapy, and 54% had an adverse risk classification. At the dose and schedule selected as the recommended Phase 2 dose (0.045 mg/kg Q3W), a 40% response rate was seen in relapsed and refractory patients with de novo AML, including one CR, four CRi, and one MLFS (with subsequent conversion to CRi).

Of the evaluable relapsed/refractory BPDCN patients, three of nine (33%) achieved a response after one or two doses of 0.045 mg/kg IMG632 (one CR, one CRi, and one partial remission); all three patients had received prior SL-401 (tagraxofusp-erzs), two had received intense multi-agent chemotherapy, and/or prior stem cell transplant.

Preclinical data on IMG632 in combination therapy in AML

In addition, IMG632 was evaluated in combination with azacitidine, and as a triplet with azacitidine and venetoclax in AML models, including patient derived xenografts, which are referred to as PDX. As reported by our collaborators from MD Anderson at ASH in December 2019, the addition of IMG632 to azacitidine alone or to azacitidine plus venetoclax was associated with reductions in tumor burden and improved survival in these murine models. We believe that these data support clinical testing of IMG632 in combination with standard of care therapy including azacitidine, and azacitidine plus venetoclax in AML patients.

Ongoing IMG632 trials

We believe that the preclinical data on combining IMG632 with azacitidine and venetoclax generated by our MD Anderson collaborators, as well as their preclinical data on CD123 expression in acute lymphoblastic leukemia, or ALL, together with the updated clinical results reported at ASH in December 2019, provide a strong foundation for our ongoing expansion of IMG632 monotherapy trials in BPDCN, AML and ALL, and the recent initiation of our trial to evaluate IMG632 combinations with azacitidine and venetoclax in relapsed and frontline AML, as well as IMG632 as a monotherapy in minimal residual disease positive AML patients.

Our preclinical programs

We continue to advance select preclinical programs, led by IMGC936. IMGC936 is an investigational ADC in co-development with MacroGenics designed to target ADAM9, an enzyme overexpressed in a range of solid tumors and implicated in tumor progression and metastasis. This ADC incorporates a number of innovations, including antibody engineering to extend half-life, site-specific conjugation with a fixed drug-antibody ratio to enable higher dosing, and a next-generation linker and payload for improved stability and bystander activity. We reported encouraging preclinical safety and activity data from this program at the American Association of Cancer Research, or AACR, meeting in 2019 and expect an Investigational New Drug application, or IND, for IMGC936 will be submitted to the FDA in the first half of 2020. Finally, we expect our next generation anti-FR α candidate, IMG151, to move into preclinical development in 2020.

Collaborations and Out-Licenses

Over the last 38 years, ImmunoGen has assembled the most comprehensive “toolbox” in the ADC field. Our platform technology combines advanced chemistry and biochemistry with innovative approaches to antibody optimization, with a focus on increasing the diversity and potency of our payload agents, advancing antibody-payload linkage and release technologies, and integration of novel approaches to antibody engineering. These capabilities have enabled us to generate a pipeline of novel candidates designed for individual tumor types to have potent anti-tumor activity and favorable safety profiles that we can develop as monotherapies and in combination with existing and novel therapies.

Collaborating on ADC development with other companies allows us to generate revenue, mitigate expenses, enhance our capabilities, and extend the reach of our proprietary platform. The most advanced partner program is Roche’s marketed product, Kadcyla® (ado-trastuzumab emtansine). Our ADC technology is also used in candidates in clinical development with a number of partners. We have evolved our partnering approach to pursue relationships where we can gain access to technology and complementary capabilities, such as our technology swap with CytomX Therapeutics, Inc., or CytomX, as well as co-development and co-commercialization arrangements, such as our relationships with Jazz and MacroGenics. In addition, following our restructuring in 2019, we seek to monetize our remaining portfolio and platform technologies through out-licensing transactions or asset sales. To this end, in December 2019, we granted an exclusive development and commercialization license to CytomX to our cytotoxic payload technology for use with antibodies (and Probodies™ developed therefrom) directed to epithelial cell adhesion molecule (EpCAM), including certain of our proprietary anti-EpCAM antibodies developed into Probodies utilizing CytomX’s Probody technology, in return for which we will receive an upfront payment from CytomX with the potential for additional payments following CytomX’s successful achievement of pre-defined clinical development, approval, and commercialization milestones, as well as royalties on net sales.

We have selectively licensed restricted access to our ADC platform technology to other companies to expand the use of our technology and to provide us with cash to fund our own product programs. These agreements typically provide the licensee with rights to use our ADC platform technology with its antibodies or related targeting vehicles to a defined target to develop products. The licensee is generally responsible for the development, clinical testing, manufacturing, registration and commercialization of any resulting product candidate. As part of these agreements, we are generally entitled to receive upfront fees, potential milestone payments, royalties on the sales of any resulting products, and research and development funding based on activities performed at our collaborative partner’s request.

We only receive royalty payments from our ADC platform technology out-licenses after a product candidate developed under the license has been approved for marketing and commercialized. Additionally, the largest milestone payments under our existing collaborations usually are on later-stage events, such as commencement of pivotal clinical trials, product approval and achievement of defined annual sales levels. Achievement of product approval requires, at a minimum, favorable completion of preclinical development and evaluation, assessment in early-stage clinical trials, advancement into pivotal clinical testing, completion of this later-stage clinical testing with favorable results, and completion of regulatory submissions and a positive regulatory decision. Below is a table setting forth our current ADC partnerships and status of the most advanced program in each partnership:

Partner	Licensed targets	Status of Most Advanced Program
Roche	HER2, 4 other ¹	Marketed
Bayer	Mesothelin	Phase 2
Biotest	CD-138	Phase 1/ 2
Novartis	cKit, pCadherin, CDH6, 2 others ¹	Phase 1
Oxford BioTherapeutics/Menarini	CD205 ²	Phase 1
CytomX	CD166, EpCAM	Phase 2
Takeda	GCC	Phase 1
Jazz	CD123 ³	Phase 1/ 2
Debiopharm	CD37 ⁴	Phase 2

¹ Undisclosed

² Oxford BioTherapeutics and Menarini are developing MEN 1309, an ADC targeting CD205 and utilizing our DM4 payload, pursuant to a sublicense from Amgen, which in turn licensed our maytansinoid ADC technology to develop and commercialize ADCs targeting CD205.

³ Jazz has exclusive worldwide rights to opt into development and commercialization of IMG632 (CD123)

⁴ Debiopharm has an exclusive license for Debio 1562 (formerly known as IMG529)

Below is a brief description of the business relationships underlying each of the foregoing programs. For more information concerning these relationships, including their ongoing financial and accounting impact on our business, please read Note C, Significant Collaborative Agreements, to our consolidated financial statements included in this report.

Roche

In 2000, we granted Genentech, now a unit of Roche, an exclusive development and commercialization license to use our maytansinoid technology with antibodies that target HER2. Roche's Kadcyla resulted from this license. Kadcyla was approved for marketing in the U.S., EU and Japan in 2013. We are entitled to receive up to a total of \$44 million in milestone payments, of which we have received \$39 million to date, and also tiered royalties on the commercial sales of Kadcyla or any other resulting products as described below. Roche is responsible for the development, manufacturing, and marketing of any products resulting from this license.

On May 3, 2019, Roche notified the Company that the U.S. Food and Drug Administration approved Kadcyla for adjuvant (after surgery) treatment of people with HER2-positive early breast cancer who have residual invasive disease after neoadjuvant (before surgery) taxane and Herceptin® (trastuzumab)-based treatment, resulting in a \$5 million regulatory milestone payment to the Company for a first extended indication, which is included in license and milestone fees for the year ended December 31, 2019.

In 2015, Immunity Royalty Holdings, L.P., or IRH, paid us \$200 million to purchase our right to receive 100% of the royalty payments on commercial sales of Kadcyla arising under our development and commercialization license with Genentech, until IRH had received aggregate Kadcyla royalties equal to \$235 million or \$260 million, depending on when the aggregate Kadcyla royalties received by IRH reached a specified milestone. Once the applicable threshold would have been met, if ever, we would thereafter have received 85% and IRH would have received 15% of the Kadcyla royalties for the remaining royalty term. In January 2019, we sold our residual rights to receive royalty payments on commercial sales of Kadcyla to OMERS, the defined benefit pension plan for municipal employees in the Province of Ontario, Canada, for \$65.2 million, net of \$1.5 million of transaction fees. Simultaneously, OMERS purchased IRH's right to the royalties we previously sold to IRH as described above, therefore obtaining the rights to 100% of the royalties received from that date on.

We also granted Roche, through its Genentech unit, exclusive development and commercialization licenses to use our maytansinoid ADC technology with antibodies to four specified targets, which were granted under the terms of a separate, now expired 2000 right-to-test agreement with Genentech. For each of these licenses, we are entitled to receive up to a total of \$38 million in milestone payments and also royalties on the sales of any resulting products. Roche is

responsible for the development, manufacturing, and marketing of any products resulting from these licenses. The standard termination provisions discussed below apply to these licenses.

Bayer

In 2008, we granted Bayer an exclusive development and commercialization license to use our maytansinoid ADC technology with antibodies or other proteins that target mesothelin. We are entitled to receive, for each product developed and marketed by Bayer under this agreement, up to a total of \$170.5 million in milestone payments, of which we have received \$13 million to date, plus tiered royalties between 4 - 7% on the commercial sales of any resulting products. Bayer is responsible for the development, manufacturing, and marketing of any products resulting from this license. The standard termination provisions discussed below apply to this license.

Biotest

In 2006, we granted Biotest an exclusive development and commercialization license to our maytansinoid ADC technology for use with antibodies that target CD138. The product candidate indatuximab ravtansine is in development under this agreement. We are entitled to receive up to a total of \$35.5 million in milestone payments, plus royalties on the commercial sales of any resulting products. Biotest is responsible for the development, manufacturing, and marketing of any products resulting from this license. The standard termination provisions discussed below apply to this license.

Novartis

We granted Novartis exclusive development and commercialization licenses to our maytansinoid and IGN ADC technology for use with antibodies to six specified targets under a now-expired right-to-test agreement established in 2010. In May 2018, Novartis terminated one of its six development and commercialization licenses. With respect to each remaining license, we are entitled to receive up to a total of \$199.5 million in milestone payments, plus royalties on the commercial sales of any resulting products. Novartis is responsible for the manufacturing, product development, and marketing of any products resulting from this agreement. The standard termination provisions discussed below apply to these licenses.

Oxford BioTherapeutics/Menarini

In 2013, we granted Amgen an exclusive development and commercialization license to our maytansinoid ADC technology for use with antibodies that target CD205 under a now-expired right-to-test agreement, which Amgen sublicensed to Oxford BioTherapeutics, which is developing MEN 1309 with Menarini. With respect to this license, we are entitled to receive up to a total of \$34 million in milestone payments, plus royalties on the commercial sales of any resulting products. Amgen (or its sublicensee(s)) is responsible for the manufacturing, product development, and marketing of any products resulting from this development and commercialization license. The standard termination provisions discussed below apply to this license.

CytomX

In 2016, we granted CytomX an exclusive development and commercialization license to our maytansinoid and IGN ADC technology for use with Probodies™ that target CD166 under a now-expired reciprocal right-to-test agreement. We are entitled to receive up to a total of \$160 million in milestone payments plus royalties on the commercial sales of any resulting product. CytomX is responsible for the manufacturing, product development, and marketing of any products resulting from this license. The standard termination provisions discussed below apply to this license.

In 2017, we took exclusive development and commercialization licenses to CytomX's proprietary Probody technology for use with Probodies that target two specified targets under the same reciprocal right-to-test agreement. We terminated one of these licenses for convenience prior to the end of 2017. We terminated the second license in December 2019, in connection with the grant of the EpCAM license to CytomX discussed below.

In December 2019, we granted CytomX an exclusive development and commercialization license to our maytansinoid and IGN ADC technology for use with antibodies (and Probodies™ developed therefrom) that target EpCAM. In January 2020, we received a \$7.5 million upfront license payment and are entitled to receive up to a total of \$355 million in milestone payments plus royalties on the commercial sales of any resulting product. CytomX is responsible for the manufacturing, product development, and marketing of any products resulting from this license. The standard termination provisions discussed below apply to this license.

Takeda

In 2015, we granted Takeda an exclusive development and commercialization license to our maytansinoid and IGN ADC technology for use with antibodies that target GCC under a now-expired right-to-test agreement. We are entitled to receive up to a total of \$210 million in milestone payments, plus royalties on the commercial sales of any resulting products. Takeda is responsible for the manufacturing, product development, and marketing of any products resulting from this license. The standard termination provisions discussed below apply to this license. In March 2018, the right-to-test agreement expired without Takeda exercising its option to a second license or extending or expanding the agreement as it had the right to do for a third license.

Jazz

In August 2017, we entered into a Collaboration and Option Agreement (the “Option Agreement”) with a subsidiary of Jazz Pharmaceuticals plc, pursuant to which we granted Jazz options to develop and commercialize, on an exclusive, worldwide basis, IMG779, IMG632, and a third ADC from our early research and development pipeline to be designated by Jazz within the first seven years of the Option Agreement term. Each of the foregoing three products is referred to herein as a “Collaboration Product.” In October 2019, Jazz exercised certain of its opt-out rights under the Option Agreement following the termination of our IMG779 development program. In addition, in November 2019, we executed a First Amendment (the “First Amendment”) to the Option Agreement. The First Amendment included an exercise of their opt-out rights related to the termination of our early research programs covered by the Option Agreement in connection with our previously announced restructuring. Under the terms of the Option Agreement, the exercise of both of these opt-out rights will result in a pro-rata reduction in Jazz’s obligation to provide development funding, which will now be limited to support of our IMG632 development program. The First Amendment also provides for a streamlining of the governance structure under the Option Agreement and a reduction in the option exercise fee that Jazz would pay for the remaining product under the Option Agreement or a back-up to that product. We have the right to co-commercialize IMG632 with Jazz in the U.S.

Under the terms of the Option Agreement, we received a non-refundable \$75 million upfront option fee. Jazz had also agreed to provide up to \$100 million in development funding over seven years to support development of the Collaboration Products, which was reduced for the years 2020 through 2024 pursuant to the terms of the First Amendment, as discussed above. We are obligated to use a specified level of efforts to advance the development of IMG632, and we are responsible for all development costs with respect to IMG632 in excess of Jazz’s development funding.

Jazz may exercise its option with respect to IMG632 at any time prior to a pivotal study or any time prior to a biologics license application (BLA) upon payment of an option exercise fee of mid-double digit millions or low-triple digit millions, respectively. The option exercise fee for IMG632 is subject to certain adjustments depending on the indication(s) for which initial regulatory approval of this product is based. After any option exercise by Jazz, we will share equally with Jazz the costs associated with developing and obtaining regulatory approvals of IMG632 in the U.S. and the European Union, and Jazz will be solely responsible for such costs with respect to all other territories worldwide.

We are also entitled to receive milestone payments upon US and EU regulatory approvals for IMG632, plus tiered royalties as a percentage of commercial sales which, depending on sales levels and the stage of development at the time of Jazz’s option exercise, range from the mid- to high-single digits in the lowest tier, to low 10’s to low 20’s in the highest tier. If we designate IMG632 for co-commercialization, in lieu of receiving a milestone payment based on receiving regulatory approval in the U.S., or royalties on sales in the U.S., we will share equally with Jazz the activities, costs, and profits associated with commercialization in the U.S. The standard termination provisions discussed below apply to the Option Agreement and the license agreement associated with IMG632 (“License Agreements”), except that if IMG632 is being co-commercialized by the parties in the U.S., the License Agreement shall remain in effect as long as the parties continue to be engaged in such co-commercialization activities, subject to earlier termination in the event of a material breach.

If Jazz does not exercise its option to IMG632 or opts out of IMG632, rights to that product revert to us, and we may continue development and commercialization of IMG632 without any further involvement by Jazz, except that we would pay Jazz royalties at a rate specified in the Option Agreement or License Agreement, as applicable, on our commercial sales of such product.

Debiopharm

In May 2017, we entered into an Exclusive License and Asset Purchase Agreement with Debiopharm International, S.A., pursuant to which Debiopharm acquired our antibody-drug conjugate IMG529, a potential new treatment for patients with CD37-positive B-cell malignancies, such as non-Hodgkin lymphoma (NHL). The transaction

includes the sale to Debiopharm of specified intellectual property and other assets related to the IMGN529 program, and an exclusive license to additional intellectual property necessary or useful for Debiopharm to develop and commercialize IMGN529 (now known as Debio 1562).

Under the terms of the agreement, we received a \$25 million upfront payment for the IMGN529 program and a \$5 million milestone payment following the transfer of technology relating to IMGN529 to Debiopharm. In addition, we are entitled to a \$25 million milestone upon IMGN529/Debio 1562 entering a Phase 3 clinical trial. Except for the foregoing upfront and milestone payments, we will not be entitled to receive any additional milestone payments or royalties under the agreement.

Standard Termination Provisions

Standard termination provisions in our license agreements state that the partner may terminate the agreement for convenience at any time upon prior written notice to us. The agreement may also be terminated by either party for a material breach by the other, subject to notice and cure provisions. We may also terminate certain of these agreements upon the occurrence of specified events. Upon termination, the partner's rights to our intellectual property with respect to the applicable target are cancelled and could then be used by us or re-licensed for that target. Unless earlier terminated, the agreement will continue in effect until the expiration of partner's royalty obligations, which are determined on a product-by-product and country-by-country basis. For each product and country, royalty obligations commence upon first commercial sale of that product in that country, and extend until the later of either the expiration of the last-to-expire ImmunoGen patent covering that product in that country or the expiration for that country of the minimum royalty period specified in the agreement.

Other Agreements

From time to time we have entered into additional agreements with some of our collaborators pursuant to which we have provided certain CMC-related development and pre-pivotal ADC manufacturing services, or supplied ADC payloads, to them with respect to products they are developing under their licenses with us, with respect to which we have been entitled to receive payments at mutually negotiated rates.

Patents, Trademarks and Trade Secrets

ImmunoGen has a substantial and robust intellectual property portfolio comprising more than 1,300 issued patents and over 650 pending patent applications on a worldwide basis. Our intellectual property strategy centers on obtaining high quality patent protection directed to various embodiments of our proprietary technologies and product candidates. Using this strategy, our ADC technology and our product candidates are protected through a multi-layered approach. In this regard, we have patents and patent applications covering antibodies and other cell binding agents, linkers, cytotoxic payload agents (e.g., tubulin-acting maytansinoids and DNA-acting IGNs), conjugation methodologies and complete ADCs, comprising one or more of these components, as well as methods of making and using each of the above. Typically, multiple issued patents and pending patent applications cover various embodiments of each of ImmunoGen's and our licensees' product candidates.

We consider our tubulin-acting maytansinoid and DNA-acting IGN cytotoxic payload agent technologies to be key components of our overall patent strategy. With regard to our tubulin-acting maytansinoid cytotoxic payload agents, we currently own 27 issued U.S. patents covering various embodiments of our maytansinoid technology including those with claims directed to certain maytansinoids, including DM4 and DM21, and methods of manufacturing of DM1, DM4, and DM21, as well as methods of using the same. These issued patents remain in force until various times between 2020 and 2038. With regard to our IGN payload agents, we have 24 issued U.S. patents covering various aspects of our DNA-acting cytotoxic payload agents, which will expire at various times between 2030 and 2040. In all cases, we have received or are applying for comparable patent protection in other major commercial and manufacturing jurisdictions, including Europe, Japan, and China. In nearly all cases for both our maytansinoid and IGN patent portfolios, we have additional pending patent applications disclosing and claiming many other related and strategically important embodiments of these technologies which, upon issuance or grant, will extend our patent protection term over these technologies by several additional years.

Our intellectual property strategy also includes pursuing patents directed to linkers, antibodies, conjugation methods, ADC formulations and the use of specific antibodies and ADCs to treat certain diseases. In this regard, we have 20 issued patents related to many of our linker technologies, as well as additional pending patent applications disclosing and claiming many other related and strategically important embodiments of these linker technologies, including methods of making the linkers and antibody maytansinoid conjugates comprising these linkers. These issued patents remain in force until various times between 2021 and 2034. We also have 18 issued U.S. patents covering methods of assembling ADCs from their constituent antibody, linker, and cytotoxic payload agent moieties. These issued

patents will expire between 2022 and 2040. In nearly all instances for both our linker and conjugation patent portfolios, we have additional pending patent applications disclosing and claiming many other related and strategically important embodiments of these technologies which, upon issuance or grant, will extend our patent protection term over these technologies by several additional years. In all cases, we have received or are applying for comparable patents in other major commercial and manufacturing jurisdictions including Europe, Japan, and China.

We also file, prosecute, and maintain a substantial portfolio of patents and patent applications specifically directed to ImmunoGen's and our licensees' ADC candidates. In this regard, we craft a detailed patent protection strategy for each ADC as it approaches clinical evaluation. Such strategies make use of the patents and patent applications described in the preceding paragraphs, as well as ADC-specific filings, to create a multi-layered and multi-jurisdictional patent protection approach for each ADC as it enters the clinic. In addition to the platform patent strategy described above and specific to mirvetuximab soravtansine, we have 15 issued U.S. patents and 9 pending U.S. applications covering various embodiments of the composition of matter and methods of treatment using mirvetuximab soravtansine, expiring at various times between 2031 and 2038. These ADC-specific patent strategies are intended to provide the exclusivity basis for revenue and royalties arising from commercial development of each of ImmunoGen's and our licensees' ADCs.

We expect our continued independent and collaborative work in each of these areas will lead to other patent applications. We will be the owner of all patents covering our independently generated inventions. In all other instances, we expect to either be the sole owner or co-owner of any patents covering collaboratively generated inventions insofar as they relate to co-developed products or our ADC platform technology, or otherwise have an exclusive or non-exclusive license to the technology covered by such patents.

We cannot provide assurance that pending patent applications will issue as patents or that any patents, if issued, will provide us with adequate protection against competitors with respect to the covered products, technologies, or processes. Defining the scope and term of patent protection involves complex legal and factual analyses and, at any given time, the result of such analyses may be uncertain. In addition, other parties may challenge our patents in litigation or administrative proceedings resulting in a partial or complete loss of certain patent rights owned or controlled by ImmunoGen. Furthermore, as a patent does not confer any specific freedom to operate, other parties may have patents that may block or otherwise hinder the development and commercialization of our technology.

In addition, many of the processes and much of the know-how that are important to us depend upon the skills, knowledge, and experience of our key scientific and technical personnel, which skills, knowledge, and experience are not patentable. To protect our rights in these areas, we require that all employees, consultants, advisors, and collaborators enter into confidentiality agreements with us. Further, we require that all employees enter into assignment of invention agreements as a condition of employment. We cannot provide assurance, however, that these agreements will provide adequate or any meaningful protection for our trade secrets, know-how, or other proprietary information in the event of any unauthorized use or disclosure of such trade secrets, know-how, or proprietary information. Further, in the absence of patent protection, we may be exposed to competitors who independently develop substantially equivalent technology or otherwise gain access to our trade secrets, know-how, or other proprietary information.

Competition

We focus on highly competitive areas of product development. Our competitors include major pharmaceutical companies and other biotechnology firms. For example, Pfizer, Seattle Genetics, Roche, Astellas, AstraZeneca/MedImmune, Daiichi Sankyo, GlaxoSmithKline and AbbVie have programs to attach a cell-killing small molecule to an antibody for targeted delivery to cancer cells. Pharmaceutical and biotechnology companies, as well as other institutions, also compete with us for promising targets for antibody-based therapeutics and in recruiting highly qualified scientific personnel. Additionally, there are non-ADC therapies available and/or in development for the cancer types we and our partners are targeting. Many competitors and potential competitors have substantially greater scientific, research and product development capabilities, as well as greater financial, sales, marketing, and human resources 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.

In particular, competitive factors within the antibody and cancer therapeutic market include:

- the safety, efficacy, and convenience of products;
- the timing of regulatory approvals and commercial introductions;
- special regulatory designation of products, such as orphan drug and breakthrough therapy designations; and

- the effectiveness of marketing, sales, and reimbursement efforts.

Our competitive position depends on a combination of factors. These include effectively pursuing the development of proprietary products, the implementation of clinical development programs, the ability to appropriately manufacture, sell, and market our products, and obtain patent protection for our products. In addition, we must secure sufficient capital resources to accomplish all of the previously mentioned activities.

Continued development of conventional and targeted chemotherapeutics by large pharmaceutical companies and biotechnology companies may result in new compounds that may compete with our product candidates. Antibodies developed by certain of these companies have been approved for use as cancer therapeutics. In the future, new antibodies or other targeted therapies may compete with our product candidates. Other companies have created or have programs to create potent cell-killing agents for attachment to antibodies. These companies may compete with us for technology out-license arrangements.

Regulatory Matters

Government Regulation and Product Approval

Government authorities in the U.S., at the federal, state, and local level, and other countries extensively regulate, among other things, the research, development, testing, manufacture, quality control, approval, labeling, packaging, storage, record-keeping, promotion, advertising, distribution, marketing, and export and import of products such as those we are developing. A new drug must be approved by the FDA through the new drug application, or NDA, process and a new biologic must be approved by the FDA through the biologics license application, or BLA, process before it may be legally marketed in the U.S.

U.S. Drug Development Process

In the U.S., the FDA regulates drugs under the federal Food, Drug, and Cosmetic Act, or FDCA, and in the case of biologics, also under the Public Health Service Act, or PHSA, and implementing regulations. The process of obtaining regulatory approvals and the subsequent compliance with applicable federal, state, and local statutes and regulations require the expenditure of substantial time and financial resources. Failure to comply with the applicable U.S. requirements at any time during the product development process, approval process, or after approval, may subject an applicant to adverse administrative or judicial actions. These actions could include the FDA's refusal to approve pending applications, withdrawal of an approval, a clinical hold, warning letters, product recalls, product seizures, total or partial suspension of production or distribution, injunctions, fines, refusals of government contracts, restitution, disgorgement, or civil or criminal penalties. Any such administrative or judicial action could have a material adverse effect on us.

The process required by the FDA before a drug or biologic may be marketed in the U.S. generally involves the following:

- completion of preclinical and other nonclinical laboratory tests, animal studies, and formulation studies according to current Good Laboratory Practices, or cGLP, or other applicable regulations;
- submission to the FDA of an IND, which must become effective before human clinical trials may begin;
- performance of adequate and well-controlled human clinical trials according to current Good Clinical Practices, or cGCP, to establish the safety and efficacy of the proposed drug for its intended use;
- development and approval of a companion diagnostic if the FDA or the sponsor believes that its use is essential for the safe and effective use of a corresponding product;
- submission to the FDA of an NDA or BLA;
- satisfactory completion of an FDA inspection of the manufacturing facility or facilities at which the drug is produced to assess compliance with current Good Manufacturing Practice, or cGMP, to assure that the facilities, methods, and controls are adequate to preserve the drug's identity, strength, quality, and purity; and
- FDA review and approval of the NDA or BLA.

Once a pharmaceutical candidate is identified for development, it enters the preclinical testing stage. Preclinical tests include laboratory evaluations of product chemistry, toxicity, and formulation, as well as animal studies. An IND sponsor must submit the results of the preclinical tests, together with manufacturing information and analytical data, to the FDA as part of the IND. The sponsor will also include a clinical protocol detailing, among other things, the objectives of the first phase of the clinical trial, the parameters to be used in monitoring safety, and the effectiveness

criteria to be evaluated, if the first phase lends itself to an efficacy evaluation. Some nonclinical testing may continue even after the IND is submitted and clinical trials have begun. The IND automatically becomes effective 30 days after receipt by the FDA, unless the FDA, within the 30-day time period, places the clinical trial on a clinical hold. In such a case, the IND sponsor and the FDA must resolve any outstanding concerns before the clinical trial can begin. Clinical holds also may be imposed by the FDA at any time before or during clinical trials due to safety concerns about ongoing or proposed clinical trials or non-compliance with specific FDA requirements, and the trials may not begin or continue until the sponsor submits additional information that alleviates FDA concerns and FDA notifies the sponsor that the hold has been lifted.

Each clinical trial must be conducted under the supervision of one or more qualified investigators in accordance with cGCP requirements in accordance with a protocol included as part of the IND, and timely safety reports must be submitted to the FDA and the investigators for serious and unexpected adverse events. A local or central institutional review board, or IRB, acting on behalf of each institution participating in the clinical trial must review and approve each protocol before a clinical trial commences at that institution and must also approve the information regarding the trial and the consent form that must be provided to each trial subject or his or her legal representative, monitor the study until completed, and otherwise comply with IRB regulations.

Human clinical trials are typically conducted in three sequential phases that may overlap or be combined:

- **Phase I:** The product candidate is initially introduced into healthy human subjects and tested for safety and dosage tolerance, absorption, metabolism, distribution, and excretion. In the case of some products for severe or life-threatening diseases, such as cancer, especially when the product may be too inherently toxic to ethically administer to healthy volunteers, the initial human testing is often conducted in patients.
- **Phase II:** This phase involves clinical trials in a limited patient population to identify possible adverse effects and safety risks, to preliminarily evaluate the efficacy of the product for specific targeted diseases and to determine dosage tolerance and optimal dosage.
- **Phase III:** These trials are undertaken to further evaluate dosage, clinical efficacy, and safety in an expanded patient population at geographically dispersed clinical study sites and to establish the overall risk-benefit ratio of the product candidate and provide, if appropriate, an adequate basis for product labeling.

Post-approval trials, sometimes referred to as Phase IV, may be conducted after initial marketing approval. These trials are used to gain additional information about the use of the approved drug in the treatment of patients in the intended therapeutic indication. In certain instances, the FDA may mandate the performance of Phase IV clinical trials as a condition of approval of an NDA or BLA.

The FDA or the sponsor may suspend a clinical trial at any time on various grounds, including a finding that the research subjects or patients are being exposed to an unacceptable health risk. Similarly, an IRB can suspend or terminate approval of a clinical trial at its institution if the clinical trial is not being conducted in accordance with the IRB's requirements or if the drug has been associated with unexpected or serious patient reactions. Additionally, some clinical trials are overseen by an independent group of qualified experts organized by the sponsor, known as a data safety monitoring board or committee. Depending on its charter, this group may determine whether a trial may move forward at designated check points based on access to certain data from the trial. Phase I, Phase II, and Phase III testing may not be completed successfully within any specified period, if at all.

During the development of a new drug, sponsors may request meetings with the FDA. These meetings often occur prior to submission of an IND, at the end of Phase II, and before an NDA or BLA is submitted, but meetings at other times may be requested. These meetings can provide an opportunity for the sponsor to share information about the data gathered to date, for the FDA to provide advice, and for the sponsor and FDA to reach agreement on the next phase of development. Sponsors typically use the End of Phase II meeting to discuss their Phase II clinical results and present their plans for the pivotal Phase III clinical trial or trials that they believe will support approval of the new drug. If this type of discussion occurs, a sponsor may be able to request a Special Protocol Assessment, or SPA, the purpose of which is to reach agreement with the FDA on the design of the Phase III clinical trial protocol design and analysis that will form the primary basis of an efficacy claim.

According to FDA guidance for industry on the SPA process, a sponsor that meets the prerequisites may make a specific request for a special protocol assessment and provide information regarding the design and size of the proposed clinical trial. The FDA is required to evaluate the protocol within 45 days of the request to assess whether the proposed trial is adequate, and that evaluation may result in discussions and a request for additional information. A SPA request

must be made before the proposed trial begins, and all open issues must be resolved before the trial begins. If a written agreement is reached, it will be documented and made part of the record. The agreement will be binding on the FDA and may not be changed by the sponsor or the FDA after the trial begins except with the written agreement of the sponsor and the FDA or if the FDA determines that a substantial scientific issue essential to determining the safety or efficacy of the drug was identified after the testing began. If the sponsor makes any unilateral changes to the approved protocol, the agreement will be invalidated.

Concurrent with clinical trials, companies usually complete additional animal studies and must also develop additional information about the chemistry and physical characteristics of the drug and finalize a process for manufacturing the product in commercial quantities in accordance with cGMP requirements. The manufacturing process must be capable of consistently producing quality batches of the product candidate and, among other things, the manufacturer must develop methods for testing the identity, strength, quality, and purity of the final drug. Additionally, appropriate packaging must be selected and tested, and stability studies must be conducted to demonstrate that the product candidate does not undergo unacceptable deterioration over its shelf life.

While the IND is active, progress reports summarizing the results of the clinical trials and nonclinical studies performed since the last progress report must be submitted at least annually to the FDA, and written IND safety reports must be submitted to the FDA and investigators for serious and unexpected suspected adverse events, findings from other studies suggesting a significant risk to humans exposed to the same or similar drugs, findings from animal or *in vitro* testing suggesting a significant risk to humans, and any clinically important increased incidence of a serious suspected adverse reaction compared to that listed in the protocol or investigator brochure.

There are also requirements governing the reporting of ongoing clinical trials and completed trial results to public registries. Most sponsors of clinical trials of FDA-regulated products are required to register and disclose specified clinical trial information, which is publicly available at www.clinicaltrials.gov. Information related to the product, patient population, phase of investigation, trial sites and investigators, and other aspects of the clinical trial is then made public as part of the registration. Sponsors are also obligated to discuss the results of their clinical trials after completion. Disclosure of the results of these trials can be delayed until the new product or new indication being studied has been approved. However, there are evolving rules and increasing requirements for publication of all trial-related information, and it is possible that data and other information from trials involving drugs that never garner approval could require disclosure in the future.

Companion Diagnostics

For some of our product candidates, including mirvetuximab soravtansine and potentially others, we plan to work with collaborators to develop or obtain access to *in vitro* companion or complementary diagnostic tests to identify appropriate patients for these targeted therapies.

If a sponsor or the FDA believes that a diagnostic test is essential for the safe and effective use of a corresponding therapeutic product, a sponsor will typically work with a collaborator to develop an *in vitro* diagnostic, or IVD. Companion diagnostics can be used to identify patients likely to be more responsive to a particular therapy or at increased risk for serious side effects as a result of treatment with a particular therapeutic product. They may also be useful for monitoring the response to treatment for the purpose of adjusting treatment or doses to achieve improved safety or effectiveness.

IVDs are regulated by the FDA as medical devices, and it issued a final guidance document in 2014, entitled “*In Vitro* Companion Diagnostic Devices” that is intended to assist companies developing *in vitro* companion diagnostic devices and companies developing therapeutic products that depend on the use of a specific *in vitro* companion diagnostic for the safe and effective use of the product. The FDA defined an IVD companion diagnostic device as a device that provides information that is essential for the safe and effective use of a corresponding therapeutic product. The FDA also issued a draft guidance on July 15, 2016, entitled, “Principles for Codevelopment of an In Vitro Companion Diagnostic Device with a Therapeutic Product” to serve as a practical guide to assist therapeutic product sponsors and IVD sponsors in developing a therapeutic product and an accompanying IVD companion diagnostic, and on December 7, 2018, it published another draft guidance, “Developing and Labeling In Vitro Companion Diagnostic Devices for a Specific Group or Class of Oncology Therapeutic Products” which, if finalized, is intended to facilitate class labeling on diagnostic tests for oncology therapeutic products, where scientifically appropriate.

The FDA subsequently introduced the concept of complementary diagnostics that are distinct from companion diagnostics because they provide additional information about how a drug is used or identify patients who are likely to derive the greatest benefit from therapy without being required for the safe and effective use of that drug. The FDA has

not yet provided much guidance on the regulation and use of complementary diagnostics, but several have been approved.

The FDA indicated that it will apply a risk-based approach to determine the regulatory pathway for IVD companion and complementary diagnostic devices, as it does with all medical devices. This means that the regulatory pathway will depend on the level of risk to patients, based on the intended use of the IVD companion diagnostic device and the controls necessary to provide a reasonable assurance of safety and effectiveness. The two primary types of marketing pathways for medical devices are clearance of a premarket notification under Section 510(k) of the Federal Food, Drug, and Cosmetic Act, or 510(k), and approval of a premarket approval application, or PMA. We expect that any IVD companion diagnostic device developed for use with our drug candidates will utilize the PMA pathway and that a clinical trial performed under an investigational device exemption, or IDE, will have to be completed before the PMA may be submitted.

The FDA expects that the therapeutic sponsor will address the need for an IVD companion diagnostic device in its therapeutic product development plan and that, in most cases, the therapeutic product and its corresponding IVD companion diagnostic device will be developed contemporaneously. If the companion diagnostic test will be used to make critical treatment decisions such as patient selection, treatment assignment, or treatment arm, it will likely be considered a significant risk device for which a clinical trial will be required.

The sponsor of the IVD companion diagnostic device will be required to comply with the FDA's IDE requirements that apply to clinical trials of significant risk devices. If the diagnostic test and the therapeutic drug are studied together to support their respective approvals, the clinical trial must meet both the IDE and IND requirements.

PMAs must be supported by valid scientific evidence, which typically requires extensive data, including technical, preclinical, clinical, and manufacturing data, to demonstrate to the FDA's satisfaction the safety and effectiveness of the device. For diagnostic tests, a PMA typically includes data regarding analytical and clinical validation studies. As part of its review of the PMA, the FDA will conduct a pre-approval inspection of the manufacturing facility or facilities to ensure compliance with the Quality System Regulation, or QSR, which requires manufacturers to follow design, testing, control, documentation, and other quality assurance procedures. FDA review of an initial PMA may require several years to complete.

After approval, the use of an IVD companion diagnostic device with a therapeutic product will be stipulated in the instructions for use in the labeling of both the diagnostic device and the corresponding therapeutic product. In addition, a diagnostic test that was approved through the PMA process or one that was cleared through the 510(k) process and placed on the market will be subject to many of the same regulatory requirements that apply to approved drugs.

U.S. Review and Approval Processes

The results of product development, preclinical and other non-clinical studies, and clinical trials, along with descriptions of the manufacturing process, analytical tests conducted on the chemistry of the drug, proposed labeling, and other relevant information are submitted to the FDA as part of an NDA or BLA requesting approval to market the product. The submission of an NDA or BLA is subject to the payment of user fees; a waiver of such fees may be obtained under certain limited circumstances. The FDA reviews all NDAs and BLAs submitted to ensure that they are sufficiently complete for substantive review before it accepts them for filing. The FDA may request additional information rather than accept an NDA or BLA for filing. In this event, the NDA or BLA must be resubmitted with the additional information. The resubmitted application also is subject to review before the FDA accepts it for filing. Once the submission is accepted for filing, the FDA begins an in-depth substantive review. FDA may refer the NDA or BLA to an advisory committee for review, evaluation, and recommendation as to whether the application should be approved and under what conditions. The FDA is not bound by the recommendation of an advisory committee, but it generally follows such recommendations. The approval process is lengthy and often difficult, and the FDA may refuse to approve an NDA or BLA if the applicable regulatory criteria are not satisfied or may require additional clinical or other data and information. Even if such data and information are submitted, the FDA may ultimately decide that the NDA or BLA does not satisfy the criteria for approval. Data obtained from clinical trials are not always conclusive and the FDA may interpret data differently than we interpret the same data. The FDA reviews an NDA to determine, among other things, whether a product is safe and effective for its intended use and whether its manufacturing is cGMP-compliant to assure and preserve the product's identity, strength, quality, and purity. The FDA reviews a BLA to determine, among other things whether the product is safe, pure, and potent and the facility in which it is manufactured, processed, packed, or held meets standards designed to assure the product's continued safety, purity, and potency. Before approving an NDA or BLA, the FDA will inspect the facility or facilities where the product is manufactured.

NDA or BLAs receive either standard or priority review. A drug representing a significant improvement in treatment, prevention, or diagnosis of disease may receive priority review. Priority review for an NDA for a new molecular entity and original BLAs will be 6 months from the date that the NDA or BLA is filed. In addition, products studied for their safety and effectiveness in treating serious or life-threatening illnesses and that provide meaningful therapeutic benefit over existing treatments may receive accelerated approval and may be approved on the basis of adequate and well-controlled clinical trials establishing that the drug product has an effect on a surrogate endpoint that is reasonably likely to predict clinical benefit or on the basis of an effect on a clinical endpoint other than survival or irreversible morbidity. As a condition of approval, the FDA may require that a sponsor of a drug receiving accelerated approval perform adequate and well-controlled Phase IV clinical trials. Priority review and accelerated approval do not change the standards for approval, but may expedite the approval process.

After the FDA evaluates an NDA or BLA, it will issue an approval letter or a Complete Response Letter. An approval letter authorizes commercial marketing of the drug with prescribing information for specific indications. A Complete Response Letter indicates that the review cycle of the application is complete and the application will not be approved in its present form. A Complete Response Letter usually describes the specific deficiencies in the NDA or BLA identified by the FDA and may require additional clinical data, such as an additional Phase III trial or other significant and time-consuming requirements related to clinical trials, nonclinical studies, or manufacturing. If a Complete Response Letter is issued, the sponsor must resubmit the NDA or BLA, addressing all of the deficiencies identified in the letter, or withdraw the application. Even if such data and information are submitted, the FDA may decide that the NDA or BLA does not satisfy the criteria for approval.

If a product receives regulatory approval, the approval may be significantly limited to specific diseases and dosages or the indications for use may otherwise be limited, which could restrict the commercial value of the product. In addition, the FDA may require a sponsor to conduct Phase IV testing which involves clinical trials designed to further assess a drug's safety and effectiveness after NDA or BLA approval, and may require testing and surveillance programs to monitor the safety of approved products which have been commercialized. The FDA may also place other conditions on approval including the requirement for a risk evaluation and mitigation strategy, or REMS, to assure the safe use of the drug. If the FDA concludes a REMS is needed, the sponsor of the NDA or BLA must submit a proposed REMS. The FDA will not approve the NDA or BLA without an approved REMS, if required. A REMS could include medication guides, physician communication plans, or other elements to assure safe use, such as restricted distribution methods, patient registries, and other risk minimization tools. Any of these limitations on approval or marketing could restrict the commercial promotion, distribution, prescription, or dispensing of products. Marketing approval may be withdrawn for non-compliance with regulatory requirements or if problems occur following initial marketing.

The Pediatric Research Equity Act, or PREA, requires a sponsor to conduct pediatric clinical trials for most drugs and biologics, for a new active ingredient, new indication, new dosage form, new dosing regimen, or new route of administration. Under PREA, original NDAs, BLAs, and supplements thereto, must contain a pediatric assessment unless the sponsor has received a deferral or waiver. The required assessment must evaluate the safety and effectiveness of the product for the claimed indications in all relevant pediatric subpopulations and support dosing and administration for each pediatric subpopulation for which the product is safe and effective. The sponsor or FDA may request a deferral of pediatric clinical trials for some or all of the pediatric subpopulations. A deferral may be granted for several reasons, including a finding that the drug or biologic is ready for approval for use in adults before pediatric clinical trials are complete or that additional safety or effectiveness data need to be collected before the pediatric clinical trials begin. Orphan indications are exempt from PREA. The FDA must send a non-compliance letter to any sponsor that fails to submit the required assessment, keep a deferral current, or fails to submit a request for approval of a pediatric formulation.

Patent Term Restoration and Marketing Exclusivity

Depending upon the timing, duration, and specifics of FDA approval of our drugs, some of our U.S. patents may be eligible for limited patent term extension under the Drug Price Competition and Patent Term Restoration Act of 1984, referred to as the Hatch-Waxman Amendments. The Hatch-Waxman Amendments permit a patent restoration term of up to five years as compensation for patent term lost during product development and the FDA regulatory review process. However, patent term restoration cannot extend the remaining term of a patent beyond a total of 14 years from the product's approval date. The patent term restoration period is generally one-half the time between the effective date of an IND, and the submission date of an NDA or BLA, plus the time between the submission date of an NDA or BLA and the approval of that application. Only one patent applicable to an approved drug is eligible for the extension, and the extension must be applied for prior to expiration of the patent. The U.S. Patent and Trademark Office, in consultation with the FDA, reviews and approves the application for any patent term extension or restoration. In the future, we intend to apply for restorations of patent term for some of our currently owned or licensed patents to add patent life beyond

their current expiration date, depending on the expected length of clinical trials and other factors involved in the filing of the relevant NDA.

Pediatric exclusivity is a type of marketing exclusivity available in the U.S. Under the Best Pharmaceuticals for Children Act, or BPCA, an additional six months of marketing exclusivity may be available if a sponsor conducts clinical trials in children in response to a written request from the FDA, or a Written Request. If the Written Request does not include clinical trials in neonates, the FDA is required to include its rationale for not requesting those clinical trials. The FDA may request studies on approved or unapproved indications in separate Written Requests. The issuance of a Written Request does not require the sponsor to undertake the described clinical trials. To date, we have not received any Written Requests.

Biologics Price Competition and Innovation Act of 2009

The Patient Protection and Affordable Care Act which included the Biologics Price Competition and Innovation Act of 2009, or BPCIA, amended the PHSA to create an abbreviated approval pathway for two types of “generic” biologics—biosimilars and interchangeable biologic products, and provides for a twelve-year data exclusivity period for the first approved biological product, or reference product, against which a biosimilar or interchangeable application is evaluated; however if pediatric clinical trials are performed and accepted by the FDA, the twelve-year data exclusivity period will be extended for an additional six months. A biosimilar product is defined as one that is highly similar to a reference product notwithstanding minor differences in clinically inactive components and for which there are no clinically meaningful differences between the biological product and the reference product in terms of the safety, purity, and potency of the product. An interchangeable product is a biosimilar product that meets additional requirements that show, among other things, that the product will produce the same clinical result as the reference product in any given patient. In addition, for products administered to a patient more than once, the effects of switching back and forth between the interchangeable product and a reference product on safety and efficacy will have to be evaluated. An interchangeable product may be substituted for the reference product without the intervention of the health care provider who prescribed the reference product.

The biosimilar applicant must demonstrate that the product is biosimilar based on data from (1) analytical studies showing that the biosimilar product is highly similar to the reference product; (2) animal studies (including toxicity); and (3) one or more clinical trials to demonstrate safety, purity, and potency in one or more appropriate conditions of use for which the reference product is approved. In addition, the applicant must show that the biosimilar and reference products have the same mechanism of action for the conditions of use on the label, route of administration, dosage, and strength, and the production facility must meet standards designed to assure product safety, purity, and potency.

An application for a biosimilar product may not be submitted until four years after the date on which the reference product was first approved. The first approved interchangeable biologic product will be granted an exclusivity period of up to one year after it is first commercially marketed, but the exclusivity period may be shortened under certain circumstances.

The FDA has issued a number of final and draft guidance documents in order to implement the law and will likely continue to publish new guidance as new issues relating to biosimilars and interchangeability are identified. The guidance documents provide FDA’s current thinking on approaches to demonstrating that a proposed biological product is biosimilar to a reference product. Although the FDA intends to issue additional guidance documents in the future, the absence of final guidance documents covering all biosimilars issues does not prevent a sponsor from seeking licensure of a biosimilar under the BPCIA, as evidenced by the biosimilar products already approved by the FDA.

Orphan Drug Designation

Under the Orphan Drug Act, the FDA may grant orphan drug designation to a drug intended to treat a rare disease or condition, which is generally a disease or condition that affects fewer than 200,000 individuals in the U.S., or more than 200,000 individuals in the U.S. and for which there is no reasonable expectation that the cost of developing and making available in the U.S. a drug for this type of disease or condition will be recovered from sales in the U.S. for that drug. Orphan drug designation must be requested before submitting an NDA or BLA. After the FDA grants orphan drug designation, the identity of the therapeutic agent and its potential orphan use will be disclosed publicly by the FDA; the posting will also indicate whether a drug is no longer designated as an orphan drug. More than one product candidate may receive an orphan drug designation for the same indication. Orphan drug designation does not convey any advantage in or shorten the duration of the regulatory review and approval process.

If a product that has orphan drug designation subsequently receives the first FDA approval for the disease for which it has such designation, the product is entitled to seven years of orphan product exclusivity, except in very limited

circumstances. The FDA issued a final rule intended to clarify what constitutes some of those limited circumstances. For example, the FDA will not recognize orphan drug exclusive approval if a sponsor fails to demonstrate upon approval that the drug is clinically superior to a previously approved drug, regardless of whether or not the approved drug was designated an orphan drug or had orphan drug exclusivity. Thus, orphan drug exclusivity also could block the approval of one of our products for seven years if a competitor obtains approval of the same drug as defined by the FDA and we are not able to show the clinical superiority of our drug or if our product candidate is determined to be contained within the competitor's product for the same indication or disease. The FDA continues to periodically provide additional clarification, and in July 2018 published a final guidance entitled, "Clarification of Orphan Designation of Drugs and Biologics for Pediatric Subpopulations of Common Diseases,"

Mirvetuximab soravtansine has been granted orphan drug designation by the FDA in the United States, and orphan medicinal product status by the European Medicines Agency, or EMA, in the European Union for the treatment of ovarian cancer. In the U.S., orphan drug designation provides us with seven years of market exclusivity that begins once mirvetuximab soravtansine receives FDA marketing approval for the use for which the orphan drug status was granted. In the EU, orphan designation will provide us with ten years of market exclusivity that begins after mirvetuximab soravtansine receives marketing authorization for the use for which it was granted. We may pursue these designations for other indications for other product candidates intended for qualifying patient populations.

Expedited Review and Approval; Breakthrough Therapy Designation

The FDA has various programs, including Fast Track, priority review, and accelerated approval, that are intended to expedite or simplify the process for reviewing drugs, and/or provide for approval on the basis of surrogate endpoints. Even if a drug qualifies for one or more of these programs, the FDA may later decide that the drug no longer meets the conditions for qualification or that the time period for FDA review or approval will not be shortened. Generally, drugs that may be eligible for these programs are those for serious or life-threatening conditions, those with the potential to address unmet medical needs, and those that offer meaningful benefits over existing treatments. For example, Fast Track is a process designed to facilitate the development, and expedite the review, of drugs to treat serious diseases and fill an unmet medical need. The request may be made at the time of IND submission and generally no later than the pre-BLA or pre-NDA meeting. The FDA will respond within 60 calendar days of receipt of the request. Priority review, which is requested at the time of BLA or NDA submission, is designed to give drugs that offer major advances in treatment or provide a treatment where no adequate therapy exists an initial review within six months as compared to a standard review time of ten months. Although Fast Track and priority review do not affect the standards for approval, the FDA will attempt to facilitate early and frequent meetings with a sponsor of a Fast Track designated drug and expedite review of the application for a drug designated for priority review. Accelerated approval provides an earlier approval of drugs to treat serious diseases, and that fill an unmet medical need based on a surrogate endpoint, which is a laboratory measurement or physical sign used as an indirect or substitute measurement representing a clinically meaningful outcome. Discussions with the FDA about the feasibility of an accelerated approval typically begin early in the development of the drug in order to identify, among other things, an appropriate endpoint. As a condition of approval, the FDA may require that a sponsor of a drug receiving accelerated approval perform post-marketing clinical trials to confirm the appropriateness of the surrogate marker trial. Mirvetuximab soravtansine was granted Fast Track designation by the FDA for the treatment of patients with medium to high FR α -positive platinum-resistant epithelial ovarian cancer who received at least one but no more than three prior systemic treatment regimens and for whom single-agent chemotherapy is appropriate as the next line of therapy.

In the Food and Drug Administration Safety and Improvement Act, or FDASIA, Congress encouraged the FDA to utilize innovative and flexible approaches to the assessment of products under accelerated approval. The law required the FDA to issue related draft guidance within a year after the law's enactment and also promulgate confirming regulatory changes. The FDA published a final guidance on May 30, 2014, entitled "Expedited Programs for Serious Conditions—Drugs and Biologics." One of the expedited programs added by FDASIA is that for Breakthrough Therapy. A Breakthrough Therapy designation is designed to expedite the development and review of drugs that are intended to treat a serious condition where preliminary clinical evidence indicates that the drug may demonstrate substantial improvement over available therapy on a clinically significant endpoint(s). A sponsor may request Breakthrough Therapy designation at the time that the IND is submitted, or no later than at the end-of-Phase II meeting. The FDA will respond to a Breakthrough Therapy designation request within sixty days of receipt of the request. A drug that receives Breakthrough Therapy designation is eligible for all fast track designation features, intensive guidance on an efficient drug development program, beginning as early as Phase I, and commitment from the FDA involving senior managers.

Post-Approval Requirements

Once an approval is granted, the FDA may withdraw the approval if compliance with regulatory standards is not maintained or if problems occur after the product reaches the market. Later discovery of previously unknown problems with a product may result in restrictions on the product or even complete withdrawal of the product from the market. After approval, some types of changes to the approved product, such as adding new indications, certain manufacturing changes, and additional labeling claims, are subject to further FDA review and approval. Drug manufacturers and other entities involved in the manufacture and distribution of approved drugs are required to register their establishments with the FDA and certain state agencies, and are subject to periodic unannounced inspections by the FDA and certain state agencies for compliance with cGMP and other laws and regulations. We rely, and expect to continue to rely, on third parties for the production of clinical and commercial quantities of our products. Future inspections by the FDA and other regulatory agencies may identify compliance issues at the facilities of our contract manufacturers that may disrupt production or distribution, or require substantial resources to correct.

Any drug products manufactured or distributed by us or our partners pursuant to FDA approvals are subject to continuing regulation by the FDA, including, among other things, record-keeping requirements, reporting of adverse experiences with the drug, providing the FDA with updated safety and efficacy information, drug sampling and distribution requirements, complying with certain electronic records and signature requirements, and complying with FDA promotion and advertising requirements. FDA strictly regulates labeling, advertising, promotion, and other types of information on products that are placed on the market. Drugs may be promoted only for the approved indications and in accordance with the provisions of the approved label.

From time to time, legislation is drafted, introduced, and passed in Congress that could significantly change the statutory provisions governing the approval, manufacturing, and marketing of products regulated by the FDA. It is impossible to predict whether further legislative changes will be enacted, or FDA regulations, guidance, or interpretations changed or what the impact of such changes, if any, may be.

Other Healthcare Laws

Although we currently do not have any products on the market, we will be subject to additional healthcare regulation and enforcement by the federal government and by authorities in the states and other countries in which we conduct our business after a product is approved and commercialized. Such laws include, without limitation, state and federal anti-kickback, fraud and abuse, false claims, privacy and security and physician sunshine laws and regulations. If our operations are found to be in violation of any of such laws or any other governmental regulations that apply to us, we may be subject to penalties, including, without limitation, administrative, civil and criminal penalties, damages, fines, disgorgement, the curtailment or restructuring of our operations, exclusion from participation in federal and state healthcare programs, and imprisonment, any of which could adversely affect our ability to operate our business and our financial results.

Foreign Regulation

In addition to regulations in the U.S., we will be subject to a variety of foreign regulations governing clinical trials and commercial sales and distribution of our products. Whether or not we obtain FDA approval for a product, we must obtain approval by the comparable regulatory authorities of foreign countries or economic areas, such as the European Union, before we may commence clinical trials or market products in those countries or areas. The approval process and requirements governing the conduct of clinical trials, product licensing, pricing, and reimbursement vary greatly from place to place, and the time may be longer or shorter than that required for FDA approval.

Under European Union regulatory systems, a company may submit marketing authorization applications either under a centralized or decentralized procedure. The centralized procedure, which is compulsory for medicinal products produced by biotechnology or those medicinal products containing new active substances for specific indications such as the treatment of AIDS, cancer, neurodegenerative disorders, diabetes, viral diseases, and designated orphan medicines, and optional for other medicines which are highly innovative. Under the centralized procedure, a marketing application is submitted to the European Medicines Agency (EMA) where it will be evaluated by the Committee for Medicinal Products for Human Use. A favorable opinion typically results in the grant by the EMA of a single marketing authorization that is valid for all European Union member states within 67 days of receipt of the opinion. The initial marketing authorization is valid for five years, but once renewed is usually valid for an unlimited period. The decentralized procedure provides for approval by one or more “concerned” member states based on an assessment of an application performed by one member state, known as the “reference” member state. Under the decentralized approval procedure, an applicant submits an application, or dossier, and related materials to the reference member state and concerned member states. The reference member state prepares a draft assessment and drafts of the related materials

within 120 days after receipt of a valid application. Within 90 days of receiving the reference member state's assessment report, each concerned member state must decide whether to approve the assessment report and related materials. If a member state does not recognize the marketing authorization, the disputed points are eventually referred to the EMA, whose decision is binding on all member states.

As in the U.S., we may apply for designation of a product as an orphan drug for the treatment of a specific indication in the European Union before the application for marketing authorization is made. Orphan drugs in Europe enjoy economic and marketing benefits, including up to 10 years of market exclusivity for the approved indication unless another applicant can show that its product is safer, more effective, or otherwise clinically superior to the orphan-designated product.

Reimbursement

Sales of pharmaceutical products depend in significant part on the availability of third-party reimbursement. Third-party payers include government healthcare programs such as Medicare, managed care providers, private health insurers, and other organizations. We anticipate third-party payers will provide reimbursement for our products. However, these third-party payers are increasingly challenging the price and examining the cost-effectiveness of medical products and services. In addition, significant uncertainty exists as to the reimbursement status of newly approved healthcare products. We have incorporated certain health outcomes measures in our clinical studies, but may need to conduct expensive additional pharmacoeconomic studies in order to demonstrate the cost-effectiveness of our products. Our product candidates may not be considered cost-effective. It is time consuming and expensive for us to seek reimbursement from third-party payers. Reimbursement may not be available or sufficient to allow us to sell our products on a competitive and profitable basis.

Medicare is a federal healthcare program administered by the federal government that covers individuals age 65 and over as well as individuals with certain disabilities. Drugs may be covered under one or more sections of Medicare depending on the nature of the drug and the conditions associated with and site of administration. For example, under Part D, Medicare beneficiaries may enroll in prescription drug plans offered by private entities which provide coverage for outpatient prescription drugs. Part D plans include both stand-alone prescription drug benefit plans and prescription drug coverage as a supplement to Medicare Advantage plans. Unlike Medicare Part A and B, Part D coverage is not standardized. Part D prescription drug plan sponsors are not required to pay for all covered Part D drugs, and each drug plan can develop its own drug formulary that identifies which drugs it will cover and at what tier or level.

Medicare Part B covers most injectable drugs given in an in-patient setting and some drugs administered by a licensed medical provider in hospital outpatient departments and doctors' offices. Medicare Part B is administered by Medicare Administrative Contractors, which generally have the responsibility of making coverage decisions. Subject to certain payment adjustments and limits, Medicare generally pays for a Part B covered drug based on a percentage of manufacturer-reported average sales price which is regularly updated. We believe that most of our drugs, when approved, will be subject to the Medicare Part B rules.

The American Recovery and Reinvestment Act of 2009 provides funding for the federal government to compare the effectiveness of different treatments for the same illness. A plan for this research will be developed by the Department of Health and Human Services, the Agency for Healthcare Research and Quality and the National Institutes for Health, and periodic reports on the status of the research and related expenditures will be made to Congress. Although the results of the comparative effectiveness studies are not intended to mandate coverage policies for public or private payers, it is not clear what effect, if any, the research will have on the sales of our product candidates, if any such product or the condition that it is intended to treat is the subject of a study. It is also possible that comparative effectiveness research demonstrating benefits in a competitor's product could adversely affect the sales of our product candidates. If third-party payers do not consider our products to be cost-effective compared to other available therapies, they may not cover our products after approval as a benefit under their plans or, if they do, the level of payment may not be sufficient to allow us to sell our products on a profitable basis.

We expect that there will continue to be a number of federal and state proposals to implement governmental pricing controls and limit the growth of healthcare costs, including the cost of prescription drugs. For example, the Patient Protection and Affordable Care Act, as amended by the Health Care and Education Affordability Reconciliation Act of 2010 (collectively, ACA) enacted in March 2010, was expected to have a significant impact on the health care industry and result in expanded coverage for the uninsured. With regard to pharmaceutical products, among other things, ACA was expected to expand and increase industry rebates for drugs covered under Medicaid programs and make changes to the coverage requirements under the Medicare Part D program. We cannot predict the impact of ACA on pharmaceutical companies as many of the ACA reforms require the promulgation of detailed regulations implementing the statutory provisions which has not yet occurred. In addition, some members of Congress and the President continue

to express their strong desire to repeal the ACA, and as a result certain sections of the ACA have not been fully implemented or effectively repealed; for example, as part of the Tax Cuts and Jobs Act, the U.S. Congress eliminated the ACA's individual mandate. These challenges add to the uncertainty of the changes enacted as part of ACA. Moreover, President Trump ran for office on a platform that supported the repeal of the ACA and one of his first actions after his inauguration was to sign an Executive Order commanding federal agencies to try to waive or delay requirements of the ACA that impose economic or regulatory burdens on states, families, the health-care industry and others. The Order also declares that the administration will seek the "prompt repeal" of the law and that the government should prepare to "afford the states more flexibility and control to create a more free and open healthcare market." At this time, the immediate impact of the ACA is not clear.

In addition, in some foreign countries, the proposed pricing for a drug must be approved before it may be lawfully marketed. The requirements governing drug pricing vary widely from country to country. For example, the European Union provides options for its member states to restrict the range of medicinal products for which their national health insurance systems provide reimbursement and to control the prices of medicinal products for human use. A member state may approve a specific price for the medicinal product or it may instead adopt a system of direct or indirect controls on the profitability of the company placing the medicinal product on the market. There can be no assurance that any country that has price controls or reimbursement limitations for pharmaceutical products will allow favorable reimbursement and pricing arrangements for any of our products. Historically, products launched in the European Union do not follow price structures of the U.S. and generally tend to be significantly lower.

Research and Development Spending

During the years ended December 31, 2019, 2018, and 2017, we spent \$114.5, \$174.5 and \$139.7 million, respectively, on research and development activities.

Manufacturing

We contract with third-party contract manufacturers, or CMOs, for the manufacture of our product candidates for both our clinical and potential commercial needs. Our CMO network manufactures antibody, linker, and payload, conjugates the foregoing to create bulk drug substance of our product candidates, and processes the bulk drug substance into vialled and labeled drug product for use in humans. As a result of the closure of our Norwood facility in 2018, we no longer operate manufacturing facilities for the production of our product candidates for clinical use, and we have no plans to build our own clinical or commercial scale manufacturing capabilities. Although we are reliant on third parties to manufacture our product candidates, we have personnel with extensive manufacturing experience to oversee the relationships with our CMOs.

CMOs are subject to extensive governmental regulations and we depend on them to manufacture our product candidates in accordance with cGMP. We have an established quality assurance program to ensure that the CMOs involved in the manufacture of product candidates do so in accordance with cGMP and other applicable U.S. and foreign regulations. We believe that our current CMO network complies with such regulations.

Employees

As of December 31, 2019, we had 75 full-time employees, of whom 52 were engaged in research and development activities. Of the 52 research and development employees, 39 employees hold post-graduate degrees, of which 13 hold Ph.D. degrees and 3 hold M.D. degrees. We consider our relations with our employees to be good. None of our employees is covered by a collective bargaining agreement.

We have entered into confidentiality agreements with all of our employees, members of our board of directors, and consultants. Further, we have entered into assignment of invention agreements with all of our employees.

In June 2019, the Board of Directors approved a plan to restructure the business to focus resources on continued development of mirvetuximab soravtansine and a select portfolio of three earlier-stage product candidates, resulting in a significant reduction of our workforce, with a majority of these employees separating from the business by mid-July 2019 and most of the remaining affected employees transitioning over varying periods of time of up to 12 months.

In February 2018, we determined to implement a new operating model that will rely on external manufacturing and quality testing for drug substance and drug product for our development programs. The implementation of this new operating model led to the ramp-down of manufacturing and quality activities at our Norwood facility during 2018, with a full decommissioning of the facility occurring in early 2019.

Third-Party Trademarks

Herceptin and Kadcyca are registered trademarks of Genentech, Inc. Probody is a trademark of CytomX.

Corporate Information

We were organized as a Massachusetts corporation in March 1981. Our principal offices are located at 830 Winter Street, Waltham, Massachusetts 02451, and our telephone number is (781) 895-0600. Our internet address is www.immunogen.com. Our annual reports on Form 10-K, quarterly reports on Form 10-Q and current reports on Form 8-K, and all amendments to those reports, are available to you free of charge through the “Investors & Media – Financials & Filings - SEC Filings” section of our website as soon as reasonably practicable after those materials have been electronically filed with, or furnished to, the Securities and Exchange Commission. Please note that the information contained on the web site is not a part of this annual report on Form 10-K.

Item 1A. Risk Factors

INVESTING IN OUR COMMON STOCK INVOLVES A HIGH DEGREE OF RISK. BEFORE DECIDING WHETHER TO INVEST IN OUR COMMON STOCK, YOU SHOULD CAREFULLY CONSIDER THE RISKS DESCRIBED BELOW, TOGETHER WITH THE OTHER INFORMATION CONTAINED IN THIS ANNUAL REPORT ON FORM 10-K, INCLUDING OUR CONSOLIDATED FINANCIAL STATEMENTS AND RELATED NOTES. THE RISKS AND UNCERTAINTIES DESCRIBED BELOW ARE THOSE THAT WE CURRENTLY BELIEVE MAY MATERIALLY AFFECT OUR COMPANY AND IF ANY OF THESE RISKS ACTUALLY OCCURS, OUR BUSINESS, FINANCIAL CONDITION, RESULTS OF OPERATIONS, OR CASH FLOW COULD BE SERIOUSLY HARMED. ADDITIONAL RISKS AND UNCERTAINTIES THAT WE ARE UNAWARE OF OR THAT WE CURRENTLY DEEM IMMATERIAL ALSO MAY BECOME IMPORTANT FACTORS THAT AFFECT OUR COMPANY AND MAY MATERIALLY IMPAIR OUR BUSINESS.

We have a history of operating losses and expect to incur significant additional operating losses and may never be profitable.

We have generated operating losses since our inception. As of December 31, 2019, we had an accumulated deficit of \$1.3 billion. We may never be profitable. We expect to incur substantial additional operating expenses over the next several years as our development, preclinical testing, clinical trials, and collaborator support activities continue. We intend to continue to invest significantly in our product candidates. We may encounter technological or regulatory difficulties as part of this development and commercialization process that we cannot overcome or remedy. Our revenues to date have been primarily from upfront and milestone payments, research and development support and clinical materials reimbursement from our collaborators, and from royalties received from the commercial sales of Kadcyra (which we sold partial cash rights to 2015 and the remainder in 2019). Because of the numerous risks and uncertainties associated with developing pharmaceutical drugs, we are unable to predict the extent of any future losses or when we will become profitable, if at all. In addition, our expenses could increase beyond expectations if we are required by the FDA or foreign regulatory agencies, to perform studies and clinical trials in addition to those that we currently anticipate, or if there are any delays in our or our partners completing clinical trials or the development of any of our product candidates. We do not expect to generate revenues from the commercial sale of our internal product candidates in the near term, and we may never generate revenues from the commercial sale of internal products. Even if we do successfully develop products that can be marketed and sold commercially, we will need to generate significant revenues from those products to achieve and maintain profitability. Even if we do become profitable, we may not be able to sustain or increase profitability on a quarterly or annual basis. Our failure to become and remain profitable would decrease the value of the company and could impair our ability to raise capital, maintain our development efforts, expand our business or continue our operations and may require us to raise additional capital that may dilute your ownership interest. A decline in the value of our company could also cause you to lose all or part of your investment.

If we are unable to obtain additional funding when needed, we may have to delay or scale back some of our programs or grant rights to third parties to develop and market our product candidates.

We will continue to expend substantial resources developing new and existing product candidates, including costs associated with research and development, acquiring new technologies, conducting preclinical studies and clinical trials, obtaining regulatory approvals and manufacturing products, establishing marketing and sales capabilities to commercialize our product candidates, as well as providing certain support to our collaborators in the development of their products. We believe that our current working capital, including the \$97.7 million in net proceeds raised from the sale of our common stock in a public offering in January 2020, and expected future collaborator payments will be sufficient to meet our current and projected operating and capital requirements for at least the next 12 months. Conducting preclinical studies and clinical trials is a time-consuming, expensive and uncertain process that can take years to complete, and we may never generate the necessary data or results required to obtain marketing approval and

achieve product sales. In addition, our product candidates, if approved, may not achieve commercial success. Our commercial revenues, if any, will be derived from sales of products that may not be commercially available for several years, if ever. Accordingly, we may need to continue to rely on additional financing to achieve our business objectives.

In addition, we cannot provide assurance that anticipated collaborator payments will, in fact, be received. Should such future collaborator payments not be received, we expect we could seek additional funding from other sources. We may elect or need to seek additional financing sooner due to a number of other factors as well, including:

- if either we incur higher than expected costs or we or any of our collaborators experience slower than expected progress in developing product candidates and obtaining regulatory approvals; and
- acquisition of technologies and other business opportunities that require financial commitments.

Additional funding may not be available to us in sufficient amounts, on favorable terms, or at all. We may raise additional funds through public or private financings, collaborative arrangements or other arrangements. Any additional fundraising efforts may divert our management from their day-to-day activities, which may adversely affect our ability to develop and commercialize our product candidates. Volatility in the financial markets have generally made equity and debt financing more difficult to obtain and may have a material adverse effect on our ability to meet our fundraising needs. Moreover, the terms of any financing may adversely affect the holdings or the rights of our stockholders and the issuance of additional securities, whether equity or debt, by us, or the possibility of such issuance, may cause the market price of our shares to decline. Debt financing, if available, may involve covenants that could restrict our business activities. If we are unable to raise additional funds through equity or debt financing when needed, we may be required to delay, scale back, or eliminate expenditures for some of our development programs, including restructuring our operations, refinancing or restructuring our debt, or grant rights to develop and market product candidates that we would otherwise prefer to internally develop and market. If we are required to grant such rights, the ultimate value of these product candidates to us may be reduced.

Our ability to use our net operating loss carryforwards and certain other tax attributes to offset future taxable income may be limited.

Under Sections 382 and 383 of the Internal Revenue Code of 1986, as amended, a corporation that undergoes an “ownership change,” is subject to limitations on its ability to use its pre-change net operating loss carryforwards, or NOLs, and other pre-change tax attributes (such as research tax credits) to offset its post-change income or taxes. For these purposes, an ownership change generally occurs where the equity ownership of one or more shareholders or groups of shareholders who owns at least 5% of a corporation’s stock increases its ownership by more than 50 percentage points over its lowest ownership percentage within a three-year period. We may have experienced such ownership changes in the past, and we may experience shifts in our stock ownership, some of which are outside ImmunoGen’s control. These ownership changes may subject our existing NOLs or credits to substantial limitations under Sections 382 and 383. Accordingly, we may not be able to utilize a material portion of our NOLs or credits. As of December 31, 2019, we had federal NOLs of approximately \$471.6 million available to reduce federal taxable income, if any, that begin to expire in 2028 through 2037, \$269.2 million of federal NOLs that can be carried forward indefinitely, and \$64.4 million of federal credit carryforwards that expire beginning in 2020. Limitations on our ability to utilize those NOLs to offset U.S. federal taxable income could potentially result in increased future tax liability to us. In addition, at the state level, there may be periods during which the use of NOLs is suspended or otherwise limited, which could accelerate or permanently increase state taxes owed.

If our ADC technology does not produce safe, effective, and commercially viable products or if such products fail to obtain or maintain FDA approval, our business will be severely harmed.

Our ADC technology yields novel product candidates for the treatment of cancer. To date, only one ADC using our technology, Kadcyla, has obtained marketing approval. Our ADC product candidates and/or our collaborators’ ADC product candidates may not prove to be safe, effective, or commercially viable treatments for cancer and as a result, our ADC technology may not result in any future meaningful benefits to us or for our current or potential collaborators. Furthermore, we are aware of only seven other compounds that are based on technology similar to our ADC technology that have obtained marketing approval by the FDA. If our ADC technology fails to generate product candidates that are safe, effective, and commercially viable treatments for cancer or such product candidates fail to obtain or maintain FDA approval, our business will be severely harmed. In March of 2019, we announced that our FORWARD I Phase 3 clinical trial evaluating mirvetuximab soravtansine compared to chemotherapy in women with FR α -positive, platinum-resistant ovarian cancer, did not meet the primary endpoint in either the entire treatment population or the pre-specified high FR α expression population. Based on post hoc exploratory analyses of the FORWARD I results and consultations with the FDA, we are conducting two new trials of mirvetuximab soravtansine, SORAYA and MIRASOL, to support the

potential approval of mirvetuximab soravtansine as a monotherapy. We are also continuing FORWARD II to assess mirvetuximab soravtansine as a combination therapy. Negative results in any of these ongoing clinical trials could cause us to discontinue further development of mirvetuximab soravtansine as a monotherapy, as combination therapy, or both, and may significantly harm our business and future prospects.

Clinical trials for our and our collaborators' product candidates will be lengthy and expensive, and their outcome is uncertain.

Before obtaining regulatory approval for the commercial sale of any product candidates, we and our collaborators must demonstrate through clinical testing that our product candidates are safe and effective for use in humans. Conducting clinical trials is a time-consuming, expensive, and uncertain process and typically requires years to complete. In our industry, the results from preclinical studies and early clinical trials often are not predictive of results obtained in later-stage clinical trials. Some compounds that have shown promising results in preclinical studies or early clinical trials subsequently fail to establish sufficient safety and efficacy data necessary to obtain regulatory approval. For example, despite encouraging results from earlier clinical trials of mirvetuximab soravtansine, our FORWARD I Phase 3 clinical trial evaluating mirvetuximab soravtansine compared to chemotherapy in women with FR α -positive, platinum-resistant ovarian cancer, did not meet the primary endpoint in either the entire treatment population or the pre-specified high FR α expression population. Based on post hoc exploratory analyses of the FORWARD I results and consultations with the FDA, we are conducting two new trials of mirvetuximab soravtansine, SORAYA and MIRASOL, to support the potential approval of mirvetuximab soravtansine as a monotherapy. The results of SORAYA and/or MIRASOL may not show positive results consistent with our post hoc exploratory analyses of the FORWARD I results or earlier successful trials of mirvetuximab soravtansine as monotherapy which would cause significant harm to our business and future prospects.

At any time during the clinical trials, we, our collaborators, or the FDA or other regulatory authority might delay or halt any clinical trials of our product candidates for various reasons, including:

- occurrence of unacceptable toxicities or side effects;
- ineffectiveness of the product candidate;
- insufficient drug supply, including delays in obtaining supplies/materials necessary for manufacturing such drugs;
- negative or inconclusive results from the clinical trials, or results that necessitate additional nonclinical studies or clinical trials;
- delays in obtaining or maintaining required approvals from institutions, review boards, or other reviewing entities at clinical sites;
- delays in patient enrollment;
- insufficient funding or a reprioritization of financial or other resources;
- our or our collaborators' inability to develop and obtain approval for any companion *in vitro* diagnostic devices that the FDA or other regulatory authority may conclude must be used with such product candidates to ensure their safe use; or
- other reasons that are internal to the businesses of our collaborators and third-party suppliers, which they may not share with us.

Any failure or substantial delay in successfully completing clinical trials and obtaining regulatory approval for our product candidates or our collaborators' product candidates could severely harm our business.

Inadequate funding for the FDA, the SEC, and other government agencies could hinder their ability to hire and retain key leadership and other personnel, prevent new products and services from being developed or commercialized in a timely manner, or otherwise prevent those agencies from performing normal business functions, which could negatively impact our business.

The ability of the FDA to review and approve new products can be affected by a variety of factors, including government budget and funding levels, ability to hire and retain key personnel and accept the payment of user fees, and statutory, regulatory, and policy changes. Average review times at the agency have fluctuated in recent years as a result. In addition, government funding of the SEC and other government agencies on which our operations may rely, including

those that fund research and development activities is subject to the political process, which is inherently fluid and unpredictable.

Disruptions at the FDA and other agencies may also slow the time necessary for new drugs to be reviewed and/or approved by necessary government agencies, which would adversely affect our business. For example, over the last several years, including December 22, 2018 to January 25, 2019, the U.S. government has shut down several times and certain regulatory agencies, such as the FDA and the SEC, have had to furlough employees and stop critical activities. If a prolonged government shutdown or a series of shutdowns occurs, it could significantly affect the ability of the FDA to timely review and process our regulatory submissions, which could have a material adverse effect on our business. Further, future government shutdowns could impact our ability to gain access to the public markets and obtain necessary capital in order to properly capitalize and continue our operations.

We may be subject to, or may in the future become subject to, U.S. federal and state and foreign laws and regulations imposing obligations on how we collect, use, disclose, store, and process personal information. Our actual or perceived failure to comply with such obligations could result in liability or reputational harm and adversely affect our business. Ensuring compliance with such laws could also impair our efforts to maintain and expand our customer base, and thereby decrease our revenue.

In many activities, including the conduct of clinical trials, we are subject to laws and regulations governing data privacy and the protection of health-related and other personal information. These laws and regulations govern our processing of personal data, including the collection, access, use, analysis, modification, storage, transfer, security breach notification, destruction, and disposal of personal data. We must comply with laws and regulations associated with the international transfer of personal data based on the location in which the personal data originates and the location in which such data are processed. While we strive to comply with all applicable privacy and security laws and regulations, legal standards for privacy continue to evolve and any failure or perceived failure to comply may result in proceedings or actions against us by government entities or others, or could cause reputational harm, which could have a material adverse effect on our business.

The legislative and regulatory landscape for privacy and data security continues to evolve. For example, the EU General Data Protection Regulation, or GDPR, which was effective as of May 25, 2018, introduced new data protection requirements in the European Union relating to the consent of the individuals to whom the personal data relate, the information provided to the individuals, the documentation we must retain, the security and confidentiality of the personal data, data breach notification, and the use of third party processors in connection with the processing of personal data. The GDPR has increased our responsibility and potential liability in relation to personal data that we process, and we may be required to put in place additional mechanisms to ensure compliance with the GDPR. However, our ongoing efforts related to compliance with the GDPR may not be successful and could increase our cost of doing business. In addition, data protection authorities of the different EU member states may interpret the GDPR differently, and guidance on implementation and compliance practices are often updated or otherwise revised, which adds to the complexity of processing personal data in the European Union. It is also not yet clear how the United Kingdom's withdrawal from the EU, or BREXIT, will affect the approval, distribution and marketing of medicinal products in the UK.

In the United States, California adopted the California Consumer Privacy Act of 2018, or CCPA, which became effective in January 2020. The CCPA has been characterized as the first "GDPR-like" privacy statute to be enacted in the United States because it mirrors a number of the key provisions of the EU GDPR. The CCPA establishes a new privacy framework for covered businesses by creating an expanded definition of personal information, establishing new data privacy rights for consumers in the State of California, imposing special rules on the collection of consumer data from minors, and creating a new and potentially severe statutory damages framework for violations of the CCPA and for businesses that fail to implement reasonable security procedures and practices to prevent data breaches.

We and our collaborators are subject to extensive government regulations and we and our collaborators may not be able to obtain necessary regulatory approvals.

We and our collaborators may not receive the regulatory approvals necessary to commercialize our product candidates, which would cause our business to be severely harmed. Pharmaceutical product candidates, including those in development by us and our collaborators, are subject to extensive and rigorous government regulation. The FDA regulates, among other things, the development, testing, manufacture, safety, record-keeping, labeling, storage, approval, advertising, promotion, sale, and distribution of pharmaceutical products. If our potential products or our collaborators' potential products are marketed outside of the United States, they will also be subject to extensive regulation by foreign governments. The regulatory review and approval process, which includes preclinical studies and clinical trials of each product candidate, is lengthy, complex, expensive and uncertain. Securing regulatory approval requires the submission of extensive preclinical and clinical data and supporting information to the authorities for each indication to establish the

product candidate's safety and efficacy. Data obtained from preclinical and other nonclinical studies and clinical trials are susceptible to varying interpretation, which may delay, limit or prevent regulatory approval. The approval process may take many years to complete and may involve ongoing requirements for post-marketing studies. Any FDA or other regulatory approvals of our or our collaborators' product candidates, once obtained, may be withdrawn. The effect of government regulation may be to:

- delay marketing of potential products for a considerable period of time;
- limit the indicated uses for which potential products may be marketed;
- impose costly requirements on our activities; and
- place us at a competitive disadvantage to other pharmaceutical and biotechnology companies.

We may encounter delays or rejections in the regulatory approval process because of additional government regulation from future legislation or administrative action or changes in regulatory policy during the period of product development, clinical trials, and regulatory review. Failure to comply with applicable regulatory requirements may result in criminal prosecution, civil penalties, recall or seizure of products, total or partial suspension of production or injunction, as well as other regulatory action against our product candidates or us. In addition, we are, or may become, subject to various federal, state, and local laws, regulations, and recommendations relating to safe working conditions, laboratory and manufacturing practices, the experimental use of animals, and the use and disposal of hazardous substances, including radioactive compounds and infectious disease agents, used in connection with our research work. If we fail to comply with the laws and regulations pertaining to our business, we may be subject to sanctions, including the temporary or permanent suspension of operations, product recalls, marketing restrictions and civil and criminal penalties.

Our and our collaborators' product candidates will remain subject to ongoing regulatory review even if they receive marketing approval. If we or our collaborators fail to comply with regulations applicable to approved products, these approvals could be lost and the sale of our or our collaborators' products could be suspended.

Even if we or our collaborators receive regulatory approval to market a particular product candidate, the approval could be conditioned on us or our collaborators conducting costly post-approval studies or could limit the indicated uses included in product labeling. Moreover, the product may later cause adverse effects that limit or prevent its widespread use, force us or our collaborators to withdraw it from the market, or impede or delay our or our collaborators' ability to obtain regulatory approvals in additional countries. In addition, the manufacturer of the product and its facilities will continue to be subject to regulatory review and periodic inspections to ensure adherence to applicable regulations. After receiving marketing approval, the manufacturing, labeling, packaging, adverse event reporting, storage, advertising, promotion, and record-keeping related to the product remain subject to extensive regulatory requirements. We do not have prior experience complying with regulations pertaining to products that have already received marketing approval and, therefore, we may be unable or slow to comply with existing regulations, including changes in existing regulatory requirements, or new regulations. Furthermore, our collaborators may be slow to adapt, or may never adapt, to changes in existing regulatory requirements or adoption of new regulatory requirements pertaining to products that have already received approval.

If we or our collaborators fail to comply with the regulatory requirements of the FDA and other applicable U.S. and foreign regulatory authorities, or if previously unknown problems with our or our partners' products, manufacturers, or manufacturing processes are discovered, we could be subject to administrative or judicially imposed sanctions, including:

- restrictions on the products, manufacturers, or manufacturing processes;
- warning letters;
- civil or criminal penalties;
- fines;
- injunctions;
- product seizures or detentions;
- import bans;
- voluntary or mandatory product recalls and publicity requirements;

- suspension or withdrawal of regulatory approvals;
- total or partial suspension of production; and
- refusal to approve pending applications for marketing approval of new drugs or supplements to approved applications.

Any one of these could have a material adverse effect on our business or financial condition.

If our collaborators fail to perform their obligations under our agreements with them, or determine not to continue with clinical trials for particular product candidates, our business could be severely affected.

The development and commercialization of our product candidates depends, in part, upon the formation and maintenance of collaborative arrangements. Collaborations provide an opportunity for us to:

- generate cash flow and revenue;
- fund some of the costs associated with our internal research and development, preclinical testing, clinical trials, and manufacturing;
- seek and obtain regulatory approvals faster than we could on our own;
- successfully commercialize existing and future product candidates; and
- secure access to targets which, due to intellectual property restrictions, would otherwise be unavailable to our technology.

If we fail to secure or maintain successful collaborative arrangements, the development and marketing of compounds that use our technology may be delayed, scaled back, or otherwise may not occur. In addition, we may be unable to negotiate other collaborative arrangements or, if necessary, modify our existing arrangements on acceptable terms. We cannot control the amount and timing of resources our collaborators may devote to our product candidates. Our collaborators may separately pursue competing product candidates, therapeutic approaches, or technologies to develop treatments for the diseases targeted by us or our collaborative efforts, or may decide, for reasons not known to us, to discontinue development of product candidates under our agreements with them. Any of our collaborators may slow or discontinue the development of a product candidate covered by a collaborative arrangement for reasons that can include, but are not limited to:

- a change in the collaborative partner's strategic focus as a result of merger, management changes, adverse business events, or other causes;
- a change in the priority of the product candidate relative to other programs in the collaborator's pipeline;
- a reassessment of the patent situation related to the compound or its target;
- a change in the anticipated competition for the product candidate;
- preclinical studies and clinical trial results; and
- a reduction in the financial resources the collaborator can or is willing to apply to the development of new compounds.

Even if our collaborators continue their collaborative arrangements with us, they may nevertheless determine not to actively pursue the development or commercialization of any resulting products. Also, our collaborators may fail to perform their obligations under the collaborative agreements or may be slow in performing their obligations. Our collaborators can terminate our collaborative agreements under certain conditions. The decision to advance a product that is covered by a collaborative agreement through clinical trials and ultimately to commercialization is, in some cases, in the discretion of our collaborators. If any collaborative partner were to terminate or breach our agreements, fail to complete its obligations to us in a timely manner, or decide to discontinue its development of a product candidate, our anticipated revenue from the agreement and from the development and commercialization of the products could be severely limited or eliminated. If we are not able to establish additional collaborations or any or all of our existing collaborations are terminated and we are not able to enter into alternative collaborations on acceptable terms, or at all, our continued development, manufacture and commercialization of our product candidates could be delayed or scaled back as we may not have the funds or capability to continue these activities. If our collaborators fail to successfully develop and commercialize ADC compounds, our business prospects could be severely harmed.

Our business and operations could suffer in the event of system failures.

We utilize information technology systems and networks to process, transmit and store electronic information in connection with our business activities. As use of digital technologies has increased, cyber incidents, including deliberate attacks and attempts to gain unauthorized access to computer systems and networks, have increased in frequency and sophistication. These threats pose a risk to the security of our systems and networks and the confidentiality, availability and integrity of our data. There can be no assurance that we will be successful in preventing cyber-attacks or successfully mitigating their effects.

Despite the implementation of security measures, our internal computer systems and those of our third-party contract research organizations, or CROs, and other contractors and consultants are vulnerable to damage from cyber-attack, computer viruses, unauthorized access, natural disasters, terrorism, war and telecommunication and electrical failures. Furthermore, we have little or no control over the security measures and computer systems of our third-party CROs and other contractors and consultants. 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 our product candidates could result in delays in our marketing 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.

We depend on a small number of collaborators for a substantial portion of our revenue. The loss of, or a material reduction in activity by, any one of these collaborators could result in a substantial decline in our revenue.

We have and will continue to have collaborations with a limited number of companies. As a result, our financial performance depends on the efforts and overall success of these companies. Also, the failure of any one of our collaborators to perform its obligations under its agreement with us, including making any royalty, milestone or other payments to us, could have an adverse effect on our financial condition. Further, any material reduction by any one of our collaborators in its level of commitment of resources, funding, personnel, and interest in continued development under its agreement with us could have an adverse effect on our financial condition. If a present or future collaborator of ours were to be involved in a business combination, the collaborator's continued pursuit and emphasis on our product development program could be delayed, diminished, or terminated.

Royalty rates under our license agreements with our collaborators may vary over the royalty term depending on our intellectual property rights and the existence of certain third-party competing products.

Most of our license agreements with our collaborators provide that the royalty rates are subject to downward adjustment in the absence of ImmunoGen patent rights covering various aspects of the manufacture, use, or sale of the products developed under such licenses, or if certain third-party products compete with the particular product covered by the license agreement.

We depend on our collaborators for the determination of royalty payments. We may not be able to detect errors and payment calculations may call for retroactive adjustments.

The royalty payments we may receive are determined by our collaborators based on their reported net sales. Each collaborative partner's calculation of the royalty payments is subject to and dependent upon the adequacy and accuracy of its sales and accounting functions, and errors may occur from time to time in the calculations made by a collaborative partner. Our agreement with Genentech provides us the right to audit the calculations and sales data for the associated royalty payments related to sales of Kadcyła; however, such audits may occur many months following our recognition of the royalty revenue, may require us to adjust our royalty revenues in later periods and generally require audit-related costs on our part.

If our product requirements for clinical trials are significantly higher than we estimated, the inability to procure additional antibody, or conjugation or fill/finish services in a timely manner could impair our ability to initiate or advance our clinical trials.

We rely on third-party suppliers to manufacture antibodies used in our own proprietary compounds. Due to the specific nature of the antibody and availability of production capacity, there is significant lead time required by these suppliers to provide us with the needed materials. If our antibody requirements for clinical materials to be manufactured are significantly higher than we estimated, we may not be able to readily procure additional antibody which would impair our ability to advance our clinical trials currently in process or initiate additional trials. We also rely on third parties to manufacture bulk drug substance and convert it into filled and finished vials of drug product for clinical use. If

our product requirements are significantly higher than we estimated, we may not be able to readily procure slots to manufacture bulk drug substance or to convert drug substance into filled and finished vials of drug product for clinical use. There can be no assurance that we will not have supply problems that could delay or stop our clinical trials or otherwise could have a material adverse effect on our business.

We currently rely on, and expect to continue to rely on, third-party manufacturers to produce our antibodies, linkers, payloads, drug substance, and drug product, and any delay or interruption in such manufacturers' operations could impair our ability to advance clinical trials and commercialization of our product candidates.

We rely on third-party contract manufacturers to produce sufficiently large quantities of drug materials that are and will be needed for clinical trials and commercialization of our potential products. We have established relationships with third-party manufacturers to provide materials for our clinical trials, and are developing relationships with these and other third-party manufacturers that we believe will be necessary to continue the development of our product candidates and to supply commercial quantities of these product candidates, if they are approved. Third-party manufacturers may not be able to meet our needs with respect to timing, quantity, or quality of materials. If we are unable to contract for a sufficient supply of needed materials on acceptable terms, or if we should encounter delays or difficulties in our relationships with manufacturers, our clinical trials may be delayed, thereby delaying the submission of applications for regulatory approval and the market introduction and subsequent commercialization of our potential products. Any such delays may lower our revenues and potential profitability.

The facilities used to manufacture our product candidates (drug substance and drug product) must be approved by the FDA (and other similar regulatory agencies outside the United States depending on where marketing authorizations are filed) before marketing authorizations are approved. Often, but not always, these inspections are triggered by marketing authorization submissions. We are completely dependent on our contract manufacturers for compliance with cGMPs in connection with the manufacture of our product candidates. If our contract manufacturers cannot successfully manufacture material that conforms to our specifications and the regulatory requirements of the FDA or others, we will not be able to use the products produced at their manufacturing facilities. In addition, we have no control over the ability of our contract manufacturers to maintain adequate quality control, quality assurance and qualified personnel. If the FDA or a comparable foreign regulatory authority finds that these facilities do not comply with cGMP, we may need to find alternative manufacturing facilities, which would significantly impact our ability to develop, obtain marketing approval for, or market our product candidates, if approved. Further, our failure, or the failure of our third party manufacturers, to comply with these or other applicable regulations could result in sanctions being imposed on us, including clinical holds, fines, injunctions, civil penalties, delays, suspension or withdrawal of approvals, license revocation, seizures or recalls of product candidates or drugs, if approved, operating restrictions and criminal prosecutions, any of which could significantly and adversely affect our business and supplies of our product candidates.

We are currently contractually required to obtain all of the DM4 used in mirvetuximab soravtansine from a single third-party manufacturer, and any delay or interruption in such manufacturer's operations could impair our ability to advance preclinical and clinical trials and commercialization of our product candidates and our collaborators' products candidates.

We rely on a sole third-party supplier, Società Italiana Corticosteroidi S.r.l, to manufacture the DM4 used in mirvetuximab soravtansine. Any delay or interruption in the operations of our sole third-party supplier and/or our supply of DM4 could lead to a delay or interruption in our manufacturing operations, preclinical studies, clinical trials, and commercialization of our product candidates and our collaborators' product candidates, which could negatively affect our business.

Unfavorable pricing regulations, third-party reimbursement practices, or healthcare reform initiatives applicable to our product candidates could limit our potential product revenue.

Regulations governing drug pricing and reimbursement vary widely from country to country. Some countries require approval of the sales price of a drug before it can be marketed. Some countries restrict the physicians that can authorize the use of more expensive medications. Some countries establish treatment guidelines to help limit the use of more expensive therapeutics and the pool of patients that receive them. In some countries, including the United States, third-party payers frequently seek discounts from list prices and are increasingly challenging the prices charged for medical products. Because our product candidates are in the development stage, we do not know the level of reimbursement, if any, we will receive for any products that we are able to successfully develop. If the reimbursement for any of our product candidates is inadequate in light of our development and other costs, our ability to achieve profitability would be affected.

We believe that the efforts of governments and third-party payers to contain or reduce the cost of healthcare will continue to affect the business and financial condition of pharmaceutical and biopharmaceutical companies. A number of legislative and regulatory proposals to change the healthcare system in the United States and other major healthcare markets have been proposed and adopted in recent years. For example, the Medicare Prescription Drug, Improvement and Modernization Act of 2003 created a limited prescription drug benefit for Medicare beneficiaries. While the program established by this statute may increase demand for any products that we are able to successfully develop, if we participate in this program, our prices will be negotiated with drug procurement organizations for Medicare beneficiaries and are likely to be lower than prices we might otherwise obtain. Non-Medicare third-party drug procurement organizations may also base the price they are willing to pay on the rate paid by drug procurement organizations for Medicare beneficiaries. The ACA, which became effective in 2010, was intended to broaden access to health insurance, reduce or constrain the growth of healthcare spending, enhance remedies against fraud and abuse, add new transparency requirements for the healthcare and health insurance industries, impose new taxes and fees on the health industry, and institute additional health policy reforms. It also requires discounts under the Medicare drug benefit program and increased rebates on drugs covered by Medicaid. In addition, the ACA imposes an annual fee, which will increase annually, on sales by branded pharmaceutical manufacturers. The financial impact of these discounts, increased rebates and fees, and the other provisions of the ACA on our business is unclear and there can be no assurance that our business will not be materially adversely affected by the ACA. The ACA has been under scrutiny by the U.S. Congress almost since its passage, and certain sections of the ACA have not been fully implemented or have effectively been repealed, for example, as part of the Tax Cuts and Jobs Act, the U.S. Congress eliminated the ACA's individual mandate. The longevity of other key provisions of the ACA continues to be uncertain. In addition, ongoing initiatives in the United States have increased and will continue to increase pressure on drug pricing. The announcement or adoption of any such initiative could have an adverse effect on potential revenues from any product candidate that we may successfully develop.

In 2016, the 21st Century Cures Act was signed into law. This law is intended to enable the acceleration of the discovery, development and delivery of 21st century cures, among other things. Provisions in that law, such as those applying to precision medicine, technical updates to clinical trial databases, and advancing new drug therapies, could apply directly or indirectly to our activities and those of our collaborators. At this point, however, it is not clear when that law will be fully implemented and what effect it may have on our business.

We currently do not have the direct sales, marketing, or distribution capabilities necessary to successfully commercialize our products on a large scale and may be unable to establish such capabilities.

We hold the worldwide rights to commercialize mirvetuximab soravtansine, and currently intend to commercialize mirvetuximab soravtansine ourselves in the United States and the European Union. Alternatively, we may choose to rely on third parties to market and sell mirvetuximab soravtansine in different territories, either through distributor or outlicensing arrangements. At this time, we do not have any significant direct sales, marketing or distribution capabilities. In addition, co-promotion or other marketing arrangements with third parties to commercialize mirvetuximab soravtansine or other future potential products could significantly limit the revenues we derive from these compounds, and these third parties may fail to commercialize our compounds successfully.

If our product candidates or those of our collaborators do not gain market acceptance, our business will suffer.

Even if clinical trials demonstrate the safety and efficacy of our and our collaborators' product candidates and the necessary regulatory approvals are obtained, our and our collaborators' products may not gain market acceptance among physicians, patients, healthcare payers, and other members of the medical community. The degree of market acceptance of any products that we or our collaborators develop will depend on a number of factors, including:

- their level of clinical efficacy and safety;
- their advantage over alternative treatment methods;
- our/the marketer's and our collaborators' ability to gain acceptable reimbursement and the reimbursement policies of government and other third-party payers; and
- the quality of the distribution capabilities of the party(ies) responsible to market and distribute the product(s).

Physicians may not prescribe any of our future products until such time as clinical data or other factors demonstrate the safety and efficacy of those products as compared to conventional drugs and other treatments. Even if the clinical safety and efficacy of our products are established, physicians may elect not to recommend the therapies for any number of other reasons, including whether the physicians are already using competing products that satisfy their

treatment objectives. If our products do not achieve significant market acceptance and use, we will not be able to recover the significant investment we have made in developing such products and our business will be severely harmed.

We may be unable to compete successfully.

The markets in which we compete are well established and intensely competitive. We may be unable to compete successfully against our current and future competitors. Our failure to compete successfully may result in lower volume sold, pricing reductions, reduced gross margins, and failure to achieve market acceptance for our potential products. Our competitors include research institutions, pharmaceutical companies and biotechnology companies, such as Pfizer, Seattle Genetics, Roche, Astellas, AstraZeneca/MedImmune, Daiichi Sankyo, GlaxoSmithKline, and AbbVie. Many of these organizations have substantially more experience and more capital, research and development, regulatory, manufacturing, human, and other resources than we do. As a result, they may:

- develop products that are safer or more effective than our product candidates;
- obtain FDA and other regulatory approvals or reach the market with their products more rapidly than we can, reducing the potential sales of our product candidates;
- devote greater resources to market or sell their products;
- adapt more quickly to new technologies and scientific advances;
- initiate or withstand substantial price competition more successfully than we can;
- have greater success in recruiting skilled scientific workers from the limited pool of available talent;
- more effectively negotiate third-party licensing and collaboration arrangements; and
- take advantage of acquisitions or other opportunities more readily than we can.

A number of pharmaceutical and biotechnology companies are currently developing products targeting the same types of cancer that we target, and some of our competitors' products have entered clinical trials or already are commercially available.

Our product candidates, if approved and commercialized, will also compete against well-established, existing, therapeutic products that are currently reimbursed by government healthcare programs, private health insurers, and health maintenance organizations. In addition, if our product candidates are approved and commercialized, we may face competition from biosimilars. The ACA, which included the Biologics Price Competition and Innovation Act of 2009, or BPCIA, amended the Public Health Service Act to create an abbreviated approval pathway for two types of "generic" biologics—biosimilars and interchangeable biologic products. The BPCIA establishes a pathway for the FDA approval of follow-on biologics and provides twelve years data exclusivity for reference products and an additional six months exclusivity period if pediatric studies are conducted. In Europe, EMA has issued guidelines for approving products through an abbreviated pathway, and biosimilars have been approved in Europe. If a biosimilar version of one of our potential products were approved in the United States or Europe, it could have a negative effect on sales and gross profits of the potential product and our financial condition.

We face and will continue to face intense competition from other companies for collaborative arrangements with pharmaceutical and biotechnology companies, for relationships with academic and research institutions, and for licenses to proprietary technology. In addition, we anticipate that we will face increased competition in the future as new companies enter our markets and as scientific developments surrounding antibody-based therapeutics for cancer continue to accelerate. While we will seek to expand our technological capabilities to remain competitive, research and development by others may render our technology or product candidates obsolete or noncompetitive or result in treatments or cures superior to any therapy developed by us.

If we are unable to protect our intellectual property rights adequately, the value of our technology and our product candidates could be diminished.

Our success depends in part on obtaining, maintaining, and enforcing our patents and other proprietary rights and our ability to avoid infringing the proprietary rights of others. We seek to protect our proprietary position by filing patent applications in the United States and in foreign countries that cover our novel product candidates and their uses, pharmaceutical formulations and dosages, and processes for the manufacture of them. Our patent portfolio currently includes both patents and patent applications. Patent law relating to the scope of claims in the biotechnology field in which we operate is still evolving, is surrounded by a great deal of uncertainty, and involves complex legal, scientific, and factual questions. To date, no consistent policy has emerged regarding the breadth of claims allowed in

biotechnology patents. Accordingly, our pending patent applications may not result in issued patents or in patent claims as broad as in the original applications. Although we own numerous patents, the issuance of a patent is not conclusive as to its validity or enforceability. Through litigation, a third party may challenge the validity or enforceability of a patent after its issuance. In addition, the patent prosecution process is expensive and time-consuming. We may not be able to file and prosecute all necessary or desirable patent applications at a reasonable cost or in a timely manner. We may choose not to seek patent protection for certain innovations and may choose not to pursue patent protection in certain jurisdictions. Under the laws of certain jurisdictions, patents or other intellectual property rights may be unavailable or limited in scope. It is also possible that we will fail to identify patentable aspects of our research and development before it is too late to obtain patent protection.

Patents and patent applications owned or licensed by us may become the subject of interference, opposition, nullity, or other proceedings in a court or patent office in the United States or in a foreign jurisdiction to determine validity, enforceability, or priority of invention, which could result in substantial cost to us. An adverse decision in such a proceeding may result in our loss of rights under a patent or patent application. It is unclear how much protection, if any, will be given to our patents if we attempt to enforce them or if they are challenged in court or in other proceedings. A competitor may successfully invalidate our patents or a challenge could result in limitations of the patents' coverage. In addition, the cost of litigation or interference proceedings to uphold the validity of patents can be substantial. If we are unsuccessful in these proceedings, third parties may be able to use our patented technology without paying us licensing fees or royalties. Moreover, competitors may infringe our patents or successfully avoid them through design innovation. To prevent infringement or unauthorized use, we may need to file infringement claims, which are expensive and time-consuming. In an infringement proceeding, a court may decide that a patent of ours is not valid. Even if the validity of our patents were upheld, a court may refuse to stop the other party from using the technology at issue on the ground that its activities are not covered by our patents.

The Leahy-Smith America Invents Act became fully effective in 2013. In general, the legislation attempts to address issues surrounding the enforceability of patents and the increase in patent litigation by, among other things, moving to a first inventor-to-file system, establishing new procedures for challenging patents, and establishing different methods for invalidating patents. Governmental rule-making implementing the new statute is evolving and will continue to introduce new substantive rules and procedures, particularly with regard to post-grant proceedings such as *inter partes* review and post-grant review. In due course, the courts will interpret various aspects of the law and related agency rules in ways that we cannot predict, potentially making it easier for competitors and other interested parties to challenge our patents, which, if successful, could have a material adverse effect on our business and prospects. In addition, the U.S. Supreme Court has become increasingly active in reviewing U.S. patent law in recent years, and the extent to which recent decisions will affect our ability to enforce certain types of claims under our U.S. patents or obtain future patents in certain areas is difficult to predict at this time.

Policing unauthorized use of our intellectual property is difficult, and we may not be able to prevent misappropriation of our proprietary rights, particularly in countries where the laws may not protect such rights as fully as in the United States.

In addition to our patent rights, we also rely on unpatented technology, trade secrets, know-how, and confidential information. Third parties may independently develop substantially equivalent information and techniques or otherwise gain access to or disclose our technology. We may not be able to effectively protect our rights in unpatented technology, trade secrets, know-how and confidential information. We require each of our employees, consultants and corporate partners to execute a confidentiality agreement at the commencement of an employment, consulting, or collaborative relationship with us. Further, we require that all employees enter into assignment of invention agreements as a condition of employment. However, these agreements may not provide effective protection of our information or, in the event of unauthorized use or disclosure, they may not provide adequate remedies. If we are unable to prevent material disclosure of the trade secrets and other intellectual property related to our technologies to third parties, we may not be able to establish or maintain the competitive advantage that we believe is provided by such intellectual property, adversely affecting our market position and business and operational results.

Any inability to license proprietary technologies or processes from third parties which we use in connection with the development and manufacture of our product candidates may impair our business.

Other companies, universities, and research institutions have or may obtain patents that could limit our ability to use, manufacture, market, or sell our product candidates or impair our competitive position. As a result, we would have to obtain licenses from other parties before we could continue using, manufacturing, marketing or selling our potential products. Any necessary licenses may not be available on commercially acceptable terms, if at all. If we do not obtain required licenses, we may not be able to market our potential products at all or we may encounter significant

delays in product development while we redesign products or methods that are found to infringe the patents held by others.

We may incur substantial costs as a result of litigation or other proceedings relating to patent and other intellectual property rights held by third parties and we may be unable to protect our rights to, or to commercialize, our product candidates.

Patent litigation is very common in the biotechnology and pharmaceutical industries. Third parties may assert patent or other intellectual property infringement claims against us with respect to our technologies, products, or other matters. From time to time, we have received correspondence from third parties alleging that we infringe their intellectual property rights. Any claims that might be brought against us alleging infringement of patents may cause us to incur significant expenses and, if successfully asserted against us, may cause us to pay substantial damages and limit our ability to use the intellectual property subject to these claims. Even if we were to prevail, any litigation would be costly and time-consuming and could divert the attention of our management and key personnel from our business operations. Furthermore, as a result of a patent infringement suit, we may be forced to stop or delay developing, manufacturing or selling potential products that incorporate the challenged intellectual property unless we enter into royalty or license agreements. There may be third-party patents, patent applications, and other intellectual property relevant to our potential products that may block or compete with our products or processes of which we are currently unaware with claims that cover the use or manufacture of our drug candidates or the practice of our related methods. Because patent applications can take many years to issue, there may be currently pending patent applications that may later result in issued patents that our drug candidates may infringe. In addition, we sometimes undertake research and development with respect to potential products even when we are aware of third-party patents that may be relevant to our potential products, on the basis that such patents may be challenged or licensed by us. If our subsequent challenge to such patents were not to prevail, we may not be able to commercialize our potential products after having already incurred significant expenditures unless we are able to license the intellectual property on commercially reasonable terms. We may not be able to obtain such license agreements on terms acceptable to us, if at all. Even if we were able to obtain licenses to such technology, some licenses may be non-exclusive, thereby giving our competitors access to the same technologies licensed to us. Ultimately, we may be unable to commercialize some of our potential products or may have to cease some of our business operations, which could severely harm our business.

If we fail to comply with environmental, health and safety laws and regulations that apply to us, we could become subject to fines or penalties or incur costs that could harm our business.

We are subject to numerous federal, state and local environmental, health and safety laws and regulations, including those governing the manufacture and transportation of hazardous materials and pharmaceutical compounds. Although we believe that our contracted research, development, and manufacturers safety procedures for handling and disposing of these materials comply with the standards prescribed by applicable laws and regulations, we cannot completely eliminate the risk of accidental contamination or injury from these materials. In the event of such an accident, we could be held liable for any resulting damages, and any liability could exceed our resources. We may be required to incur significant costs to comply with these laws in the future, including civil or criminal fines and penalties, which we may not be able to afford.

In addition, we may incur substantial costs in order to comply with current or future environmental, health and safety laws and regulations applicable to us. These current or future laws and regulations may impair our research, development or production efforts or impact the research activities we pursue, particularly with respect to research involving human subjects or animal testing. Our failure to comply with these laws and regulations also may result in substantial fines, penalties or other sanctions, which could cause our financial condition to suffer.

We face product liability risks and may not be able to obtain adequate insurance.

While we secure waivers from all participants in our clinical trials, the use of our product candidates during testing or after approval entails an inherent risk of adverse effects, which could expose us to product liability claims. Regardless of their merit or eventual outcome, product liability claims may result in:

- decreased demand for our product;
- injury to our reputation and significant negative media attention;
- withdrawal of clinical trial volunteers;
- costs of litigation;
- distraction of management; and

- substantial monetary awards to plaintiffs.

We may not have sufficient resources to satisfy any liability resulting from these claims. While we currently have product liability insurance for products which are in clinical testing, our coverage may not be adequate in scope to protect us in the event of a successful product liability claim. Further, we may not be able to maintain our current insurance or obtain general product liability insurance on reasonable terms and at an acceptable cost if we or our collaborators begin commercial production of our proposed product candidates. This insurance, even if we can obtain and maintain it, may not be sufficient to provide us with adequate coverage against potential liabilities.

Failure to comply with the Foreign Corrupt Practices Act, or FCPA, and other similar anti-corruption laws and anti-money laundering laws, as well as export control laws, customs laws, sanctions laws, and other laws governing our operations could subject us to significant penalties and damage our reputation.

We are subject to the FCPA, which generally prohibits U.S. companies and intermediaries acting on their behalf from offering or making corrupt payments to “foreign officials” for the purpose of obtaining or retaining business or securing an improper business advantage. The FCPA also requires companies whose securities are publicly listed in the United States to maintain accurate books and records and to maintain adequate internal accounting controls. We are also subject to other similar anti-corruption laws and anti-money laundering laws, as well as export control laws, customs laws, sanctions laws, and other laws that apply to our activities in the countries where we operate. Certain of the jurisdictions in which we conduct or expect to conduct business have heightened risks for public corruption, extortion, bribery, pay-offs, theft, and other fraudulent practices. In many countries, health care professionals who serve as investigators in our clinical studies, or may prescribe or purchase any of our product candidates if they are approved, are employed by a government or an entity owned or controlled by a government. Dealings with these investigators, prescribers, and purchasers are subject to regulation under the FCPA. Under these laws and regulations, as well as other anti-corruption laws, anti-money-laundering laws, export control laws, customs laws, sanctions laws, and other laws governing our operations, various government agencies may require export licenses, may seek to impose modifications to business practices, including cessation of business activities in sanctioned countries or with sanctioned persons or entities and modifications to compliance programs, which may increase compliance costs, and may subject us to fines, penalties and other sanctions.

Our employees, independent contractors, principal investigators, CROs, consultants and collaborators may engage in misconduct or other improper activities, including noncompliance with regulatory standards and requirements and insider trading.

We are exposed to the risk that our employees, independent contractors, principal investigators, CROs, consultants, and collaborators may engage in fraudulent conduct or other illegal activity. Misconduct by these parties could include intentional, reckless and/or negligent conduct or unauthorized activities that violate: (1) laws or regulations in jurisdictions where we are performing activities in relation to our product candidates, including those laws requiring the reporting of true, complete, and accurate information to such authorities; (2) manufacturing regulations and standards; (3) applicable laws prohibiting the promotion of a medical product for a use that has not been cleared or approved; (4) fraud and abuse, anti-corruption, and anti-money laundering laws, as well as similar laws and regulations and other laws; or (5) laws that require the reporting of true and accurate financial information and data. In particular, sales, marketing, and business arrangements in the healthcare industry are subject to laws intended to prevent fraud, bias, misconduct, kickbacks, self-dealing, and other abusive practices, and these laws may differ substantially from country to country. Misconduct by these parties could also include the improper use of information obtained in the course of clinical trials or performing other services, which could result in investigations, sanctions, and serious harm to their or our reputation. It is not always possible to identify and deter misconduct by these parties, and the precautions and procedures we currently take or may establish in the future as our operations and employee, CRO’s, consultant, and collaborator base expands to detect and prevent this type of 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 by these parties to comply 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. In addition, we have limited experience with respect to laws governing the commercial sale of pharmaceutical products and we will need to implement measures to ensure compliance with these laws before the commercialization of any of our product candidates, if approved. The failure to adequately implement these measures could negatively affect our sales and marketing activities and our business.

We depend on our key personnel and we must continue to attract and retain key employees and consultants.

We depend on our key scientific and management personnel. Our ability to pursue the development of our current and future product candidates depends largely on retaining the services of our existing personnel and hiring additional qualified scientific personnel to perform research and development. Although we have entered into employment agreements with our executive officers, each of them may terminate their employment with us at any time. We do not maintain “key person” insurance for any of our executives or other employees. In addition, we rely on consultants and advisors, including scientific and clinical advisors, to assist us in formulating our research and development and commercialization strategy. Our consultants and advisors may be employed by employers other than us and may have commitments under consulting or advisory contracts with other entities that may limit their availability to us. If we are unable to continue to attract and retain high quality personnel, our ability to pursue our growth strategy will be limited. We will also need to hire personnel with expertise in clinical testing, government regulation, manufacturing, sales, marketing, distribution, and finance. Attracting and retaining qualified personnel will be critical to our success. We may not be able to attract and retain personnel, or, in the event key personnel leave, suitable replacements for such personnel, on acceptable terms given the competition for such personnel among biotechnology, pharmaceutical and healthcare companies, universities, and non-profit research institutions. Failure to retain our existing key management and scientific personnel or to attract additional highly qualified personnel could delay the development of our product candidates and harm our business.

A pandemic, epidemic, or outbreak of an infectious disease, such as COVID-19, or coronavirus, may materially and adversely affect our business and our financial results.

The spread of COVID-19 has affected segments of the global economy and may affect our operations, including the potential interruption of our clinical trial activities and our supply chain. The recent outbreak of COVID-19 originated in Wuhan, China, in December 2019 and has since spread to multiple countries where we are currently conducting our clinical trials, including our SORAYA and MIRASOL trials. The continued spread of COVID-19 may result in a period of business disruption, including delays in our clinical trials or delays or disruptions in our supply chain. In addition, there could be a potential effect of COVID-19 to the business at FDA or other health authorities, which could result in delays of reviews and approvals, including with respect to our product candidates.

The continued spread of COVID-19 globally could adversely affect our clinical trial operations in the United States and elsewhere, including our ability to recruit and retain patients and principal investigators and site staff who, as healthcare providers, may have heightened exposure to COVID-19 if an outbreak occurs in their geography. Further, the COVID-19 outbreak may delay enrollment in our SORAYA and MIRASOL trials due to prioritization of hospital resources toward the outbreak, restrictions in travel, and some patients may be unwilling to enroll in our trials or be unable to comply with clinical trial protocols if quarantines or travel restrictions impede patient movement or interrupt healthcare services, which would delay our ability to conduct clinical trials or release clinical trial results. COVID-19 may also affect employees of third-party contract research organizations located in affected geographies that we rely upon to carry out our clinical trials. The spread of COVID-19, or another infectious disease, could also negatively affect the operations at our third-party manufacturers, which could result in delays or disruptions in the supply of our product candidates. In addition, we may take temporary precautionary measures intended to help minimize the risk of the virus to our employees, including temporarily requiring all employees to work remotely, suspending all non-essential travel worldwide for our employees, and discouraging employee attendance at industry events and in-person work-related meetings, which could negatively affect our business.

We cannot presently predict the scope and severity of any potential business shutdowns or disruptions. If we or any of the third parties with whom we engage, however, were to experience shutdowns or other business disruptions, our ability to conduct our business in the manner and on the timelines presently planned could be materially and negatively affected, which could have a material adverse impact on our business and our results of operation and financial condition.

Our stock price may be volatile and fluctuate significantly and results announced by us and our collaborators or competitors could cause our stock price to decline.

Our stock price could fluctuate significantly due to the risks listed in this section, business developments announced by us and by our collaborators and competitors, or as a result of market trends and daily trading volume. The business developments that could affect our stock price include disclosures related to clinical findings with compounds that make use of our ADC technology, new collaborations and clinical advancement or discontinuation of product candidates that make use of our ADC technology or product candidates that compete with our compounds or those of our collaborators. Our stock price could also fluctuate significantly with the level of overall investment interest in small-cap biotechnology stocks or for other reasons unrelated to our business.

Our operating results have fluctuated in the past and are likely to continue to do so in the future. Our revenue is unpredictable and may fluctuate due to the timing of non-recurring licensing fees, decisions of our collaborators with respect to our agreements with them, and the achievement of milestones and our receipt of the related milestone payments under new and existing licensing and collaboration agreements. Revenue historically recognized under our prior collaboration agreements may not be an indicator of revenue from any future collaboration. In addition, our expenses are unpredictable and may fluctuate from quarter to quarter due to the timing of expenses, which may include obligations to manufacture or supply product or payments owed by us under licensing or collaboration agreements. It is possible that our quarterly and/or annual operating results will not meet the expectations of securities analysts or investors, causing the market price of our common stock to decline. We believe that quarter-to-quarter and year-to-year comparisons of our operating results are not good indicators of our future performance and should not be relied upon to predict the future performance of our stock price.

The potential sale of additional shares of our common stock may cause our stock price to decline.

We may seek additional capital due to market conditions or strategic considerations even if we believe we have sufficient funds for our current or future operating plans through a variety of means, including through private and public equity offerings and debt financings. To the extent that we raise additional capital through the sale of equity or convertible debt securities, ownership interest of existing shareholders will be diluted and the price of our stock may decline. The price of our common stock may also decline if the market expects us to raise additional capital through the sale of equity or convertible debt securities whether or not we actually plan to do so.

We have a limited number of authorized and unreserved shares available for future issuance, which may impair our ability to conduct future financings and other transactions.

Our restated articles of organization, as amended, currently authorizes us to issue up to 200,000,000 shares of common stock and 5,000,000 shares of preferred stock. Following the closing of our January 2020 public offering of common stock, we have a limited number of authorized shares of common stock available for future issuance that are not already issued or reserved for issuance.

If we are unable to enter into new arrangements to issue shares of our common stock or securities convertible or exercisable into shares of our common stock because we do not have a sufficient number of authorized, unissued, and unreserved shares of common stock, our ability to complete equity-based financings or other transactions that involve the potential issuance of our common stock or securities convertible or exercisable into our common stock, will be limited. In lieu of issuing common stock or securities convertible into our common stock in any future equity financing transactions, we may need to issue some or all of our authorized but unissued shares of preferred stock, which would likely have superior rights, preferences, and privileges to those of our common stock, or we may need to issue debt that is not convertible into shares of our common stock, which may require us to grant security interests in our assets and property and/or impose covenants upon us that restrict our business. If we are unable to issue additional shares of common stock or securities convertible or exercisable into our common stock, our ability to enter into strategic transactions such as acquisitions of companies or technologies, may also be limited. If we propose to amend our restated articles of organization, as amended, to increase our authorized shares of common stock, such a proposal would require the approval by the holders of a majority of the shares of our common stock outstanding and entitled to vote, and we cannot assure you that such a proposal would be adopted. If we are unable to complete financing, strategic or other transactions due to our inability to issue additional shares of common stock or securities convertible or exercisable into our common stock, our financial condition and business prospects may be materially harmed.

We do not intend to declare or pay cash dividends on our common stock in the foreseeable future.

We have not declared or paid cash dividends on our common stock since our inception and do not intend to declare or pay cash dividends in the foreseeable future. We currently intend to retain all of our future earnings, if any, to finance the growth and development of our business. Therefore, shareholders will have to rely solely on appreciation in our stock price, if any, in order to achieve a gain on an investment.

Item 1B. *Unresolved Staff Comments*

None.

Item 2. *Properties*

We lease approximately 120,000 square feet of laboratory and office space in a building located at 830 Winter Street, Waltham, MA. The term of the 830 Winter Street lease expires on March 31, 2026, with an option for us to extend the lease for two additional five-year terms. We have been actively seeking to sub-lease approximately 80,000

square feet of this space as a result of our July 2019 restructuring and, in January 2020, executed a sublease for approximately 18,000 square feet through the remaining initial term of the lease.

In 2016, we entered into a lease agreement for the rental of 10,281 square feet of additional office space at 930 Winter Street, Waltham, MA through August 31, 2021. We have been actively seeking to sub-lease this space.

Item 3. *Legal Proceedings*

From time to time we may be a party to various legal proceedings arising in the ordinary course of our business. We are not currently subject to any material legal proceedings.

Item 3.1. *Executive Officers of the Registrant*

ImmunoGen's executive officers are appointed by the Board of Directors at the first meeting of the Board following the annual meeting of shareholders or at other Board meetings as appropriate, and hold office until the first Board meeting following the next annual meeting of shareholders and until a successor is chosen, subject to prior death, resignation or removal. Information regarding our executive officers is presented below.

Mark J. Enyedy, age 56, joined ImmunoGen in 2016, and has served as our President and Chief Executive Officer since that date. Prior to joining ImmunoGen, he served in various executive capacities at Shire PLC, a pharmaceutical company, from 2013 to 2016, including as Executive Vice President and Head of Corporate Development from 2014 to 2016, where he led Shire's strategy, M&A, and corporate planning functions and provided commercial oversight of Shire's pre-Phase 3 portfolio. Prior to joining Shire, he served as Chief Executive Officer and a director of Proteostasis Therapeutics, Inc., a biopharmaceutical company, from 2011 to 2013. Prior to joining Proteostasis, he served for 15 years at Genzyme Corporation, a biopharmaceutical company, most recently as President of the Transplant, Oncology, and Multiple Sclerosis divisions. Mr. Enyedy holds a JD from Harvard Law School and practiced law prior to joining Genzyme. Mr. Enyedy is also a director of Akebia Therapeutics, Inc. and The American Cancer Society of Eastern New England. Within the past five years, he also served as a director of Fate Therapeutics, Inc. and Keryx Biopharmaceuticals, Inc.

Anna Berkenblit, MD, age 50, joined ImmunoGen in 2015, and has served as our Senior Vice President and Chief Medical Officer since 2019. Prior to that, she served as our Vice President and Chief Medical Officer from 2015 to 2019. Prior to joining ImmunoGen, she served as Senior Vice President and Head of Clinical Research at H3 Biomedicine Inc., a pharmaceutical company, from 2013 to 2015. Dr. Berkenblit holds a Doctor of Medicine degree from Harvard Medical School and a master's degree from the Harvard/MIT Health & Sciences clinical investigator training program. Dr. Berkenblit is also a director of Surrozen, Inc.

Thomas Ryll, PhD, age 59, joined ImmunoGen in 2015, and has served as our Senior Vice President, Technical Operations, since 2019. Prior to that he served as our Vice President, Technical Operations, from 2017 to 2019, and as our Vice President, Process and Analytical Development, from his date of hire to 2017. Prior to joining ImmunoGen, he spent almost nine years at Biogen Inc. (formerly known as Biogen Idec Inc.), a biopharmaceutical company, in roles of increasing responsibility in the area of cell line culture development, including Senior Director in Biogen's technical development department. Dr. Ryll holds a PhD in biotechnology and biochemistry from the Technical University of Braunschweig, Germany, and completed his post-doctoral work at the Society for Biotechnology Research (now the Helmholtz Center for Infection Research) in Germany.

Theresa G. Wingrove, PhD, age 62, joined ImmunoGen in 2011, and has served as our Senior Vice President, Regulatory Affairs and Quality since 2018. Prior to that she served as our Vice President, Regulatory Affairs and Quality from 2017 to 2018, and prior to that as our Vice President, Regulatory Affairs for more than five years. Dr. Wingrove holds a PhD in biochemical toxicology from the University of Rochester School of Medicine and Dentistry, and completed her postdoctoral work at the University of Rochester Medical Center.

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 Price of Our Common Stock and Related Stockholder Matters

Our common stock is quoted on the NASDAQ Global Select Market under the symbol “IMGN.” As of March 4, 2020, the closing price per share of our common stock was \$4.67, as reported by NASDAQ, and we had 339 holders of record of our common stock.

We have not paid any cash dividends on our common stock since our inception and do not intend to pay any cash dividends in the foreseeable future.

Recent Sales of Unregistered Securities; Uses of Proceeds from Registered Securities; Issuer Repurchases of Equity Securities

None.

Item 6. Selected Financial Data

The following table (in thousands, except per share data) sets forth our selected financial data. The information set forth below should be read in conjunction with “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and the consolidated financial statements and related notes included elsewhere in this report.

	Year Ended Dec. 31 2019	Year Ended Dec. 31 2018	Year Ended Dec. 31 2017	Twelve Months Ended Dec. 31 2016 (unaudited)	Six Month Transition Period Ended Dec. 31 2016 (unaudited)	Six Months Ended Dec. 31 2015 (unaudited)	Years Ended June 30,	
							2016	2015
Consolidated Statement of Operations Data:								
Total revenues	\$ 82,271	\$ 53,446	\$ 115,447	\$ 48,628	\$ 21,506	\$ 32,880	\$ 60,002	\$ 85,541
Total operating expenses	174,444	214,895	174,429	184,271	88,992	89,714	184,993	139,996
Non-cash interest expense on liability related to sale of future royalty and convertible senior notes	16,879	10,631	13,682	18,593	8,665	10,202	20,130	5,437
Non-cash debt conversion expense	—	—	22,915	—	—	—	—	—
Other income (expense), net	4,919	3,237	(433)	(2,497)	(2,732)	69	304	(847)
Net loss	<u>\$ (104,133)</u>	<u>\$ (168,843)</u>	<u>\$ (96,012)</u>	<u>\$ (156,733)</u>	<u>\$ (78,883)</u>	<u>\$ (66,967)</u>	<u>\$ (144,817)</u>	<u>\$ (60,739)</u>
Basic and diluted net loss per common share	<u>\$ (0.70)</u>	<u>\$ (1.21)</u>	<u>\$ (0.98)</u>	<u>\$ (1.80)</u>	<u>\$ (0.91)</u>	<u>\$ (0.77)</u>	<u>\$ (1.67)</u>	<u>\$ (0.71)</u>
Basic and diluted weighted average common shares outstanding	<u>148,311</u>	<u>139,946</u>	<u>98,068</u>	<u>87,029</u>	<u>87,102</u>	<u>86,904</u>	<u>86,976</u>	<u>86,038</u>
	<u>December 31,</u>				<u>June 30,</u>			
	<u>2019</u>	<u>2018</u>	<u>2017</u>	<u>2016</u>			<u>2016</u>	<u>2015</u>
Consolidated Balance Sheet Data:								
Cash and cash equivalents	\$ 176,225	\$ 262,252	\$ 267,107	\$ 159,964			\$ 245,026	\$ 278,109
Total assets	235,262	295,381	294,676	198,864			287,085	313,823
Long-term convertible notes - net	2,078	2,064	2,050	96,965			96,628	—
Shareholders’ equity (deficit)	(76,121)	10,972	(17,895)	(152,850)			(82,304)	35,104

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

Overview

We are a clinical-stage biotechnology company focused on developing the next generation of ADCs to improve outcomes for cancer patients. By generating targeted therapies with enhanced anti-tumor activity and favorable tolerability profiles, we aim to disrupt the progression of cancer and offer patients more good days. We call this our commitment to “target a better now.”

An ADC with our proprietary technology comprises an antibody that binds to a target found on tumor cells and is conjugated to one of our potent anti-cancer agents as a “payload” to kill the tumor cell once the ADC has bound to its target. ADCs are an expanding approach to the treatment of cancer, with seven approved products and the number of agents in development growing significantly in recent years.

We have established a leadership position in ADCs with a portfolio of differentiated product candidates to address both solid tumors and hematological malignancies.

Our lead program is mirvetuximab soravtansine, a first-in-class investigational ADC targeting FR α , a cell-surface protein overexpressed in a number of epithelial tumors, including ovarian, endometrial, and non-small-cell lung cancers. In March of 2019, we announced that FORWARD I, our Phase 3 clinical trial evaluating mirvetuximab compared to chemotherapy in women with FR α -positive PROC, did not meet the primary endpoint in either the entire treatment population or the pre-specified high FR α expression population. Data from FORWARD I did, however, show promising efficacy signals across a range of parameters in the pre-specified subset of patients with high FR α expression. In post hoc exploratory analyses using a PS2+ scoring method, in the FR α -high population scored by the PS2+ method, mirvetuximab was associated with longer PFS, by BIRC, higher overall response rate, or ORR, and longer overall survival, or OS.

Following consultation with the FDA, we will concurrently enroll two new trials of mirvetuximab: SORAYA, a single-arm clinical trial that, if successful, could lead to accelerated approval of mirvetuximab; and MIRASOL, a randomized Phase 3 clinical trial that, if successful, could lead to full approval of mirvetuximab. We anticipate enrolling our first patient in SORAYA during the first quarter of 2020, and expect to report top-line data from this trial in mid-2021. We opened enrollment in MIRASOL in December 2019 and expect to report top-line data from this trial in the first half of 2022. If SORAYA is successful, we expect to submit an application for accelerated approval of mirvetuximab in the applicable patient population to the FDA during the second half of 2021 and to thereafter seek full approval on the basis of a confirmatory Phase 3 trial, MIRASOL.

We undertook a review of our operations during the second quarter of 2019 with the goals of prioritizing our portfolio and reducing our cost base to ensure that our cash resources will be sufficient to advance certain of our programs through the next stages of development. Based on the outcome of this operational review and subsequent consultation with FDA, we have established three strategic priorities for the business: (i) execute SORAYA and MIRASOL and pursue the development of additional indications for mirvetuximab in ovarian cancer; (ii) advance a select portfolio of three earlier-stage product candidates; and (iii) further strengthen our balance sheet and expand our capabilities through partnering. Consistent with these priorities, we have focused our operations on the following activities:

- open SORAYA and enroll patients in MIRASOL to support the potential for accelerated approval in 2022 and conversion to full approval in 2023;
- continue follow up in the ongoing Phase 1b FORWARD II companion trial of mirvetuximab in combination regimens and initiate additional combination trials to support expanded indications;
- continue IMG632 development in patients with AML, BPDCN, and other CD123-positive hematologic malignancies in collaboration with Jazz;
- advance two additional assets that demonstrate our continued innovation in ADCs: IMGC936, which is an investigational ADC directed to the novel solid tumor target, ADAM9, which we are co-developing with MacroGenics; and our next generation investigational anti-FR α ADC, IMG151, which is expected to enter preclinical development in 2020; and
- monetize our remaining portfolio and platform technologies through out-licensing transactions or asset sales.

Corresponding to the prioritization of our portfolio, we have reduced ongoing expenses through the discontinuation of our IMG779 development program, suspension of all other research activities, and a reduction in our workforce.

We have also developed a new class of cytotoxic payloads that we refer to as IGNs. Our IGNs are designed to alkylate DNA without cross-linking, which has provided a broad therapeutic index in preclinical models. Specifically, IGN ADCs have retained the anti-tumor potency of crosslinking drugs with less toxicity to normal cells in *in vitro* and animal models. These properties have allowed for repeat administration of ADCs with IGN payloads in clinical studies and as supported by preclinical data, suggest that IGNs may be able to be combined with other agents.

IMG632 is an investigational ADC comprised of a high affinity antibody designed to target CD123 with site specific conjugation to our most potent IGN payload. We are advancing IMG632 in clinical trials for patients with AML and BPDCN. We recently presented data from our Phase 1 clinical trial of IMG632 in patients with relapsed or refractory adult AML and BPDCN. We have also determined a Phase 2 dose and schedule for IMG632 and have initiated a clinical trial with combinations in AML as well as monotherapy in front-line patients with minimal residual disease following induction therapy. In addition, we continue to enroll BPDCN patients under our initial protocol.

We continue to advance select preclinical programs, led by IMG936. IMG936 is an investigational ADC in co-development with MacroGenics designed to target ADAM9, an enzyme overexpressed in a range of solid tumors and implicated in tumor progression and metastasis. This ADC incorporates a number of innovations, including antibody engineering to extend half-life, site-specific conjugation with a fixed drug-antibody ratio to enable higher dosing, and a next-generation linker and payload for improved stability and bystander activity. We reported encouraging preclinical safety and activity data from this program at the AACR meeting in 2019 and expect an IND for IMG936 will be submitted to the FDA in the first half of 2020. Finally, we expect our next generation anti-folate receptor alpha candidate, IMG151, to move into preclinical development in 2020.

Collaborating on ADC development with other companies allows us to generate revenue, mitigate expenses, enhance our capabilities, and extend the reach of our proprietary platform. The most advanced partner program is Roche's marketed product, Kadcyla[®]. Our ADC technology is also used in candidates in clinical development with a number of partners. We have evolved our partnering approach to pursue relationships where we can gain access to technology and complementary capabilities, such as our technology swap with CytomX, as well as co-development and co-commercialization opportunities, such as our relationships with Jazz and MacroGenics. In addition, following our restructuring in 2019, we seek to monetize our remaining portfolio and platform technologies through out-licensing transactions or asset sales. To this end, in December 2019, we granted an exclusive development and commercialization license to CytomX to our cytotoxic payload technology for use with antibodies (and Probodyes[™] developed therefrom) directed to EpCAM, including certain of our proprietary anti-EpCAM antibodies developed into Probodyes utilizing CytomX's Probody technology, in return for which we will receive an upfront payment from CytomX with the potential for additional payments following CytomX's successful achievement of pre-defined clinical development, approval, and commercialization milestones, as well as royalties on net sales. In addition, the new license terminated the previous exclusive development and commercialization license CytomX granted us in 2017 to its proprietary antibody-masking technology for use with Probodyes. We expect that substantially all of our revenue for the foreseeable future will result from payments under our collaborative arrangements. For more information concerning these relationships, including their ongoing financial and accounting impact on our business, please read Note C, "Significant Collaborative Agreements," to our consolidated financial statements included in this report.

To date, we have not generated revenues from commercial sales of internal products and we expect to incur significant operating losses for the foreseeable future. As of December 31, 2019, we had \$176.2 million in cash and cash equivalents compared to \$262.3 million as of December 31, 2018.

In January 2020, we announced the closing of a public offering of 24,523,750 shares of common stock at a price of \$4.25 per share. We received net proceeds from the offering of \$97.7 million after deducting underwriting discounts and offering expenses. We intend to use the net proceeds of the offering, together with its existing capital, to fund our operations, including, but not limited to, clinical trial activities, supply of drug substance and drug product, pre-commercialization activities, capital expenditures, and working capital.

Critical Accounting Policies

We prepare our consolidated financial statements in accordance with accounting principles generally accepted in the U.S. The preparation of these financial statements requires us to make estimates and judgments that affect the reported amounts of assets, liabilities, revenues, and expenses and related disclosure of contingent assets and liabilities. On an on-going basis, we evaluate our estimates, including those related to our collaborative agreements, clinical trial

accruals, inventory, and stock-based compensation. We base our estimates on historical experience and various other assumptions that we believe to be reasonable under the circumstances. Actual results may differ from these estimates.

We adopted ASC 842 using the transition method provided by ASC Update No. 2018-11, Leases (Topic 842): Targeted Improvements. Under this method, we initially applied the new leasing rules on January 1, 2019, rather than at the earliest comparative period presented in the financial statements. Prior periods presented are in accordance with previous guidance issued under ASC 840. The adoption of ASC 842 represents a change in accounting principle that will recognize lease assets and liabilities on the balance sheet, including those previously classified as operating leases under ASC 840, and disclose key information about leasing arrangements. Refer to Note B to the consolidated financial statements for further discussion on this change.

We adopted ASC 606 on January 1, 2018, using the modified retrospective method for all contracts not completed as of the date of adoption. The reported results for 2018 reflect the application of ASC 606 guidance, while the reported results prior to 2018 were prepared under the guidance of ASC 605, "Revenue Recognition", which is also referred to herein as "legacy GAAP" or the "previous guidance." Refer to Note B to the consolidated financial statements for further discussion on this change. We believe the following critical accounting policies reflect our more significant judgments and estimates used in the preparation of our consolidated financial statements.

Revenue Recognition

We enter into licensing and development agreements with collaborators for the development of ADCs. The terms of these agreements contain multiple deliverables/performance obligations which may include (i) licenses, or options to obtain licenses, to our ADC technology, (ii) rights to future technological improvements, (iii) research activities to be performed on behalf of the collaborative partner, (iv) delivery of cytotoxic agents, and (v) prior to the decommission of our Norwood facility in 2018, the manufacture of preclinical or clinical materials for the collaborative partner. Payments to us under these agreements may include upfront fees, option fees, exercise fees, payments for research activities, payments for the manufacture of preclinical or clinical materials, payments based upon the achievement of certain milestones, and royalties on product sales. We follow the provisions of Accounting Standards Codification Topic 606 - *Revenue from Contracts with Customers* (ASC 606) in accounting for these agreements.

Revenue is recognized when a customer obtains control of promised goods or services, in an amount that reflects the consideration which the entity expects to receive in exchange for those goods or services. In determining the appropriate amount of revenue to be recognized as we fulfill our obligations under the agreements, we perform the following five steps: (i) identification of the promised goods or services in the contract; (ii) determination of whether the promised goods or services are performance obligations, including whether they are distinct in the context of the contract; (iii) measurement of the transaction price, including the constraint on variable consideration; (iv) allocation of the transaction price to the performance obligations; and (v) recognition of revenue when or as we satisfy each performance obligation.

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

As part of the accounting for the arrangement, we must develop assumptions that require judgment to determine the selling price for each performance obligation that was identified in the contract, which is discussed in further detail below.

At December 31, 2019, we had the following material types of agreements with the parties identified below:

- Development and commercialization licenses, which provide the party with the right to use our ADC technology and/or certain other intellectual property to develop and commercialize anticancer compounds to a specified antigen target:
 - Bayer (one exclusive single-target license)
 - Biotest (one exclusive single-target license)
 - CytomX (two exclusive single-target licenses)
 - Debiopharm (one exclusive single-compound license)

Fusion Pharmaceuticals (one exclusive single-compound license)

Novartis (five exclusive single-target licenses)

Oxford BioTherapeutics/Menarini (one exclusive single target license sublicensed from Amgen)

Roche, through its Genentech unit (five exclusive single-target licenses)

Sanofi (five fully-paid, exclusive single-target licenses)

Takeda, through its wholly owned subsidiary, Millennium Pharmaceuticals, Inc. (one exclusive single-target license)

- Collaboration and option agreement for a defined period of time to secure a license to develop and commercialize a specified anticancer compound on established terms:

Jazz Pharmaceuticals

- Collaboration and license agreement to co-develop and co-commercialize a specified anticancer compound on established terms:

MacroGenics

There are no performance, cancellation, termination, or refund provisions in any of the arrangements that contain material financial consequences to us.

Development and Commercialization Licenses

The obligations under a development and commercialization license agreement generally include the license to our ADC technology with respect to a specified antigen target, and may also include obligations related to rights to future technological improvements, research activities to be performed on behalf of the collaborative partner and, previously, the manufacture of preclinical or clinical materials for the collaborative partner.

Generally, development and commercialization licenses contain non-refundable terms for payments and, depending on the terms of the agreement, provide that we will earn payments upon the achievement of certain milestones and royalty payments, generally until the later of the last applicable patent expiration or 10 to 12 years after product launch. Royalty rates may vary over the royalty term depending on our intellectual property rights and/or the presence of comparable competing products. In the case of Sanofi, its licenses are fully-paid and no further milestones or royalties will be received. In the case of Debiopharm, no royalties will be received. We previously made available research and manufacturing services under the development and commercialization licenses; following our restructuring in June 2019, these services have been discontinued. However, we may provide technology transfer services in connection with the out-licensing of product candidates initially developed by us at negotiated prices which are generally consistent with what other third parties would charge. We may also provide technical assistance and share any technology improvements with our collaborators during the term of the collaboration agreements. We do not directly control when or whether any collaborator will request research, achieve milestones, or become liable for royalty payments.

In determining the performance obligations, management evaluates whether the license is distinct, and has significant standalone functionality, from the undelivered elements to the collaborative partner based on the consideration of the relevant facts and circumstances for each arrangement. Factors considered in this determination include the research capabilities of the partner and the availability of ADC technology research expertise in the general marketplace and whether technological improvements are required for the continued functionality of the license. If the license to our intellectual property is determined to be distinct from the other performance obligations identified in the arrangement, we recognize revenues from non-refundable, up-front fees allocated to the license when the license is transferred to the customer and the customer is able to use and benefit from the license.

We estimate the selling prices of the license and all other performance obligations based on market conditions, similar arrangements entered into by third parties, and entity-specific factors such as the terms of our previous collaborative agreements, recent preclinical and clinical testing results of therapeutic products that use our ADC technology, our pricing practices and pricing objectives, the likelihood that technological improvements will be made, and, if made, will be used by our collaborators, and the nature of the research services to be performed on behalf of our collaborators and market rates for similar services.

We recognize revenue related to research services as the services are performed. We have also produced research material for potential collaborators under material transfer agreements. We are compensated at negotiated rates that are consistent with what other third parties would charge. We record amounts received for research materials

produced or services performed as a component of research and development support revenue. Following our restructuring in July 2019, we are no longer making research services available under our development and commercialization licenses.

Prior to 2019, we also provided cytotoxic agents to our collaborators and produced preclinical and clinical materials (drug substance) at negotiated prices generally consistent with what other third parties would charge. We recognized revenue on cytotoxic agents and on preclinical and clinical materials when the materials passed all quality testing required for collaborator acceptance and control had transferred to the collaborator. During the twelve months ended December 31, 2018 and 2017 the difference between our full cost to manufacture preclinical and clinical materials on behalf of our collaborators as compared to total amounts received from collaborators for the manufacture of preclinical and clinical materials was \$1.4 and \$3.1 million, respectively. We discontinued producing preclinical and clinical materials for our collaborators at the end of 2018.

We recognize revenue related to the rights to future technological improvements over the estimated term of the applicable license.

Our development and commercialization license agreements have milestone payments which for reporting purposes are aggregated into three categories: (i) development milestones, (ii) regulatory milestones, and (iii) sales milestones. Development milestones are typically payable when a product candidate initiates or advances into different clinical trial phases. Regulatory milestones are typically payable upon submission for marketing approval with the FDA or other countries' regulatory authorities or on receipt of actual marketing approvals for the compound or for additional indications. Sales milestones are typically payable when annual sales reach certain levels.

At the inception of each arrangement that includes developmental and regulatory milestone payments, we evaluate whether the achievement of each milestone specifically relates to our efforts to satisfy a performance obligation or transfer a distinct good or service within a performance obligation. If the achievement of a milestone is considered a direct result of our efforts to satisfy a performance obligation or transfer a distinct good or service and the receipt of the payment is based upon the achievement of the milestone, the associated milestone value is allocated to that distinct good or service. If the milestone payment is not specifically related to our effort to satisfy a performance obligation or transfer a distinct good or service, the amount is allocated to all performance obligations using the relative standalone selling price method. In addition, we evaluate the milestone to determine whether the milestone is considered probable of being reached and estimate the amount to be included in the transaction price using the most likely amount method. If it is probable that a significant revenue reversal would not occur, the associated milestone value is included in the transaction price to be allocated; otherwise, such amounts are considered constrained and excluded from the transaction price. At the end of each subsequent reporting period, we re-evaluate the probability of achievement of such development or regulatory milestones and any related constraint, and if necessary, adjust our estimate of the transaction price. Any such adjustments to the transaction price are allocated to the performance obligations on the same basis as at contract inception. Amounts allocated to a satisfied performance obligation shall be recognized as revenue, or as a reduction of revenue, in the period in which the transaction price changes.

For development and commercialization license agreements that include sales-based royalties, including milestone payments based on the level of sales, and the license is deemed to be the predominant item to which the royalties relate, we recognize revenue at the later of (i) when the related sales occur, or (ii) when the performance obligation to which some or all of the royalty has been allocated has been satisfied (or partially satisfied) in accordance with the royalty recognition constraint. Under our development and commercialization license agreements, except for the Sanofi and Debiopharm licenses, we receive royalty payments based upon our licensees' net sales of covered products. Generally, under the development and commercialization agreements, we receive royalty reports and payments from our licensees approximately one quarter in arrears. We estimate the amount of royalty revenue to be recognized based on historical and forecasted sales and/or sales information from our licensees if available.

Collaboration and Option Agreements/Right-to-Test Agreements

Our right-to-test agreements provide collaborators the right to test our ADC technology for a defined period of time through a research, or right-to-test, license. Under both right-to-test agreements and collaboration and option agreements, collaborators may (a) take options, for a defined period of time, to specified targets and (b) upon exercise of those options, secure or "take" licenses to develop and commercialize products for the specified targets on established terms. Under these agreements, fees may be due to us (i) at the inception of the arrangement (referred to as "upfront" fees or payments), (ii) upon the opt-in to acquire a development and commercialization license(s) (referred to as exercise fees or payments earned, if any, when the development and commercialization license is "taken"), (iii) at the collaborator's request, after providing research services at negotiated prices, which are generally consistent with what other third parties would charge, or (iv) some combination of all of these fees.

The accounting for collaboration and option agreements and right-to-test agreements is dependent on the nature of the options granted to the collaborative partner. Options are considered distinct performance obligations if they provide a collaborator with a material right. Factors that are considered in evaluating whether options convey a material right include the overall objective of the arrangement, the benefit the collaborator might obtain from the agreement without exercising the options, the cost to exercise the options relative to the fair value of the licenses, and the additional financial commitments or economic penalties imposed on the collaborator as a result of exercising the options. As of December 31, 2019, all right-to-test agreements have expired.

If we conclude that an option provides the customer a material right, and therefore is a separate performance obligation, we then determine the estimated selling prices of the option and all other units of accounting using the following inputs: a) estimated fair value of each program, b) the amount the partner would pay to exercise the option to obtain the license, and c) probability of exercise.

We do not control when or if any collaborator will exercise its options for development and commercialization licenses. As a result, we cannot predict when or if we will recognize revenues in connection with any of the foregoing.

Upfront payments on development and commercialization licenses may be recognized upon delivery of the license if facts and circumstances dictate that the license has stand-alone functionality and is distinct from the undelivered elements.

In determining whether a collaboration and option agreement is within the scope of ASC 808, *Collaborative Arrangements*, management evaluates the level of involvement of both companies in the development and commercialization of the products to determine if both parties are active participants and if both parties are exposed to risks and rewards dependent on the commercial success of the licensed products. If the agreement is determined to be within the scope of ASC 808, we will segregate the research and development activities and the related cost sharing arrangement. Payments made by us for such activities will be recorded as research and development expense and reimbursements received from its partner will be recognized as an offset to research and development expense.

Clinical Trial Accruals

Clinical trial expenses are a significant component of research and development expenses, and we outsource a significant portion of these costs to third parties. Third party clinical trial expenses include investigator fees, site costs (patient costs), clinical research organization costs, and costs for central laboratory testing and data management. The accrual for site and patient costs includes inputs such as estimates of patient enrollment, patient cycles incurred, clinical site activations, and other pass-through costs. These inputs are required to be estimated due to a lag in receiving the actual clinical information from third parties. Payments for these activities are based on the terms of the individual arrangements, which may differ from the pattern of costs incurred, and are reflected on the consolidated balance sheets as a prepaid asset or accrued clinical trial cost. These third party agreements are generally cancelable, and related costs are recorded as research and development expenses as incurred. Non-refundable advance clinical payments for goods or services that will be used or rendered for future R&D activities are recorded as a prepaid asset and recognized as expense as the related goods are delivered or the related services are performed. We also record accruals for estimated ongoing clinical research and development costs. When evaluating the adequacy of the accrued liabilities, we analyze progress of the studies, including the phase or completion of events, invoices received, and contracted costs. Significant judgments and estimates may be made in determining the accrued balances at the end of any reporting period. Actual results could differ from the estimates made by the Company. The historical clinical accrual estimates made by the Company have not been materially different from the actual costs.

Leases

Effective January 1, 2019, we adopted ASU 2016-2, *Leases (Topic 842)*, the details of which are further discussed in Note B to the consolidated financial statements. We determine if an arrangement is a lease at inception. Operating leases include right-of-use (“ROU”) assets and operating lease liabilities (current and non-current), which are recorded in our consolidated balance sheets. Single payment capital leases for equipment that are considered finance leases are included in property and equipment in our consolidated balance sheets. As these single payment obligations have all been made, there is no related liability recorded.

ROU assets represent our right to use an underlying asset for the lease term and lease liabilities represent our obligation to make lease payments arising from the lease. Operating lease ROU assets and liabilities are recognized at commencement date based on the present value of lease payments over the lease term. We use the implicit rate when readily determinable. As a number of our leases do not provide an implicit rate, we use an incremental borrowing rate applicable to us based on the information available at the commencement date in determining the present value of lease payments. As we have no existing or proposed collateralized borrowing arrangements, to determine a reasonable

incremental borrowing rate, we consider collateral assumptions, the lease term, our current credit risk profile and rates for existing borrowing arrangements for comparable peer companies. The operating lease ROU assets were netted against any lease incentive and straight-line lease liability balances at January 1, 2019. We account for the lease and fixed non-lease components as a single lease component. Our lease terms may include options to extend or terminate the lease when it is reasonably certain that we will exercise that option. Lease expense for operating lease payments is recognized on a straight-line basis over the lease term.

Stock-based Compensation

As of December 31, 2019, we are authorized to grant future awards under three share-based compensation plans, which are the ImmunoGen, Inc. 2018 Employee, Director and Consultant Equity Incentive Plan, the Employee Stock Purchase Plan, and the Inducement Equity Plan. The stock-based awards are accounted for under ASC Topic 718, "Compensation—Stock Compensation," pursuant to which the estimated grant date fair value of awards is charged to the statement of operations over the requisite service period, which is the vesting period. Such amounts have been reduced by our estimate of forfeitures for unvested awards.

The fair value of each stock option is estimated on the date of grant using the Black-Scholes option-pricing model. Expected volatility is based exclusively on historical volatility of our stock. The expected term of stock options granted is based exclusively on historical data and represents the period of time that stock options granted are expected to be outstanding. The expected term is calculated for and applied to one group of stock options as we do not expect substantially different exercise or post-vesting termination behavior amongst our employee population. The risk-free rate of the stock options is based on the U.S. Treasury rate in effect at the time of grant for the expected term of the stock options. Estimated forfeitures are based on historical data as well as current trends. Stock compensation cost related to stock options and restricted stock incurred during the years ended December 31, 2019, 2018, and 2017 was \$13.8, \$16.4 and \$11.1 million, respectively. Stock compensation cost related to director deferred share units recorded during the years ended December 31, 2019, 2018, and 2017 was \$337,000, \$361,000 and \$206,000 respectively.

Future stock-based compensation may significantly differ based on changes in the fair value of our common stock and our estimates of expected volatility and the other relevant assumptions.

Results of Operations

Revenues

Our total revenues increased \$28.9 million to \$82.3 million for the year ended December 31, 2019 compared to the prior year and decreased \$62.0 million to \$53.4 million for the year ended December 31, 2018 compared to the year ended December 31, 2017. The increase in revenues in 2019 compared to 2018 is attributable to an increase in license and milestone and non-cash royalty revenue, partially offset by decreases in research and development support and clinical materials revenue. The decrease in revenues in 2018 compared to 2017 is attributable to a decrease in license and milestone fees and research and development support revenue, partially offset by an increase in non-cash royalty revenue and clinical materials revenue.

License and milestone fees

The amount of license and milestone fees we earn is directly related to the number of our collaborators, the collaborators' advancement of the product candidates, and the overall success in the clinical trials of the product candidates. As such, the amount of license and milestone fees may vary widely from quarter to quarter and year to year.

Total revenue recognized from license and milestone fees from each of our collaborators in the years ended December 31, 2019, 2018, and 2017 is shown in the following table (in thousands):

License and Milestone Fees	Years Ended December 31,		
	2019	2018	2017
Collaborative Partner:			
Amgen/Oxford BioTherapeutics/Menarini	\$ 5	\$ 1,066	\$ 17
Bayer HealthCare	16	16	—
CytomX	10,314	14	13,665
Debiopharm	—	500	29,500
Fusion	—	750	—
Jazz	14,500	—	—
Lilly	—	717	22
Novartis	4,865	1,189	180
Roche	5,046	46	—
Sanofi	—	—	36,000
Takeda	42	10,982	85
Total	<u>\$ 34,788</u>	<u>\$ 15,280</u>	<u>\$ 79,469</u>

Revenue from license and milestone fees increased \$19.5 million to \$34.8 million for the year ended December 31, 2019 and decreased \$64.2 million to \$15.3 million for the year ended December 31, 2018. Included in license and milestone fees for the year ended December 31, 2019 is a \$5 million regulatory milestone achieved under our license agreement with Genentech, a member of the Roche Group, and \$3.0 million and \$4.7 million of development milestones that were determined to be probable of occurring under our license agreements with CytomX and Novartis, respectively, that were allocated to the previously delivered licenses. Also included in license and milestone fees for the year ended December 31, 2019 is \$14.5 million of previously deferred license revenue earned upon the opt-out of the right to execute a license by Jazz. In addition, \$7.3 million was recognized as revenue pursuant to a license agreement executed with CytomX in December 2019. Included in license and milestone fees for the year ended December 31, 2018 is \$10.9 million of previously deferred license revenue earned upon the expiration of the right to execute a license or extend the research term specified under the right-to-test agreement with Takeda, a \$500,000 payment received in January 2018 related to the delivery of IMG529 clinical materials to Debiopharm, and \$1 million and \$500,000 of development milestones that were determined to be probable of occurring under our license agreements with Oxford BioTherapeutics Ltd. and Fusion, respectively, that were allocated to the previously delivered licenses. In May 2018, Novartis terminated one of its six development and commercialization licenses, and in October 2018, Lilly terminated its three development and commercialization licenses. As a result, we recorded the remaining \$1.7 million balance of the upfront payments that had been allocated to future performance obligations under these licenses as revenue, which is included in license and milestone fees for 2018. Included in license and milestone fees for the year ended December 31, 2017 is \$29.5 million of revenue related to the sale and transfer of our IMG529 asset to Debiopharm, a \$30 million paid-up license fee related to an amendment to our collaboration and license agreement with Sanofi, \$6 million of development milestones achieved under the collaboration and license agreement with Sanofi prior to amendment, \$12.7 million of non-cash license revenue earned upon the expiration of the right to replace the target specified under the development and commercialization license with CytomX and a \$1 million development milestone achieved under said license agreement with CytomX.

Deferred revenue of \$127.4 million as of December 31, 2019 includes \$60.5 million remaining from an upfront payment related to the license options granted to Jazz in August 2017 and \$65.2 million related to the sale of our residual rights to receive royalty payments on commercial sales of Kadcyra, with the remainder of the balance primarily representing consideration received from our collaborators pursuant to our license agreements which we have yet to earn pursuant to our revenue recognition policy.

Non-cash royalty revenue related to the sale of future royalties

In February 2013, the U.S. FDA granted marketing approval to Kadcyra, an ADC resulting from one of our development and commercialization licenses with Roche, through its Genentech unit. We receive royalty reports and payments related to sales of Kadcyra from Roche one quarter in arrears. In accordance with our revenue recognition policy, \$47.4, \$32.2, and \$28.1 million of non-cash royalties on net sales of Kadcyra were recorded and included in royalty revenue for the years ended December 31, 2019, 2018, and 2017, respectively. Kadcyra sales occurring after January 1, 2015 are covered by a royalty purchase agreement whereby the associated cash was remitted to Immunity

Royalty Holdings, L.P. subject to a residual cap. In January 2019, we sold our residual rights to receive royalty payments on commercial sales of Kadcyra to OMERS, the defined benefit pension plan for municipal employees in the Province of Ontario, Canada, for \$65.2 million, net of \$1.5 million of fees. Simultaneously, OMERS purchased IRH's right to the royalties the Company previously sold as described above, thereby obtaining the rights to 100% of the royalties received from that date on. See further details regarding royalty obligation in Note F of the Consolidated Financial Statements.

Research and development support revenue

Research and development support revenue was \$68,000, \$1.4 million, and \$3.5 million for the years ended December 31, 2019, 2018 and 2017, respectively. The amount of research and development support revenue we earn is directly related to requests we receive from collaborators for research and development work under our agreements with them and, as such, the amount of these fees may vary widely from quarter to quarter and year to year. Additionally, as a result of the restructuring at the end of the second quarter of 2019, we have discontinued providing such services.

Clinical materials revenue

Clinical materials revenue was \$4.6 million and \$4.4 million, respectively, for the years ended December 31, 2018 and 2017. During these periods, we shipped clinical materials in support of a number of our collaborators' clinical trials, as well as preclinical materials in support of certain collaborators' development efforts and DMx shipments to certain collaborators in support of development and manufacturing efforts. We were compensated at negotiated prices which were generally consistent with what other third-parties would charge. We discontinued producing preclinical and clinical materials for our collaborators by the end of 2018.

Research and Development Expenses

Our research and development expenses relate to (i) research to evaluate new targets and to develop and evaluate new antibodies, linkers, and cytotoxic agents, (ii) preclinical testing of our own and, in certain instances, our collaborators' product candidates, and the cost of our own clinical trials, (iii) development related to clinical and commercial manufacturing processes, and (iv) external manufacturing operations, and prior to 2019, internal manufacturing operations, which also included raw materials.

Research and development expense for the year ended December 31, 2019 decreased \$60.0 million to \$114.5 million from \$174.5 million for the year ended December 31, 2018. Research and development expense was \$139.7 million for the year ended December 31, 2017. The significant decrease in 2019 from the prior year was primarily due to: (i) lower expenses resulting from the restructuring of the business at the end of the second quarter of 2019 and the closing of our manufacturing facility at the end of 2018, including decreases in personnel, facility, and third-party research expenses; (ii) decreased clinical trial costs driven by lower activity in the FORWARD I Phase 3 study; and, (iii) lower antibody costs driven by activity to support commercial validation of mirvetuximab soravtansine in the prior year period. The significant increase in 2018 from 2017 was primarily due to higher clinical trial costs driven largely by completion of patient enrollment in FORWARD I, increased costs related to the FORWARD II and IMGN632 trials, and higher external manufacturing costs in support of commercial validation of mirvetuximab soravtansine. Contract service expense also increased due to increased clinical, regulatory, and commercial-readiness efforts to support advancement of mirvetuximab soravtansine.

We are unable to accurately estimate which potential product candidates, if any, will eventually move into our internal preclinical research program. We are unable to reliably estimate the costs to develop these products as a result of the uncertainties related to discovery research efforts as well as preclinical and clinical testing. Our decision to move a product candidate into the clinical development phase is predicated upon the results of preclinical tests. We cannot accurately predict which, if any, of the discovery stage product candidates will advance from preclinical testing and move into our internal clinical development program. The clinical trial and regulatory approval processes for our product candidates that have advanced or that we intend to advance to clinical testing are lengthy, expensive, and uncertain in both timing and outcome. As a result, the pace and timing of the clinical development of our product candidates is highly uncertain and may not ever result in approved products. Completion dates and development costs will vary significantly for each product candidate and are difficult to predict. A variety of factors, many of which are outside our control, could cause or contribute to the prevention or delay of the successful completion of our clinical trials, or delay or prevent our obtaining necessary regulatory approvals. The costs to take a product through clinical trials are dependent upon, among other factors, the clinical indications, the timing, size, and design of each clinical trial, the number of patients enrolled in each trial, and the speed at which patients are enrolled and treated. Product candidates may be found to be ineffective or to cause unacceptable side effects during clinical trials, may take longer to progress through clinical trials than

anticipated, may fail to receive necessary regulatory approvals or may prove impractical to manufacture in commercial quantities at reasonable cost or with acceptable quality.

The lengthy process of securing FDA approvals for new drugs requires the expenditure of substantial resources. Any failure by us to obtain, or any delay in obtaining, regulatory approvals, would materially adversely affect our product development efforts and our business overall. Accordingly, we cannot currently estimate, with any degree of certainty, the amount of time or money that we will be required to expend in the future on our product candidates prior to their regulatory approval, if such approval is ever granted. As a result of these uncertainties surrounding the timing and outcome of our clinical trials, we are currently unable to estimate when, if ever, our product candidates that have advanced into clinical testing will generate revenues and cash flows.

We do not track our research and development costs by project. Since we use our research and development resources across multiple research and development projects, we manage our research and development expenses within each of the categories listed in the following table and described in more detail below (in thousands):

Research and Development Expense Category	Years Ended December 31,		
	2019	2018	2017
Research	\$ 12,272	\$ 24,218	\$ 22,570
Preclinical and Clinical Testing	71,193	89,226	68,794
Process and Product Development	7,807	12,463	10,261
Manufacturing Operations	23,250	48,549	38,114
Total Research and Development Expense	\$ 114,522	\$ 174,456	\$ 139,739

Research

Research includes expenses associated with activities to evaluate new targets and to develop and evaluate new antibodies, linkers, and cytotoxic agents for our products and in support of our collaborators. Such expenses primarily include personnel, contract services, facility expenses, and lab supplies. Research expenses decreased \$11.9 million to \$12.3 million for the year ended December 31, 2019 and increased \$1.6 million to \$24.2 million for the prior year. The decrease in 2019 is principally due to a decrease in personnel expenses, lab supplies, and allocated facility expenses as a result of the restructuring of the business. The increase in 2018 was principally due to increases in allocated facility expenses, contract services, and lab supplies.

Preclinical and Clinical Testing

Preclinical and clinical testing includes expenses related to preclinical testing of our own and, in certain instances, our collaborators' product candidates, regulatory activities, and the cost of our own clinical trials. Such expenses include personnel, patient enrollment at our clinical testing sites, consultant fees, contract services, and facility expenses. Preclinical and clinical testing expenses decreased \$18.0 million to \$71.2 million for the year ended December 31, 2019 and increased \$20.4 million to \$89.2 million for the prior year. The decrease in 2019 was primarily the result of lower clinical trial costs principally driven by lower FORWARD I activity, lower personnel and lab expenses resulting from the restructuring of the business, and a higher credit recorded against IMGN779 and IMG632 development costs pursuant to our cost-sharing agreement with Jazz due largely to an increased reimbursement cap for 2019 pursuant to the collaboration agreement executed in August 2017. The increase in 2018 was primarily the result of an increase in clinical trial costs principally driven by advancement of the FORWARD I, FORWARD II, and IMG632 studies, an increase in salaries and related expenses driven by increases in personnel and stock compensation expense, and an increase in contract services to support commercial advancement of mirvetuximab. Partially offsetting these increases, a higher credit was recorded against IMGN779 and IMG632 development costs in 2018 resulting from a full-year of cost-sharing with Jazz.

Process and Product Development

Process and product development expenses include costs for development of clinical and commercial manufacturing processes for our own and collaborator compounds. Such expenses include the costs of personnel, contract services, lab supplies, and facility expenses. Process and product development expenses decreased \$4.7 million to \$7.8 million for the year ended December 31, 2019 and increased \$2.2 million to \$12.5 million for the prior year. The decrease in 2019 was principally due to a decrease in personnel expenses, lab supplies, and allocated facility expenses as a result of the restructuring of the business. The increase in 2018 was principally due to increases in allocated facility expenses, lab supplies, and salaries and related expenses driven by greater stock compensation expense, partially offset by a higher credit recorded against IMGN779 and IMG632 development costs in 2018 resulting from a full-year of cost-sharing with Jazz.

Manufacturing Operations

Manufacturing operations expense includes costs to manufacture preclinical and clinical materials for our own and our collaborators' product candidates, quality control and quality assurance activities, and costs to support the operation and maintenance of our conjugate manufacturing facility, which we ramped-down in 2018 and decommissioned in February 2019. Such expenses include personnel, raw materials for our and our collaborators' preclinical studies and clinical trials, non-pivotal and pivotal development costs with contract manufacturing organizations, manufacturing supplies, and facility expenses. Manufacturing operations expense decreased \$25.2 million to \$23.3 million for the year ended December 31, 2019 and increased \$10.4 million to \$48.5 million in the previous year. The decrease in 2019 was principally the result of lower antibody and small molecule costs driven by activity to support commercial validation of mirvetuximab soravtansine in the prior year, and lower personnel expenses, raw materials/manufacturing supplies, and facility-related expenses, including amortization of leasehold improvements, resulting from the shut-down of our manufacturing facility in late 2018, as well as related to the restructuring of the business in 2019. The increase in 2018 was principally the result of: (i) an increase in external manufacturing costs, including antibody development and supply expense; (ii) an increase in analytical service fees to transfer our products and certain of our collaborators' out of our Norwood plant; and (iii) increased depreciation expense related to accelerated amortization of Norwood leasehold improvements. Partially offsetting these increases, a higher credit was recorded against IMG779 and IMG632 development costs in 2018 resulting from a full-year of cost-sharing with Jazz.

Antibody development and supply expense in support of commercial validation and in anticipation of potential future clinical trials, as well as our ongoing trials, was \$8.3, \$18.5, and \$12.5 million for the years ended December 31, 2019, 2018, and 2017, respectively. Activity and supply in support of commercial validation of mirvetuximab drove the significant increase in 2018. The process of antibody production is lengthy due in part to the lead time to establish a satisfactory production process at a vendor. Accordingly, costs incurred related to antibody production and development have fluctuated from period to period and we expect these cost fluctuations to continue in the future.

General and Administrative Expenses

General and administrative expenses increased \$1.8 million to \$38.5 million for the year ended December 31, 2019 and increased \$2.8 million to \$36.7 million for the prior year. The increase in 2019 was principally due to greater allocated facility expenses related to excess laboratory and office space, partially offset by a decrease in personnel expenses resulting from the restructuring. The increase in 2018 was principally due to an increase in third-party service fees and an increase in salaries and related expenses driven largely by greater stock compensation expense.

Restructuring Charges

2019 Corporate Restructuring

On June 26, 2019, the Board of Directors approved a plan to restructure the business to focus resources on continued development of mirvetuximab soravtansine and a select portfolio of three earlier-stage product candidates, resulting in a significant reduction of our workforce, with a majority of these employees separating from the business by mid-July 2019 and most of the remaining affected employees transitioning over varying periods of time of up to 12 months. Communication of the plan to the affected employees was substantially completed on June 27, 2019.

As a result of the workforce reduction, we recorded a charge of \$16.0 million for severance related to a pre-existing plan in June 2019, which has been subsequently reduced to \$15.4 million due to minor adjustments to the plan. The related cash payments will be substantially paid out by June 30, 2020. In addition, a charge of \$4.0 million is expected to be recorded for incremental retention benefits in the same time period, of which approximately \$2.1 million was recorded during the year ended December 31, 2019.

In addition to the termination benefits and other related charges, we are seeking to sub-lease the majority of the laboratory and office space at 830 Winter Street in Waltham, Massachusetts and decided to liquidate excess equipment. In performing the impairment test, we recorded a charge of \$2.5 million in June 2019 to write down the equipment to fair value; however, we determined the right-to-use asset related to the lease was recoverable, therefore, no impairment was recorded.

2018 Manufacturing Restructuring

In February 2018, following an in-depth review of manufacturing and quality operations, the Board of Directors authorized management to implement a new operating model that will rely on external manufacturing and quality testing for drug substance and drug product for our development programs. The implementation of this new operating model led to the ramp-down of manufacturing and quality activities at the Norwood, Massachusetts facility by the end of 2018, with a full decommissioning of the facility in February 2019. Implementation of the new operating model resulted in the

separation of 22 employees. Communication of the plan to the affected employees was substantially completed on February 8, 2018.

In connection with the implementation of the new operating model, we recorded a charge of \$1.2 million for severance related to a pre-existing plan in the first quarter of 2018. Additional expense was recorded for incremental retention benefits over the remaining service period of the related employees, as well as marginal adjustments to severance resulting from voluntary terminations, which totaled \$2.3 million for the remainder of 2018. Cash payments related to retention benefits were paid in the fourth quarter of 2018 and those related to severance were substantially paid out by the end of the second quarter of 2019. Additionally, certain options held by the employees to be separated were modified to extend the exercise period, resulting in a stock compensation charge of \$157,000 in the first quarter of 2018.

Charge Related to Unoccupied Office Space

We have sought to sub-lease 10,281 square feet of unoccupied office space in Waltham that was leased in 2016. During the year ended December 31, 2019, we recorded a \$559,000 impairment charge related to this lease, which represents the remaining balance of the right to use asset as the likelihood of finding a sub-lessor has diminished significantly as the lease approaches termination. During the year ended December 31, 2017, \$779,000 of similar charges were also recorded.

Investment Income, net

Investment income for the years ended December 31, 2019, 2018, and 2017 was \$4.4, \$4.2, and \$1.1 million, respectively. The increase in 2019 and 2018 compared to 2017 is due to a greater average cash balance in each period driven largely by \$65.2 million of net proceeds generated from the sale of our residual rights to Kadcyła[®] (ado-trastuzumab emtansine) royalties in January 2019, \$162.5 million of net proceeds generated from a public offering of common stock in June 2018, and \$101.7 million of net proceeds generated from a public offering of common stock in October 2017.

Non-Cash Interest Expense on Liability Related to Sale of Future Royalty

In 2015, IRH purchased our right to receive 100% of the royalty payments on commercial sales of Kadcyła arising under our development and commercialization license with Genentech, until IRH has received aggregate royalties equal to \$235 million or \$260 million, depending on when the aggregate royalties received by IRH reach a specified milestone. In January 2019, OMERS purchased IRH's right to the royalties the Company previously sold as described above. As described in Note F to our Consolidated Financial Statements, this royalty sale transaction has been recorded as a liability that amortizes over the estimated royalty payment period as Kadcyła royalties are remitted directly to the purchaser. During the years ended December 31, 2019, 2018, and 2017, we recorded \$16.9, \$10.6 and \$13.2, respectively, of non-cash interest expense. The increase in 2019 compared to 2018 and 2017 is a result of a greater effective interest rate driven by greater projected royalty payments than previously estimated due to market expansion of Kadcyła and approval for a second indication received in 2019. We impute interest on the transaction and record interest expense at the effective interest rate, which we currently estimate to be 15.5%. There are a number of factors that could materially affect the estimated interest rate, in particular, the amount and timing of royalty payments from future net sales of Kadcyła, and we assess this estimate on a periodic basis. As a result, future interest rates could differ significantly and any such change in interest rate will be adjusted prospectively.

Interest Expense on Convertible Senior Notes

In June 2016, the Company issued Convertible 4.5% Senior Notes with an aggregate principal amount of \$100 million. The Convertible Notes are senior unsecured obligations and bear interest at a rate of 4.5% per year, payable semi-annually in arrears on January 1 and July 1 of each year, commencing on January 1, 2017. During the second half of calendar 2017, \$97.9 million of this debt was converted to common shares, which is discussed further below. For the years ended December 31, 2019, 2018, and 2017, we recorded \$95,000, \$95,000 and \$3.0 million, respectively, of interest expense.

Non-Cash Debt Conversion Expense

During the second half of calendar 2017, we entered into privately negotiated exchange agreements with a number of holders of our outstanding Convertible Notes, pursuant to which we agreed to exchange, in a private placement, \$97.9 million in aggregate principal amount of Convertible Notes held by the holders for 26.2 million newly issued shares of our common stock, equivalent to the number of shares based on the original conversion terms, plus an additional number of newly issued shares of common stock to be determined based on the volume-weighted average trading price of the common stock over certain trading days. As a result of the agreements, 2.8 million additional shares, were issued. In accordance with ASC, Topic 470-20, "Debt – Debt with Conversion and Other Options," we recorded a

non-cash debt conversion expense in the amount of \$22.9 million in 2017, the accounting details of which are further discussed in Note E to our Consolidated Financial Statements. In addition, accrued interest on the bonds of \$743,000 which the noteholders forfeited, \$2.5 million of deferred financing costs, and \$1.7 million of costs incurred to execute the conversions were charged to paid-in capital as a result of the issuance of common stock.

Other Income (Expense), net

Other income (expense), net for the years ended December 31, 2019, 2018, and 2017, was \$590,000, \$(895,000) and \$1.5 million, respectively. This includes \$(240,000), \$(780,000) and \$1.6 million in foreign currency exchange (losses) gains related to obligations with non-U.S. dollar-based suppliers and Euro cash balances maintained to fulfill them during the same periods, respectively. In addition, we recorded \$830,000, \$(115,000) and \$(93,000) of gain (loss) on the sale/disposal of fixed assets in 2019, 2018, and 2017, respectively. The gain on sale/disposal of fixed assets in 2019 was largely driven by the sale of excess lab equipment resulting from the restructuring.

Liquidity and Capital Resources

(amounts in tables in thousands)

	As of December 31,	
	2019	2018
Cash and cash equivalents	\$ 176,225	\$ 262,252
Working capital	131,488	208,121
Shareholders' (deficit) equity	(76,121)	10,972

	Years Ended December 31		
	2019	2018	2017
Cash (used) provided by operating activities	\$ (88,367)	\$ (166,422)	\$ 7,645
Cash used for investing activities	(533)	(5,246)	(1,116)
Cash provided by financing activities	2,873	166,813	100,614

Cash Flows

We require cash to fund our operating expenses, including the advancement of our own clinical programs, and to make capital expenditures. Historically, we have funded our cash requirements primarily through equity and convertible debt financings in public markets and payments from our collaborators, including license fees, milestones, research funding, and royalties. We have also monetized our rights to receive royalties on Kadcyla for up-front consideration. As of December 31, 2019, we had \$176.2 million in cash and cash equivalents. Net cash (used) provided by operating activities was \$(88.4), \$(166.4), and \$7.6 million during the years ended December 31, 2019, 2018, and 2017, respectively. The principal use of cash in operating activities for all periods presented was to fund our net loss, adjusted for non-cash items, with the current year benefiting from \$65.2 million of net proceeds from the sale of our residual rights to royalty payments on net sales of Kadcyla, and with 2017 benefiting from payments by Jazz, Debiopharm, and Sanofi, totaling \$137.8 million resulting in cash provided by operations.

Net cash used for investing activities was \$533,000, \$5.2 million, and \$1.1 million for the years ended December 31, 2019, 2018, and 2017, respectively, and represent cash outflows from capital expenditures, net of proceeds generated from the sale of capital assets. Capital expenditures for all periods presented consisted primarily of leasehold improvements to the laboratory and office space at our corporate headquarters, laboratory equipment, computer software applications, and dedicated equipment at third-party manufacturing vendors. During 2019, as a result of the restructuring, we sold excess equipment generating proceeds of \$2.3 million.

Net cash provided by financing activities was \$2.9 million, \$166.8, and \$100.6 million for the years ended December 31, 2019, 2018, and 2017, respectively. In June 2018, pursuant to a public offering, we issued and sold 15.8 million shares of our common stock resulting in net proceeds of \$162.5 million. In October 2017, pursuant to a public offering, we issued and sold 16.7 million shares of our common stock resulting in net proceeds of \$101.7 million.

Net cash provided by financing activities for the years ended December 31, 2019, 2018, and 2017 include proceeds from the exercise of 794,000, 742,000, and 191,000 stock options, respectively.

We anticipate that our current capital resources of \$176.2 million and \$97.7 million of net proceeds generated from a public offering in January 2020 will enable us to meet our operational expenses and capital expenditures for more than twelve months after the date of this report. We may raise additional funds through equity and debt financings or generate revenues from collaborators through a combination of upfront license payments, milestone payments, royalty

payments and research funding. We cannot provide assurance that such collaborative agreement funding will, in fact, be received. Should we or our partners not meet some or all of the terms and conditions of our various collaboration agreements or if we are not successful in securing future collaboration agreements, we may elect or be required to secure alternative financing arrangements, and/or defer or limit some or all of our research, development, and/or clinical projects.

As of December 31, 2019, pursuant to a Sales Agreement dated March 3, 2017, with Cowen and Company, LLC, or Cowen, as sales agent, we could offer and sell, from time to time, through Cowen, shares of our common stock having an aggregate offering price of up to \$50.0 million. This agreement was terminated in January 2020, in conjunction with a public offering of our common stock.

Contractual Obligations

Below is a table that presents our contractual obligations and commercial commitments as of December 31, 2019 (in thousands):

	Payments Due by Period				
	Total	Less than One Year	1-3 Years	4-5 Years	More than 5 Years
Waltham lease obligations ⁽¹⁾	\$ 33,785	\$ 5,419	\$ 10,580	\$ 10,920	\$ 6,866
Other operating lease obligations ⁽¹⁾	258	66	132	60	—
Liability related to the sale of future royalties ⁽²⁾	125,034	41,909	55,265	15,552	12,308
Convertible 4.5% senior notes ⁽³⁾	2,100	—	2,100	—	—
Total	\$ 161,177	\$ 47,394	\$ 68,077	\$ 26,532	\$ 19,174

⁽¹⁾ See Note J to the Consolidated Financial Statements in Item 8 for discussion of these leases.

⁽²⁾ See Note F to the Consolidated Financial Statements in Item 8 for discussion of this liability.

⁽³⁾ See Note E to the Consolidated Financial Statements in Item 8 for discussion of the convertible senior notes.

In addition to the above table, the Company is responsible for variable operating costs and real estate taxes approximating \$3.1 million per year through March 2026.

In 2018, the Company executed a commercial agreement with one of its manufacturers for future production of antibody through calendar 2025. In May 2019, the agreement was amended to reduce the number of committed antibody batches for an agreed-upon exit fee, which was recorded as research and development expense in the first quarter of 2019. After further negotiations, our noncancelable commitment for future production is approximately €5 million at December 31, 2019.

Recent Accounting Pronouncements

The information set forth under Note B to the consolidated financial statements under the caption “Summary of Significant Accounting Policies” is incorporated herein by reference.

Off-Balance Sheet Arrangements

None.

Item 7A. Quantitative and Qualitative Disclosure About Market Risk

We maintain an investment portfolio in accordance with our investment policy. The primary objectives of our investment policy are to preserve principal, maintain proper liquidity to meet operating needs, and maximize yields. Although our investments are subject to credit risk, our investment policy specifies credit quality standards for our investments and limits the amount of credit exposure from any single issue, issuer, or type of investment. Our investments are also subject to interest rate risk and will decrease in value if market interest rates increase. However, due to the conservative nature and relatively short duration of our investments, interest rate risk is mitigated. We do not currently own derivative financial instruments in our investment portfolio. Accordingly, we do not believe there is any material market risk exposure with respect to derivative or other financial instruments that would require disclosure under this item.

Our foreign currency hedging program uses either forward contracts or a Euro-denominated bank account to manage the foreign currency exposures that exist as part of our ongoing business operations. Our foreign currency risk management strategy is principally designed to mitigate the future potential financial impact of changes in the value of transactions, anticipated transactions, and balances denominated in foreign currency resulting from changes in foreign currency exchange rates. Our market risks associated with changes in foreign currency exchange rates are currently limited to a Euro-denominated bank account as we have no forward contracts at December 31, 2019. Accordingly, we do not believe there is any material market risk exposure with respect to foreign currency exposures that would require disclosure under this item.

Item 8. Financial Statements and Supplementary Data

IMMUNOGEN, INC.

INDEX TO CONSOLIDATED FINANCIAL STATEMENTS

	<u>Page</u>
Report of Independent Registered Public Accounting Firm	59
Consolidated Financial Statements:	
Consolidated Balance Sheets as of December 31, 2019 and 2018	60
Consolidated Statements of Operations and Comprehensive Loss for the Years Ended December 31, 2019, 2018, and 2017	61
Consolidated Statements of Shareholders' (Deficit) Equity for the Years Ended December 31, 2019, 2018, and 2017	62
Consolidated Statements of Cash Flows for the Years Ended December 31, 2019, 2018, and 2017	63
Notes to Consolidated Financial Statements	64

Report of Independent Registered Public Accounting Firm

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

Opinion on the Financial Statements

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

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company's internal control over financial reporting as of December 31, 2019, based on criteria established in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) and our report dated March 11, 2020 expressed an unqualified opinion thereon.

Adoption of New Accounting Standards

ASU No. 2014-09

As discussed in Note B to the consolidated financial statements, the Company changed its method of accounting for revenue in 2018 due to the adoption of Accounting Standards Update (ASU) No. 2014-09, Revenue from Contracts with Customers (Topic 606), and the related amendments.

ASU No. 2016-02

As discussed in Note B to the consolidated financial statements, the Company has changed its method of accounting for leases as of January 1, 2019 due to the adoption of ASU No. 2016-02, Leases (Topic 842), and the related amendments.

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 PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

/s/ Ernst & Young LLP

We have served as the Company's Auditor since 2001.

Boston, Massachusetts

March 11, 2020

IMMUNOGEN, INC.

CONSOLIDATED BALANCE SHEETS

In thousands, except per share amounts

	December 31, 2019	December 31, 2018
ASSETS		
Cash and cash equivalents	\$ 176,225	\$ 262,252
Accounts receivable	7,500	1,701
Unbilled revenue/reimbursement	1,001	617
Contract asset	3,631	500
Non-cash royalty receivable	15,116	9,249
Prepaid and other current assets	5,425	4,462
Total current assets	208,898	278,781
Property and equipment, net of accumulated depreciation	6,993	12,891
Operating lease right-of-use assets	15,587	—
Other assets	3,784	3,709
Total assets	<u>\$ 235,262</u>	<u>\$ 295,381</u>
LIABILITIES AND SHAREHOLDERS' (DEFICIT) EQUITY		
Accounts payable	\$ 9,933	\$ 11,365
Accrued compensation	8,991	11,796
Other accrued liabilities	13,932	20,465
Current portion of deferred lease incentive	—	837
Current portion of liability related to the sale of future royalties, net of deferred financing costs of \$635 and \$753, respectively	41,274	25,880
Current portion of operating lease liability	2,971	—
Current portion of deferred revenue	309	317
Total current liabilities	77,410	70,660
Deferred lease incentive, net of current portion	—	4,675
Deferred revenue, net of current portion	127,123	80,485
Operating lease liability - net of current portion	21,798	—
Convertible 4.5% senior notes, net of deferred financing costs of \$22 and \$36, respectively	2,078	2,064
Liability related to the sale of future royalties, net of current portion and deferred financing costs of \$859 and \$1,536, respectively	82,267	122,345
Other long-term liabilities	707	4,180
Total liabilities	311,383	284,409
Commitments and contingencies (Note K)		
Shareholders' deficit:		
Preferred stock, \$.01 par value; authorized 5,000 shares; no shares issued and outstanding	—	—
Common stock, \$.01 par value; authorized 200,000 shares; issued and outstanding 150,136 and 149,400 shares as of December 31, 2019 and December 31, 2018, respectively	1,501	1,494
Additional paid-in capital	1,209,846	1,192,813
Accumulated deficit	(1,287,468)	(1,183,335)
Total shareholders' (deficit) equity	(76,121)	10,972
Total liabilities and shareholders' (deficit) equity	<u>\$ 235,262</u>	<u>\$ 295,381</u>

The accompanying notes are an integral part of the consolidated financial statements.

IMMUNOGEN, INC.

CONSOLIDATED STATEMENTS OF OPERATIONS AND COMPREHENSIVE LOSS

In thousands, except per share amounts

	2019	Years Ended December 31, 2018	2017
Revenues:			
License and milestone fees	\$ 34,788	\$ 15,280	\$ 79,469
Non-cash royalty revenue related to the sale of future royalties	47,415	32,154	28,142
Research and development support	68	1,377	3,482
Clinical materials revenue	—	4,635	4,354
Total revenues	<u>82,271</u>	<u>53,446</u>	<u>115,447</u>
Operating expenses:			
Research and development	114,522	174,456	139,739
General and administrative	38,489	36,746	33,911
Restructuring charge	21,433	3,693	779
Total operating expenses	<u>174,444</u>	<u>214,895</u>	<u>174,429</u>
Loss from operations	(92,173)	(161,449)	(58,982)
Investment income, net	4,424	4,227	1,146
Non-cash interest expense on liability related to the sale of future royalties and convertible senior notes	(16,879)	(10,631)	(13,682)
Interest expense on convertible senior notes	(95)	(95)	(3,040)
Non-cash debt conversion expense	—	—	(22,915)
Other income (expense), net	590	(895)	1,461
Net loss	<u>\$ (104,133)</u>	<u>\$ (168,843)</u>	<u>\$ (96,012)</u>
Basic and diluted net loss per common share	<u>\$ (0.70)</u>	<u>\$ (1.21)</u>	<u>\$ (0.98)</u>
Basic and diluted weighted average common shares outstanding	<u>148,311</u>	<u>139,946</u>	<u>98,068</u>
Total comprehensive loss	<u>\$ (104,133)</u>	<u>\$ (168,843)</u>	<u>\$ (96,012)</u>

The accompanying notes are an integral part of the consolidated financial statements.

IMMUNOGEN, INC.

CONSOLIDATED STATEMENTS OF SHAREHOLDERS' (DEFICIT) EQUITY

In thousands

	Common Stock		Additional Paid-In Capital	Accumulated Deficit	Total Shareholders' (Deficit) Equity
	Shares	Amount			
Balance at December 31, 2016	87,301	\$ 873	\$ 778,847	\$ (932,570)	\$ (152,850)
Net loss	—	—	—	(96,012)	(96,012)
Stock options exercised	191	1	649	—	650
Issuance of common stock	16,675	167	101,496	—	101,663
Restricted stock award - net of forfeitures	2,146	21	(21)	—	—
Conversion of debt	26,160	262	117,067	—	117,329
Stock option and restricted stock compensation expense	—	—	11,119	—	11,119
Directors' deferred share units converted	53	1	(1)	—	—
Directors' deferred share unit compensation	—	—	206	—	206
Balance at December 31, 2017	132,526	\$ 1,325	\$ 1,009,362	\$ (1,028,582)	\$ (17,895)
Transition adjustment for ASC 606	—	—	—	14,090	14,090
Net loss	—	—	—	(168,843)	(168,843)
Issuance of common stock pursuant to the exercise of stock options and employee stock purchase plan	946	9	4,292	—	4,301
Issuance of common stock	15,755	158	162,354	—	162,512
Stock option and restricted stock compensation expense	—	—	16,445	—	16,445
Directors' deferred share units converted	173	2	(1)	—	1
Directors' deferred share unit compensation	—	—	361	—	361
Balance at December 31, 2018	149,400	\$ 1,494	\$ 1,192,813	\$ (1,183,335)	\$ 10,972
Net loss	—	—	—	(104,133)	(104,133)
Issuance of common stock pursuant to the exercise of stock options and employee stock purchase plan	1,150	11	2,862	—	2,873
Restricted stock award - net of forfeitures	(414)	(4)	4	—	—
Stock option and restricted stock compensation expense	—	—	13,830	—	13,830
Directors' deferred share unit compensation	—	—	337	—	337
Balance at December 31, 2019	150,136	\$ 1,501	\$ 1,209,846	\$ (1,287,468)	\$ (76,121)

The accompanying notes are an integral part of the consolidated financial statements.

IMMUNOGEN, INC.

CONSOLIDATED STATEMENTS OF CASH FLOWS

In thousands

	2019	Years Ended December 31, 2018	2017
Cash flows from operating activities:			
Net loss	\$ (104,133)	\$ (168,843)	\$ (96,012)
Adjustments to reconcile net loss to net cash used for operating activities:			
Non-cash royalty revenue related to sale of future royalties	(47,415)	(32,154)	(28,142)
Non-cash interest expense on liability related to sale of future royalties and convertible senior notes	16,879	10,631	13,682
Non-cash debt conversion expense	—	—	22,915
Depreciation and amortization	4,028	7,411	5,963
Loss (gain) on sale/disposal of fixed assets and impairment charges	1,689	115	239
Operating lease right-of-use asset impairment	694	—	—
Stock and deferred share unit compensation	14,167	16,807	11,325
Deferred rent	—	(95)	91
Change in operating assets and liabilities:			
Accounts receivable	(5,799)	948	(623)
Unbilled revenue/reimbursement	(384)	1,963	4,198
Inventory	—	1,038	1,154
Contract asset	(3,131)	(500)	—
Prepaid and other current assets	(963)	(1,495)	2,419
Operating lease right-of-use assets	1,331	—	—
Other assets	(75)	88	(777)
Accounts payable	(1,045)	2,667	771
Accrued compensation	(2,189)	323	4,527
Other accrued liabilities	(6,146)	3,839	4,375
Deferred revenue	46,630	(9,165)	61,540
Operating lease liability	(2,505)	—	—
Net cash (used) provided for operating activities	<u>(88,367)</u>	<u>(166,422)</u>	<u>7,645</u>
Cash flows from investing activities:			
Purchases of property and equipment	(2,845)	(5,246)	(1,116)
Proceeds from sale of equipment	2,312	—	—
Net cash used for investing activities	<u>(533)</u>	<u>(5,246)</u>	<u>(1,116)</u>
Cash flows from financing activities:			
Proceeds from issuance of common stock under stock plans	2,873	4,301	650
Proceeds from common stock issuance, net of \$395 and \$222 of transaction costs, respectively	—	162,512	101,663
Fees for debt conversion	—	—	(1,699)
Net cash provided by financing activities	<u>2,873</u>	<u>166,813</u>	<u>100,614</u>
Net change in cash and cash equivalents	(86,027)	(4,855)	107,143
Cash and cash equivalents, beginning of period	262,252	267,107	159,964
Cash and cash equivalents, end of period	<u>\$ 176,225</u>	<u>\$ 262,252</u>	<u>\$ 267,107</u>
Supplemental cash flow information:			
Cash paid during the year for interest	<u>\$ 95</u>	<u>\$ 95</u>	<u>\$ 4,685</u>

The accompanying notes are an integral part of the consolidated financial statements.

IMMUNOGEN, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

AS OF DECEMBER 31, 2019

A. Nature of Business and Plan of Operations

ImmunoGen, Inc. (the Company) was incorporated in Massachusetts in 1981 and is focused on the development of antibody-drug conjugates, or ADCs. The Company has generally incurred operating losses and negative cash flows from operations since inception, incurred a net loss of \$104.1 million during the year ended December 31, 2019, and has an accumulated deficit of approximately \$1.3 billion as of December 31, 2019. The Company has primarily funded these losses through payments received from its collaborations and equity and convertible debt financings. To date, the Company has no product revenue and management expects operating losses to continue for the foreseeable future.

At December 31, 2019, the Company had \$176.2 million of cash and cash equivalents on hand. The Company anticipates that its current capital resources, inclusive of \$97.7 million of net proceeds generated from a public offering in January 2020, will enable it to meet its operational expenses and capital expenditures for more than twelve months after these financial statements are issued. The Company may raise additional funds through equity or debt financings or generate revenues from collaborators through a combination of upfront license payments, milestone payments, royalty payments, and research funding. There can be no assurance that the Company will be able to obtain additional debt or equity financing or generate revenues from collaborators on terms acceptable to the Company or at all. The failure of the Company to obtain sufficient funds on acceptable terms when needed could have a material adverse effect on the Company's business, results of operations, and financial condition and require the Company to defer or limit some or all of its research, development, and/or clinical projects.

The Company is subject to risks common to companies in the biotechnology industry including, but not limited to, the development by its competitors of new technological innovations, dependence on key personnel, protection of proprietary technology, manufacturing and marketing limitations, complexities associated with managing collaboration arrangements, third-party reimbursements, and compliance with governmental regulations.

B. Summary of Significant Accounting Policies

Principles of Consolidation

The consolidated financial statements include the accounts of the Company and its wholly-owned subsidiaries, ImmunoGen Securities Corp., ImmunoGen Europe Limited, ImmunoGen (Bermuda) Ltd., ImmunoGen BioPharma (Ireland) Limited, and Hurricane, LLC. All intercompany transactions and balances have been eliminated.

Use of Estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the United States (U.S.) requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

Subsequent Events

The Company has evaluated all events or transactions that occurred after December 31, 2019 up through the date the Company issued these financial statements. On January 27, 2020, pursuant to a public offering, the Company issued and sold 24.5 million shares of common stock, resulting in net proceeds of \$97.7 million. On February 21, 2020, CytomX Therapeutics, Inc. (CytomX) notified the Company that it enrolled a first patient in a Phase 2 clinical trial for its product candidate, CX-2009, triggering a \$3 million development milestone payment to the Company pursuant to a 2016 license agreement between CytomX and the Company. The Company did not have any other material recognizable or unrecognizable subsequent events.

Adoption of ASC Topic 842, Leases

The Company adopted Accounting Standards Update or ASU 2016-2, *Leases (Topic 842)* on January 1, 2019, using the transition method provided by ASC Update No. 2018-11, *Leases (Topic 842): Targeted Improvements*. The reported results for 2019 reflect the application of topic 842 guidance, while the reported results prior to 2019 were

prepared under the previous lease guidance of ASC 840, which is also referred to herein as "legacy GAAP" or the "previous guidance." See Note J for further discussion and impact of adoption.

Revenue Recognition

The Company enters into licensing and development agreements with collaborators for the development of ADCs. The terms of these agreements contain multiple deliverables/performance obligations which may include (i) licenses, or options to obtain licenses, to the Company's ADC technology, (ii) rights to future technological improvements, (iii) research activities to be performed on behalf of the collaborative partner, (iv) delivery of cytotoxic agents, and (v) prior to the decommission of the Company's Norwood facility in 2018, the manufacture of preclinical or clinical materials for the collaborative partner. Payments to the Company under these agreements may include upfront fees, option fees, exercise fees, payments for research activities, payments for the manufacture of preclinical or clinical materials, payments based upon the achievement of certain milestones, and royalties on product sales.

Prior to 2018, the Company identified the deliverables included within the agreement and evaluated which deliverables represented separate units of accounting based on whether certain criteria are met, including whether the delivered element had stand-alone value to the collaborator in accordance with ASC 605. The consideration received was allocated among the separate units of accounting, and the applicable revenue recognition criteria were applied to each of the separate units.

The Company adopted ASC 606 on January 1, 2018. In accordance with ASC 606, revenue is recognized when a customer obtains control of promised goods or services, in an amount that reflects the consideration which the entity expects to receive in exchange for those goods or services. In determining the appropriate amount of revenue to be recognized as it fulfills its obligations under the agreements, the Company performs the following steps: (i) identification of the promised goods or services in the contract; (ii) determination of whether the promised goods or services are performance obligations including whether they are distinct in the context of the contract; (iii) measurement of the transaction price, including the constraint on variable consideration; (iv) allocation of the transaction price to the performance obligations; and (v) recognition of revenue when or as the Company satisfies each performance obligation.

The Company only applies the five-step model to contracts when it is probable that the Company will collect the consideration to which it is entitled in exchange for the goods or services it transfers to the customer. At contract inception, once the contract is determined to be within the scope of ASC 606, the Company assesses the goods or services promised within each contract and determines those that are performance obligations, and assesses whether each promised good or service is distinct. The Company then recognizes as revenue the amount of the transaction price that is allocated to the respective performance obligation when or as the performance obligation is satisfied.

As part of the accounting for the arrangement, the Company must develop assumptions that require judgment to determine the selling price for each deliverable under ASC 605 and performance obligation under ASC 606 that were identified in the contract, which is discussed in further detail below.

At December 31, 2019, the Company had the following material types of agreements with the parties identified below:

- Development and commercialization licenses, which provide the party with the right to use the Company's ADC technology and/or certain other intellectual property to develop and commercialize anticancer compounds to a specified antigen target:
 - Bayer (one exclusive single-target license)
 - Biotest (one exclusive single-target license)
 - CytomX (two exclusive single-target licenses)
 - Debiopharm (one exclusive single-compound license)
 - Fusion Pharmaceuticals (one exclusive single-target license)
 - Novartis (five exclusive single-target licenses)
 - Oxford BioTherapeutics/Menarini (one exclusive single target license sublicensed from Amgen)
 - Roche, through its Genentech unit (five exclusive single-target licenses)

Sanofi (five fully-paid, exclusive single-target licenses)

Takeda, through its wholly owned subsidiary, Millennium Pharmaceuticals, Inc. (one exclusive single-target license)

- Collaboration and option agreement for a defined period of time to secure a license to develop and commercialize a specified anticancer compound on established terms:

Jazz Pharmaceuticals

- Collaboration and license agreement to co-develop and co-commercialize a specified anticancer compound on established terms:

MacroGenics

There are no performance, cancellation, termination, or refund provisions in any of the arrangements that contain material financial consequences to the Company.

Development and Commercialization Licenses

The obligations under a development and commercialization license agreement generally include the license to the Company's ADC technology with respect to a specified antigen target, and may also include obligations related to rights to future technological improvements, research activities to be performed on behalf of the collaborative partner, and the manufacture of preclinical or clinical materials for the collaborative partner.

Generally, development and commercialization licenses contain non-refundable terms for payments and, depending on the terms of the agreement, provide that the Company will earn payments upon the achievement of certain milestones and royalty payments, generally until the later of the last applicable patent expiration or 10 to 12 years after product launch. Royalty rates may vary over the royalty term depending on the Company's intellectual property rights and/or the presence of comparable competing products. In the case of Sanofi, its licenses are fully-paid and no further milestones or royalties will be received. In the case of Debiopharm, no royalties will be received. The Company previously made available research and manufacturing services under the development and commercialization licenses; following the Company's restructuring in June 2019, these services have been discontinued. However, the Company may provide technology transfer services in connection with the out-licensing of product candidates initially developed by the Company at negotiated prices which are generally consistent with what other third parties would charge. The Company may also provide technical assistance and share any technology improvements with its collaborators during the term of the collaboration agreements. The Company does not directly control when or whether any collaborator will request research, achieve milestones, or become liable for royalty payments.

In determining the units of accounting under ASC 605, management evaluated whether the license had stand-alone value from the undelivered elements to the collaborative partner based on the consideration of the relevant facts and circumstances for each arrangement. Factors considered in this determination include the research capabilities of the partner and the availability of ADC technology research expertise in the general marketplace. If the Company concluded that the license had stand-alone value and therefore accounted for as a separate unit of accounting, the Company then determined the estimated selling prices of the license and all other units of accounting.

In determining the performance obligations under ASC 606, management evaluates whether the license is distinct, and has significant standalone functionality, from the undelivered elements to the collaborative partner based on the consideration of the relevant facts and circumstances for each arrangement. Factors considered in this determination include the research capabilities of the partner and the availability of ADC technology research expertise in the general marketplace and whether technological improvements are required for the continued functionality of the license. If the license to the Company's intellectual property is determined to be distinct from the other performance obligations identified in the arrangement, the Company recognizes revenues from non-refundable, upfront fees allocated to the license when the license is transferred to the customer and the customer is able to use and benefit from the license.

The Company determined that the estimated selling price under ASC 605 and the stand-alone selling price under ASC 606 to be consistent. The estimates the selling prices of the license and all other deliverables under ASC 605 and performance obligations under ASC 606 are based on market conditions, similar arrangements entered into by third parties, and entity-specific factors such as the terms of the Company's previous collaborative agreements, recent preclinical and clinical testing results of therapeutic products that use the Company's ADC technology, the Company's pricing practices and pricing objectives, the likelihood that technological improvements will be made, and, if made, will be used by the Company's collaborators, and the nature of the research services to be performed on behalf of its collaborators and market rates for similar services.

The Company recognizes revenue related to research services as the services are performed. The Company has also produced research material for potential collaborators under material transfer agreements. The Company is compensated at negotiated rates that are consistent with what other third parties would charge. The Company records amounts received for research materials produced or services performed as a component of research and development support revenue. As of the third quarter of 2019, the Company is no longer making research services available under its development and commercialization licenses.

Prior to 2019, the Company also provided cytotoxic agents to its collaborators and produced preclinical and clinical materials (drug substance) at negotiated prices generally consistent with what other third parties would charge. The Company recognized revenue on cytotoxic agents and, previously, on preclinical and clinical materials when the materials have passed all quality testing required for collaborator acceptance and control has transferred under ASC 606 to the collaborator, while ASC 605 required title and risk of loss to transfer. The majority of the Company's costs to produce these preclinical and clinical materials were fixed and then allocated to each batch based on the number of batches produced during the period. Therefore, the Company's costs to produce these materials were significantly affected by the number of batches produced during the period. The volume of preclinical and clinical materials the Company produced was directly related to the scale and scope of preclinical activities and the number of clinical trials the Company and its collaborators were preparing for or currently had underway, the speed of enrollment in those trials, the dosage schedule of each clinical trial, and the time period such trials last. Accordingly, the volume of preclinical and clinical materials produced, and therefore the Company's per-batch costs to manufacture these preclinical and clinical materials, varied significantly from period to period, which affected the margins recognized on such product sales.

The Company recognizes revenue related to the rights to future technological improvements under ASC 605 and ASC 606 over the estimated term of the applicable license.

The Company's development and commercialization license agreements have milestone payments which for reporting purposes are aggregated into three categories: (i) development milestones, (ii) regulatory milestones, and (iii) sales milestones. Development milestones are typically payable when a product candidate initiates or advances into different clinical trial phases. Regulatory milestones are typically payable upon submission for marketing approval with the U.S. Food and Drug Administration, or FDA, or other countries' regulatory authorities or on receipt of actual marketing approvals for the compound or for additional indications. Sales milestones are typically payable when annual sales reach certain levels.

Under ASC 605, at the inception of each agreement that includes milestone payments, the Company evaluated whether each milestone was substantive and at risk to both parties on the basis of the contingent nature of the milestone. This evaluation included an assessment of whether (a) the consideration was commensurate with either (1) the entity's performance to achieve the milestone, or (2) the enhancement of the value of the delivered item(s) as a result of a specific outcome resulting from the entity's performance to achieve the milestone, (b) the consideration related solely to past performance, and (c) the consideration was reasonable relative to all of the deliverables and payment terms within the arrangement. The Company evaluated factors such as the scientific, regulatory, commercial, and other risks that must be overcome to achieve the respective milestone, the level of effort and investment required to achieve the respective milestone, and whether the milestone consideration was reasonable relative to all deliverables and payment terms in the arrangement in making this assessment. Non-refundable development and regulatory milestones that were expected to be achieved as a result of the Company's efforts during the period of substantial involvement were considered substantive and were recognized as revenue upon the achievement of the milestone, assuming all other revenue recognition criteria under ASC 605 were met. Milestones that were not considered substantive because the Company did not contribute effort to the achievement of such milestones were generally achieved after the period of substantial involvement and were recognized as revenue upon achievement of the milestone, as there were no undelivered elements remaining and no continuing performance obligations, assuming all other revenue recognition criteria under ASC 605 were met.

Under ASC 606, at the inception of each arrangement that includes developmental and regulatory milestone payments, the Company evaluates whether the achievement of each milestone specifically relates to the Company's efforts to satisfy a performance obligation or transfer a distinct good or service within a performance obligation. If the achievement of a milestone is considered a direct result of the Company's efforts to satisfy a performance obligation or transfer a distinct good or service and the receipt of the payment is based upon the achievement of the milestone, the associated milestone value is allocated to that distinct good or service. If the milestone payment is not specifically related to the Company's effort to satisfy a performance obligation or transfer a distinct good or service, the amount is allocated to all performance obligations using the relative standalone selling price method. In addition, the Company evaluates the milestone to determine whether the milestone is considered probable of being reached and estimates the amount to be included in the transaction price using the most likely amount method. If it is probable that a significant revenue reversal would not occur, the associated milestone value is included in the transaction price to be allocated;

otherwise, such amounts are considered constrained and excluded from the transaction price. At the end of each subsequent reporting period, the Company re-evaluates the probability of achievement of such development or regulatory milestones and any related constraint and, if necessary, adjusts its estimate of the transaction price. Any such adjustments to the transaction price are allocated to the performance obligations on the same basis as at contract inception. Amounts allocated to a satisfied performance obligation shall be recognized as revenue, or as a reduction of revenue, in the period in which the transaction price changes.

For development and commercialization license agreements that include sales-based royalties, including milestone payments based on the level of sales, and the license is deemed to be the predominant item to which the royalties relate, the Company recognizes revenue under ASC 606 at the later of (i) when the related sales occur, or (ii) when the performance obligation to which some or all of the royalty has been allocated has been satisfied (or partially satisfied) in accordance with the royalty recognition constraint. Under the Company's development and commercialization license agreements, except for the Sanofi and Debiopharm licenses, the Company receives royalty payments based upon its licensees' net sales of covered products. Generally, under the development and commercialization agreements, the Company receives royalty reports and payments from its licensees approximately one quarter in arrears. The Company estimates the amount of royalty revenue to be recognized based on historical and forecasted sales and/or sales information from its licensees if available. Under ASC 605, royalty revenue was recognized when it could reliably estimate such amounts and collectability was reasonably assured. As such, the Company generally recognized revenue for sales royalties in the quarter the amounts were reported to the Company by its licensees, or one quarter following the quarter in which sales by the Company's licensees occurred.

Collaboration and Option Agreements/Right-to-Test Agreements

The Company's right-to-test agreements provide collaborators the right to test the Company's ADC technology for a defined period of time through a research, or right-to-test, license. Under both right-to-test agreements and collaboration and option agreements, collaborators may (a) take options, for a defined period of time, to specified targets and (b) upon exercise of those options, secure or "take" licenses to develop and commercialize products for the specified targets on established terms. Under these agreements, fees may be due to the Company (i) at the inception of the arrangement (referred to as "upfront" fees or payments), (ii) upon the opt-in to acquire a development and commercialization license(s) (referred to as exercise fees or payments earned, if any, when the development and commercialization license is "taken"), (iii) at the collaborator's request, after providing research services at negotiated prices which are generally consistent with what other third parties would charge, or (iv) some combination of all of these fees.

The accounting for collaboration and option agreements and right-to-test agreements under ASC 605 and ASC 606 is dependent on the nature of the options granted to the collaborative partner.

Under ASC 605, options are considered substantive if, at the inception of the agreement, the Company is at risk as to whether the collaborative partner will choose to exercise the options to secure development and commercialization licenses. Factors that are considered in evaluating whether options are substantive include the overall objective of the arrangement, the benefit the collaborator might obtain from the agreement without exercising the options, the cost to exercise the options relative to the total upfront consideration, and the additional financial commitments or economic penalties imposed on the collaborator as a result of exercising the options. The exercise price for non-substantive options are included in the initial consideration. In determining the units of accounting for substantive options, management evaluates whether the options have stand-alone value from the undelivered elements to the collaborative partner based on the consideration of the relevant facts and circumstances. If the Company concludes that an option has stand-alone value and therefore will be accounted for as a separate unit of accounting, it then determines the estimated selling prices of the option and all other units of accounting based on an option pricing model using the following inputs; a) estimated fair value of each program, b) the amount the partner would pay to exercise the option to obtain the license, c) volatility during the expected term of the option, and d) risk free interest rate. A risk adjusted discounted cash flow model is then used to estimate the fair value of the option with volatility determined using the stock prices of comparable companies. The cash flow is discounted at a rate representing the Company's estimate of its cost of capital at the time.

Under ASC 606, options are considered distinct performance obligations if they provide a collaborator with a material right. Factors that are considered in evaluating whether options convey a material right include the overall objective of the arrangement, the benefit the collaborator might obtain from the agreement without exercising the options, the cost to exercise the options relative to the fair value of the licenses, and the additional financial commitments or economic penalties imposed on the collaborator as a result of exercising the options. As of December 31, 2019, all right-to-test agreements have expired.

If the Company concludes that an option provides the customer a material right, and therefore is a separate performance obligation, the Company then determines the estimated selling prices of the option and all other units of accounting using the following inputs: a) estimated fair value of each program, b) the amount the partner would pay to exercise the option to obtain the license, and c) probability of exercise.

The Company does not control when or if any collaborator will exercise its options for development and commercialization licenses. As a result, the Company cannot predict when or if it will recognize revenues in connection with any of the foregoing.

Upfront payments on development and commercialization licenses may be recognized upon delivery of the license if facts and circumstances dictate that the license has stand-alone functionality and is distinct from the undelivered elements.

In determining whether a collaboration and option agreement is within the scope of ASC 808, *Collaborative Arrangements*, management evaluates the level of involvement of both companies in the development and commercialization of the products to determine if both parties are active participants and if both parties are exposed to risks and rewards dependent on the commercial success of the licensed products. If the agreement is determined to be within the scope of ASC 808, the Company will segregate the research and development activities and the related cost sharing arrangement. Payments made by the Company for such activities will be recorded as research and development expense and reimbursements received from its partner will be recognized as an offset to research and development expense.

Transaction Price Allocated to Future Performance Obligations

Remaining performance obligations under ASC 606 represent the transaction price of contracts for which work has not been performed (or has been partially performed) and includes unexercised contract options that are considered material rights. As of December 31, 2019, the aggregate amount of the transaction price allocated to remaining performance obligations comprising deferred revenue was \$127.4 million. The Company expects to recognize revenue on approximately 1%, 36%, and 63% of the remaining performance obligations over the next 12 months, 13 to 60 months, and 61 to 120 months, respectively, however it does not control when or if any collaborator will exercise its options for, or terminate existing development and commercialization licenses.

Contract Balances from Contracts with Customers

The following table presents changes in the Company's contract assets and contract liabilities during the years ended December 31, 2019 and 2018 (in thousands):

<u>Year ended December 31, 2019</u>	<u>Balance at December 31, 2018</u>	<u>Additions</u>	<u>Deductions</u>	<u>Impact of Netting</u>	<u>Balance at December 31, 2019</u>
Contract asset	\$ 500	\$ 8,000	\$ (500)	\$ (4,369)	\$ 3,631
Contract liabilities	\$ 80,802	\$ 65,816	\$ (14,817)	\$ (4,369)	\$ 127,432

<u>Year ended December 31, 2018</u>	<u>Balance at January 1, 2018 (ASC 606 adoption)</u>	<u>Additions</u>	<u>Deductions</u>	<u>Impact of Netting</u>	<u>Balance at December 31, 2018</u>
Contract asset	\$ —	\$ 500	\$ (5,000)	\$ 5,000	\$ 500
Contract liabilities	\$ 89,967	\$ 730	\$ (14,895)	\$ 5,000	\$ 80,802

During the years ended December 31, 2019 and 2018, the Company recognized the following revenue as a result of changes in contract asset and contract liability balances in the respective periods (in thousands):

	<u>Years Ended</u>	
	<u>December 31, 2019</u>	<u>December 31, 2018</u>
Revenue recognized in the period from:		
Amounts included in contract liabilities at the beginning of the period	\$ 14,817	\$ 14,139
Performance obligations satisfied in previous periods	\$ 12,672	\$ 1,476

In accordance with ASC 606, the Company recorded the following during the year ended December 31, 2019: (i) license and milestone fee revenue of \$7.7 million for probable development milestones pursuant to license agreements with CytomX and Novartis, with another \$0.3 million deferred which represents the amount allocated to future rights to technological improvements; a \$3.6 million contract asset was recorded in December 2019 related to

these probable milestones, net of a \$4.4 million reduction in related contract liabilities; (ii) a \$5 million regulatory milestone payment earned under its license agreement with Genentech, a member of the Roche Group; the full amount of the milestone was recognized as revenue in the period as the amount allocated to future rights to technological improvements was not material; (iii) \$14.5 million of previously deferred license revenue earned upon the opt-out of the right to execute a license by Jazz; (iv) \$65.2 million was recorded as deferred revenue as a result of a sale of the Company's residual rights to receive royalty payments on commercial sales of Kadcyla® (ado-trastuzumab emtansine) as discussed in Note F; and (v) \$317,000 of amortization of deferred revenue was recorded related to numerous collaborators' rights to technological improvements. Additionally, \$7.3 million of a \$7.5 million upfront payment invoiced to CytomX pursuant to a license agreement executed in December 2019 was recorded as license and milestone fee revenue upon delivery of the license and \$200,000 was deferred until delivery of certain materials.

As a result of adoption of ASC 606, a contract asset of \$5 million was recorded for a probable milestone which was subsequently earned and paid during the year ended December 31, 2018. Additionally the Company recorded the following during 2018: (i) a contract asset and related revenue of \$500,000 for a probable milestone pursuant to a license agreement with Fusion Pharmaceuticals, which was subsequently paid in 2019; (ii) a \$1 million development milestone earned under a sublicense agreement with Oxford BioTherapeutics Ltd. as license and milestone fee revenue, which was included in accounts receivable as of December 31, 2018; (iii) \$10.9 million of revenue previously deferred, with a net reduction in deferred revenue of \$5.9 million due to contract asset and contract liability netting as a result of Takeda not executing a second license it had available, or extending or expanding its right-to-test agreement; (iv) \$750,000 of revenue previously deferred upon completion of Debiopharm and another collaborator's performance obligations; (v) \$2.1 million of amortization of deferred revenue related to numerous collaborators' rights to technological improvements; and (vi) \$335,000 of previously deferred revenue upon shipment of clinical materials to a partner which is included in clinical material revenue.

The timing of revenue recognition, billings, and cash collections results in billed receivables, contract assets, and contract liabilities on the consolidated balance sheets. When consideration is received, or such consideration is unconditionally due, from a customer prior to transferring goods or services to the customer under the terms of a contract, a contract liability is recorded. Contract liabilities are recognized as revenue after control of the products or services is transferred to the customer and all revenue recognition criteria have been met.

Financial Instruments and Concentration of Credit Risk

Cash and cash equivalents are primarily maintained with three financial institutions in the U.S. Deposits with banks may exceed the amount of insurance provided on such deposits. Generally, these deposits may be redeemed upon demand and, therefore, bear minimal risk. The Company's cash equivalents consist of money market funds with underlying investments primarily being U.S. Government-issued securities and high quality, short-term commercial paper. Financial instruments that potentially subject the Company to concentrations of credit risk consist principally of cash, cash equivalents, and marketable securities. The Company held no marketable securities as of December 31, 2019 or 2018. The Company's investment policy, approved by the Board of Directors, limits the amount it may invest in any one type of investment, thereby reducing credit risk concentrations.

Cash and Cash Equivalents

All highly liquid financial instruments with maturities of three months or less when purchased are considered cash equivalents. As of December 31, 2019 and 2018, the Company held \$176.2 million and \$262.3 million, respectively, in cash and money market funds consisting principally of U.S. Government-issued securities and high quality, short-term commercial paper which were classified as cash and cash equivalents.

Non-cash Investing Activities

The Company had \$715,000 of accrued capital expenditures as of December 31, 2018 which have been treated as a non-cash investing activity and, accordingly, are not reflected in the consolidated statement of cash flows. The Company had no accrued capital expenditures as of December 31, 2019.

Fair Value of Financial Instruments

ASC Topic 820 defines fair value, establishes a framework for measuring fair value in accordance with accounting principles generally accepted in the U.S., and expands disclosures about fair value measurements. Fair value is defined under ASC Topic 820 as the exchange price that would be received for an asset or paid to transfer a liability (an exit price) in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants on the measurement date. Valuation techniques used to measure fair value must maximize the use of observable inputs and minimize the use of unobservable inputs. The standard describes a hierarchy to measure fair value

which is based on three levels of inputs, of which the first two are considered observable and the last unobservable, as follows:

- Level 1—Quoted prices in active markets for identical assets or liabilities.
- Level 2—Inputs other than Level 1 that are observable, either directly or indirectly, such as quoted prices for similar assets or liabilities; quoted prices in markets that are not active; or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the assets or liabilities.
- 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.

As of December 31, 2019 and 2018, the Company held certain assets that are required to be measured at fair value on a recurring basis. The following tables represent the fair value hierarchy for the Company's financial assets measured at fair value on a recurring basis as of each date (in thousands):

	Fair Value Measurements at December 31, 2019 Using			
	Total	Quoted Prices in Active Markets for Identical Assets	Significant Other Observable Inputs	Significant Unobservable Inputs
		(Level 1)	(Level 2)	(Level 3)
Cash equivalents	\$ 163,674	\$ 163,674	\$ —	\$ —

	Fair Value Measurements at December 31, 2018 Using			
	Total	Quoted Prices in Active Markets for Identical Assets	Significant Other Observable Inputs	Significant Unobservable Inputs
		(Level 1)	(Level 2)	(Level 3)
Cash equivalents	\$ 242,604	\$ 242,604	\$ —	\$ —

The fair value of the Company's cash equivalents is based primarily on quoted prices from active markets.

The carrying amounts reflected in the consolidated balance sheets for accounts receivable, unbilled revenue/reimbursement, contract assets, non-cash royalty receivable, prepaid and other current assets, accounts payable, accrued compensation, and other accrued liabilities approximate fair value due to their short-term nature. The gross carrying amount and estimated fair value of the convertible 4.5% senior notes was \$2.1 million and \$3.0 million, respectively, as of December 31, 2019 compared to \$2.1 million and \$2.8 million, respectively, as of December 31, 2018. The estimated fair value per \$1,000 note on the debt remaining as of December 31, 2019 increased compared to December 31, 2018 due primarily to an increase in the Company's stock price. The fair value of the Convertible Notes is influenced by interest rates, the Company's stock price and stock price volatility and is determined by prices for the Convertible Notes observed in a market which is a Level 2 input for fair value purposes due to the low frequency of trades.

Unbilled Revenue/Reimbursement

Unbilled revenue/reimbursement substantially represents research funding earned based on actual resources utilized and external expenses incurred under certain of the Company's collaborator agreements.

Clinical Trial Accruals

Clinical trial expenses are a significant component of research and development expenses, and the Company outsources a significant portion of these costs to third parties. Third party clinical trial expenses include investigator fees, site costs (patient cost), clinical research organization costs, and costs for central laboratory testing and data management. The accrual for site and patient costs includes inputs such as estimates of patient enrollment, patient cycles incurred, clinical site activations, and other pass-through cost. These inputs are required to be estimated due to a lag in receiving the actual clinical information from third parties. Payments for these activities are based on the terms of the individual arrangements, which may differ from the pattern of costs incurred, and are reflected on the consolidated balance sheets as prepaid asset or accrued clinical trial cost. These third party agreements are generally cancelable, and related costs are recorded as research and development expenses as incurred. Non-refundable advance clinical payments for goods or services that will be used or rendered for future R&D activities are recorded as a prepaid asset and recognized as expense as the related goods are delivered or the related services are performed. The Company also records accruals for estimated ongoing clinical research and development costs. When evaluating the adequacy of the

accrued liabilities, the Company analyzes progress of the studies, including the phase or completion of events, invoices received, and contracted costs. Significant judgments and estimates may be made in determining the accrued balances at the end of any reporting period. Actual results could differ from the estimates made by the Company. The historical clinical accrual estimates made by the Company have not been materially different from the actual costs.

Leases

Effective January 1, 2019, the Company adopted ASU 2016-2, *Leases (Topic 842)*, the details of which are further discussed in Note J. The Company determines if an arrangement is a lease at inception. Operating leases include right-of-use (“ROU”) assets and operating lease liabilities (current and non-current), which are recorded in the Company’s consolidated balance sheets. Single payment capital leases for equipment that are considered finance leases are included in property and equipment in the Company’s consolidated balance sheets. As these single payment obligations have all been made, there is no related liability recorded.

ROU assets represent the Company’s right to use an underlying asset for the lease term and lease liabilities represent the Company’s obligation to make lease payments arising from the lease. Operating lease ROU assets and liabilities are recognized at commencement date based on the present value of lease payments over the lease term. The Company uses the implicit rate when readily determinable. As a number of the Company’s leases do not provide an implicit rate, the Company uses an incremental borrowing rate applicable to the Company based on the information available at the commencement date in determining the present value of lease payments. As the Company has no existing or proposed collateralized borrowing arrangements, to determine a reasonable incremental borrowing rate, the Company considers collateral assumptions, the lease term, the Company’s current credit risk profile, and rates for existing borrowing arrangements for comparable peer companies. The operating lease ROU assets were netted against any lease incentive and straight-line lease liability balances at January 1, 2019. The Company accounts for the lease and fixed non-lease components as a single lease component. The Company’s lease terms may include options to extend or terminate the lease when it is reasonably certain that the Company will exercise that option. Lease expense for operating lease payments is recognized on a straight-line basis over the lease term.

Other Accrued Liabilities

Other accrued liabilities consisted of the following at December 31, 2019 and 2018 (in thousands):

	December 31, 2019	December 31, 2018
Accrued contract payments	\$ 5,188	\$ 6,389
Accrued clinical trial costs	6,418	11,087
Accrued professional services	1,274	1,171
Accrued employee benefits	314	651
Accrued public reporting charges	180	164
Other current accrued liabilities	558	1,003
Total	\$ 13,932	\$ 20,465

Deferred Revenue

Deferred revenue represents amounts related to partner agreements that have yet to be recognized as revenue. During the year ended December 31, 2019, \$65.2 million was recorded as deferred revenue as a result of a sale of the Company’s residual rights to receive royalty payments on commercial sales of Kadcyła® (ado-trastuzumab emtansine) as discussed in Note F, and has yet to begin to be recognized.

Research and Development Expenses

The Company’s research and development expenses are charged to expense as incurred and relate to (i) research to evaluate new targets and to develop and evaluate new antibodies, linkers, and cytotoxic agents, (ii) preclinical testing of its own and, in certain instances, its collaborators’ product candidates, and the cost of its own clinical trials, (iii) development related to clinical and commercial manufacturing processes, and (iv) external manufacturing operations and, prior to 2019, internal manufacturing operations, which also included raw materials. Payments made by the Company in advance for research and development services not yet provided and/or materials not yet delivered and accepted are recorded as prepaid expenses and are included in the accompanying Consolidated Balance Sheets as prepaid and other current assets.

Income Taxes

The Company uses the liability method to account for income taxes. Deferred tax assets and liabilities are determined based on differences between the financial reporting and income tax basis of assets and liabilities, as well as net operating loss carry forwards and tax credits and are measured using the enacted tax rates and laws that will be in effect when the differences reverse. A valuation allowance against net deferred tax assets is recorded if, based on the available evidence, it is more likely than not that some or all of the deferred tax assets will not be realized.

Property and Equipment

Property and equipment are stated at cost. The Company provides for depreciation based upon expected useful lives using the straight-line method over the following estimated useful lives:

Machinery and equipment	5 years
Computer hardware and software	3 years
Furniture and fixtures	5 years
Leasehold improvements	Shorter of remaining lease term or 7 years

Equipment under capital leases is amortized over the lives of the respective leases or the estimated useful lives of the assets, whichever is shorter, and included in depreciation expense.

Maintenance and repairs are charged to expense as incurred. Upon retirement or sale, the cost of disposed assets and the related accumulated depreciation are removed from the accounts and any resulting gain or loss is included in the statement of operations. The Company recorded net losses of \$(1.7 million), \$(115,000) and \$(239,000) related to impairment charges and the sale/disposal of certain furniture and equipment during the years ended December 31, 2019, 2018, and 2017, respectively.

Impairment of Long-Lived Assets

In accordance with ASC Topic 360, "Property, Plant, and Equipment," the Company continually evaluates whether events or circumstances have occurred that indicate that the estimated remaining useful life of its long-lived assets may warrant revision or that the carrying value of these assets may be impaired if impairment indicators are present. The Company evaluates the realizability of its long-lived assets based on cash flow expectations for the related asset. Any write-downs to fair value are treated as permanent reductions in the carrying amount of the assets. Accordingly, during the year ended December 31, 2019, the Company recorded a \$2.5 million asset impairment charge resulting from restructuring activities, the details of which are further discussed in Note I. Based on this evaluation, the Company believes that, as of each of the balance sheet dates presented, none of the Company's remaining long-lived assets were impaired.

Computation of Net Loss per Common Share

Basic and diluted net loss per share is calculated based upon the weighted average number of common shares outstanding during the period. During periods of income, participating securities are allocated a proportional share of income determined by dividing total weighted average participating securities by the sum of the total weighted average common shares and participating securities (the "two-class method"). Shares of the Company's restricted stock participate in any dividends that may be declared by the Company and are therefore considered to be participating securities. Participating securities have the effect of diluting both basic and diluted earnings per share during periods of income. During periods of loss, no loss is allocated to participating securities since they have no contractual obligation to share in the losses of the Company. Diluted (loss) income per share is computed after giving consideration to the dilutive effect of stock options, convertible notes, and restricted stock that are outstanding during the period, except where such non-participating securities would be anti-dilutive.

The Company’s common stock equivalents, as calculated in accordance with the treasury-stock method for the options and unvested restricted stock and the if-converted method for the convertible notes, are shown in the following table (in thousands):

	Years Ended December 31,		
	2019	2018	2017
Options outstanding to purchase common stock, shares issuable under the employee stock purchase plan, and unvested restricted stock/units at end of period	14,815	17,380	14,290
Common stock equivalents under treasury stock method for options, shares issuable under the employee stock purchase plan, and unvested restricted stock	1,020	3,001	1,579
Shares issuable upon conversion of convertible notes at end of period	501	501	501
Common stock equivalents under if-converted method for convertible notes	501	501	501

The Company’s common stock equivalents have not been included in the net loss per share calculation because their effect is anti-dilutive due to the Company’s net loss position.

Stock-based Compensation

As of December 31, 2019, the Company is authorized to grant future awards under three employee share-based compensation plans, which are the ImmunoGen, Inc. 2018 Employee, Director and Consultant Equity Incentive Plan, or the 2018 Plan, the Employee Stock Purchase Plan, or ESPP, and the ImmunoGen Inducement Equity Incentive Plan, or the Inducement Plan. At the annual meeting of shareholders on June 20, 2018, the 2018 Plan was approved and provides for the issuance of Stock Grants, the grant of Options, and the grant of Stock-Based Awards for up to 7,500,000 shares of the Company’s common stock, as well as up to 19,500,000 shares of common stock which represent awards granted under the previous stock option plans, the ImmunoGen, Inc. 2016 and 2006 Employee, Director and Consultant Equity Incentive Plans, or the 2016 and 2006 Plans, that forfeit, expire, or cancel without delivery of shares of common stock or which resulted in the forfeiture of shares of common stock back to the Company subsequent to June 19, 2018. The Inducement Plan was approved the by Board of Directors in December 2019 to provide for the issuance of non-qualified option grants for up to 1,500,000 shares of the Company’s common stock. The Board of Directors amended the Inducement Plan in January 2020, to reduce the total number of shares reserved for issuance to 1,000,000 shares. Options awarded under the two plans are granted with an exercise price equal to the market price of the Company’s stock at the date of grant. Options vest at various periods of up to four years and may be exercised within ten years of the date of grant.

The stock-based awards are accounted for under ASC Topic 718, “Compensation—Stock Compensation.” Pursuant to Topic 718, the estimated grant date fair value of awards is charged to the statement of operations over the requisite service period, which is the vesting period. Such amounts have been reduced by an estimate of forfeitures of all unvested awards. The fair value of each stock option is estimated on the date of grant using the Black-Scholes option-pricing model with the weighted average assumptions noted in the following table. As the Company has not paid dividends since inception, nor does it expect to pay any dividends for the foreseeable future, the expected dividend yield assumption is zero. Expected volatility is based exclusively on historical volatility of the Company’s stock. The expected term of stock options granted is based exclusively on historical data and represents the period of time that stock options granted are expected to be outstanding. The expected term is calculated for and applied to one group of stock options as the Company does not expect substantially different exercise or post-vesting termination behavior amongst its employee population. The risk-free rate of the stock options is based on the U.S. Treasury rate in effect at the time of grant for the expected term of the stock options.

	December 31,		
	2019	2018	2017
Dividend	None	None	None
Volatility	76.67%	71.02%	67.34%
Risk-free interest rate	2.20%	2.73%	2.00%
Expected life (years)	6.0	6.0	6.0

Using the Black-Scholes option-pricing model, the weighted average grant date fair values of options granted during the years ended December 31, 2019, 2018, and 2017, were \$2.81, \$6.70, and \$1.98 per share, respectively.

[Table of Contents](#)

A summary of option activity under the option plans as of December 31, 2019, 2018 and 2017, is presented below (in thousands, except weighted-average data):

	Number of Stock Options	Weighted-Average Exercise Price	Weighted-Average Remaining Life in Yrs.	Aggregate Intrinsic Value
Outstanding at December 31, 2016	13,679	\$ 10.70	6.55	\$ 23
Granted	1,589	3.21		
Exercised	(191)	3.42		
Forfeited/Canceled	(3,106)	10.33		
Outstanding at December 31, 2017	11,971	9.92	6.17	\$ 13,513
Outstanding at December 31, 2017—vested or unvested and expected to vest	11,881	\$ 9.96	6.15	\$ 13,283
Exercisable at December 31, 2017	7,996	\$ 12.16	4.97	\$ 3,733
Outstanding at December 31, 2017	11,971	\$ 9.92		
Granted	5,513	10.36		
Exercised	(742)	4.67		
Forfeited/Canceled	(1,178)	11.49		
Outstanding at December 31, 2018	15,564	10.20	6.46	\$ 5,818
Outstanding at December 31, 2018—vested or unvested and expected to vest	15,386	\$ 10.21	6.43	\$ 5,781
Exercisable at December 31, 2018	8,405	\$ 11.47	4.45	\$ 3,122
Outstanding at December 31, 2018	15,564	\$ 10.20		
Granted	7,820	4.20		
Exercised	(794)	2.79		
Forfeited/Canceled	(9,072)	9.66		
Outstanding at December 31, 2019	13,518	7.53	7.18	\$ 10,657
Outstanding at December 31, 2019—vested or unvested and expected to vest	13,321	\$ 7.57	7.15	\$ 10,406
Exercisable at December 31, 2019	5,801	\$ 10.16	4.79	\$ 3,218

In September 2018, the Company granted 295,200 performance stock options to certain employees that will vest in two equal installments upon the achievement of specified performance goals within the next five years. Of these options, 139,100 are currently outstanding and are included in the table above. The Company determined it is not currently probable that these performance goals will be achieved and, therefore, no expense has been recorded to date. The fair value of the performance based options that could be expensed in future periods, net of estimated forfeitures, is \$850,000.

A summary of restricted stock and restricted stock unit activity under the option plans as of December 31, 2019, 2018, and 2017 is presented below (in thousands, except weighted-average data):

	Number of Restricted Stock Shares	Weighted-Average Grant Date Fair Value
Unvested at December 31, 2016	199	\$ 4.41
Awarded	2,253	2.71
Vested	(25)	5.87
Forfeited	(108)	2.68
Unvested at December 31, 2017	2,319	\$ 2.82
Vested	(503)	2.64
Unvested at December 31, 2018	1,816	\$ 2.87
Awarded	631	2.55
Vested	(504)	2.64
Forfeited	(646)	2.54
Unvested at December 31, 2019	1,297	\$ 2.97

In August 2016, February 2017, June 2017, and April 2019 the Company granted 117,800, 529,830, 239,000 and 106,000 shares of restricted common stock with grant date fair values of \$3.15, \$2.47, \$4.71, and \$2.82 respectively, to certain officers of the Company, of which 448,380 of these shares have subsequently forfeited, which are reflected in the table above. The restrictions on these shares will lapse in three equal installments upon the achievement of specified performance goals by August 12, 2021. The Company determined it is not currently probable that these performance goals will be achieved, and, therefore, no expense has been recorded to date. All but 57,400 of these shares will be forfeited in 2020 and accordingly, the fair value of the performance based shares that could be expensed in future periods, net of estimated forfeitures, is \$142,000.

In June 2018, the Company's Board of Directors, with shareholder approval, adopted the Employee Stock Purchase Plan. An aggregate of 1,000,000 shares of common stock have been reserved for issuance under the ESPP. The ESPP is generally available to all employees who have been continuously employed for three months per year, have customary employment of more than five months in a calendar year, and work more than 20 hours per week. Under the ESPP, eligible participants purchase shares of the Company's common stock at a price equal to 85% of the lesser of the closing price of the Company's common stock on the first business day and the final business day of the applicable plan purchase period. Plan purchase periods are six months and begin on January 1 and July 1 of each year, with purchase dates occurring on the final business day of the given purchase period. To pay for the shares, each participant authorizes periodic payroll deductions of up to 15% of his or her eligible cash compensation. All payroll deductions collected from the participant during a purchase period are automatically applied to the purchase of common stock on that period's purchase date provided the participant remains an eligible employee and has not withdrawn from the ESPP prior to that date and are subject to certain limitations imposed by the ESPP and the Internal Revenue Code. On December 31, 2019, June 30, 2019 and December 31, 2018, 33,000, 323,000, and 205,000 shares, respectively, were issued to participating employees at a fair value of \$1.20, \$1.63, and \$3.55 per share, respectively. The fair value of each ESPP award is estimated on the first day of the offering period using the Black-Scholes option-pricing model. The assumptions used in the calculations for each offering period are noted in the table below. The Company recognizes share-based compensation expense equal to the fair value of the ESPP awards on a straight-line basis over the offering period.

	December 31, 2019	June 30, 2019	December 31, 2018
Dividend	None	None	None
Volatility	131.9%	67.3%	70.1%
Risk-free interest rate	2.10%	2.51%	2.14%
Expected life (years)	0.5	0.5	0.5

Stock compensation expense related to stock options and restricted stock awards granted under the option plans was \$13.8, \$16.4, and \$11.1 million during the years ended December 31, 2019, 2018 and 2017, respectively. The decrease in expense in 2019 was primarily due to less awards expected to vest in the current year compared to prior year as a result of the restructuring in July 2019. During the years ended December 31, 2018 and 2017, the Company recorded approximately \$116,000 and \$742,000 of stock compensation cost related to the modification of certain outstanding common stock options with former officers of the Company. Stock compensation expense related to the ESPP was \$332,000 and \$424,000 for the years ended December 31, 2019 and 2018, respectively. As of December 31, 2019, the estimated fair value of unvested employee awards was \$17.7 million, net of estimated forfeitures. The weighted-average remaining vesting period for these awards is approximately two years. Also included in stock and deferred stock unit compensation expense in the consolidated statements of cash flows for the years ended December 31, 2019, 2018, and 2017 is \$337,000, \$361,000, and \$206,000, respectively, of expense recorded for directors' deferred share units, the details of which are discussed in Note H of the Company's consolidated financial statements.

A summary of option activity for options vested during the years ended December 31, 2019, 2018, and 2017 is presented below (in thousands):

	Years Ended December 31,		
	2019	2018	2017
Total fair value of options vested	\$ 13,747	\$ 7,496	\$ 10,964
Total intrinsic value of options exercised	556	3,787	598
Cash received for exercise of stock options	2,873	4,301	650

Comprehensive Loss

The Company presents comprehensive loss in accordance with ASC Topic 220, *Comprehensive Income*. Comprehensive loss is comprised of the Company's net loss for all periods presented.

Segment Information

During all periods presented, the Company continued to operate in one reportable business segment under the management approach of ASC Topic 280, *Segment Reporting*, which is the business of the discovery and development of ADCs for the treatment of cancer.

The percentages of revenues recognized from significant customers of the Company in the years ended December 31, 2019, 2018 and 2017 are included in the following table:

Collaborative Partner:	Years Ended December 31,		
	2019	2018	2017
CytomX	13%	8%	13%
Debiopharm	-%	2%	26%
Roche	64%	60%	24%
Sanofi	-%	-%	31%
Takeda	-%	23%	4%
Jazz	18%	-%	-%

There were no other customers of the Company with significant revenues in the periods presented.

Other Recently Adopted Accounting Pronouncements

In February 2016, the FASB issued ASU 2016-2, *Leases (Topic 842)* requiring the recognition of ROU assets and lease liabilities on the balance sheet. Most prominent among the changes in the standard is the recognition of ROU assets and lease liabilities by lessees for those leases classified as operating leases. Under the standard, disclosures are required to meet the objective of enabling users of financial statements to assess the amount, timing, and uncertainty of cash flows arising from leases.

In accordance with the transition method provided by ASC Update No. 2018-11, *Leases (Topic 842): Targeted Improvements*, the Company adopted and initially applied the new leasing rules on January 1, 2019, rather than at the earliest comparative period presented in the financial statements. Prior periods presented are in accordance with the previous lease guidance (ASC 840). See Note H for further discussion and impact of adoption.

The Company elected several of the available practical expedients, which are also outlined in Note H. The standard had a material impact to the Company's consolidated balance sheets, but did not have an impact to the consolidated statement of operations. The most significant impact was the recognition of ROU assets and lease liabilities for operating leases, while the accounting for finance leases, which consist entirely of single payment obligations made for equipment, remained substantially unchanged.

In June 2018, the FASB issued ASU No. 2018-07, *Compensation — Stock Compensation (Topic 718): Improvements to Nonemployee Share-Based Payment Accounting*, which expands the scope of Topic 718 to include all share-based payment transactions for acquiring goods and services from nonemployees. ASU 2018-07 specifies that Topic 718 applies to all share-based payment transactions in which the grantor acquires goods and services to be used or consumed in its own operations by issuing share-based payment awards. ASU 2018-07 also clarifies that Topic 718 does not apply to share-based payments used to effectively provide (1) financing to the issuer or (2) awards granted in conjunction with selling goods or services to customers as part of a contract accounted for under ASC 606. The Company adopted the standard on January 1, 2019, and it did not have a material effect on the Company's consolidated financial statements.

Recently issued accounting pronouncements, not yet adopted

In December 2019, the FASB issued ASU 2019-12, *Income Taxes (Topic 740): Simplifying the Accounting for Income Taxes ("ASU 2019-12")*, which is intended to simplify the accounting for income taxes. ASU 2019-12 removes certain exceptions to the general principles in Topic 740 and also clarifies and amends existing guidance to improve consistent application. The new standard will be effective beginning January 1, 2021. The Company is currently evaluating the potential impact ASU 2019-12 may have on its financial position and results of operations upon adoption.

In November 2018, the FASB issued ASU 2018-18, *Collaborative Arrangements (Topic 808): Clarifying the Interaction between Topic 808 and Topic 606*, which clarifies that certain transactions between participants in a collaborative arrangement should be accounted for under ASC 606 when the counterparty is a customer. In addition, ASU 2018-18 adds unit-of-account guidance to ASC Topic 808, *Collaborative Arrangements*, in order to align this

guidance with ASC 606 and also precludes an entity from presenting consideration from a transaction in a collaborative arrangement as revenue from contracts with customers if the counterparty is not a customer for that transaction. This guidance will be effective for annual reporting periods beginning after December 15, 2019, including interim periods within those annual reporting periods, and early adoption is permitted. The Company does not expect this guidance to have a material impact on its financial statements.

In June 2016, the FASB issued ASU No. 2016-13, Measurement of Credit Losses on Financial Instruments, to require financial assets carried at amortized cost to be presented at the net amount expected to be collected based on historical experience, current conditions, and forecasts. The ASU is effective for interim and annual periods beginning after December 15, 2019, with early adoption permitted. Adoption of the ASU is on a modified retrospective basis. The Company does not expect this guidance to have a material impact on its financial statements.

No other recently issued or effective ASUs had, or are expected to have, a material effect on the Company's results of operations, financial condition, or liquidity.

C. Agreements

Significant Collaborative Agreements

Roche

In 2000, the Company granted Genentech, now a unit of Roche, an exclusive development and commercialization license to use the Company's maytansinoid ADC technology with antibodies, such as trastuzumab, or other proteins that target HER2. Under the terms of this agreement, Roche has exclusive worldwide rights to develop and commercialize maytansinoid ADC compounds targeting HER2. In 2013, the HER2-targeting ADC, Kadcyla, was approved for marketing in the U.S., Japan, and the European Union, or EU. Roche has also received marketing approval in various other countries around the world. Roche is responsible for the manufacturing, product development, and marketing of any products resulting from the agreement. The Company received a \$2 million non-refundable upfront payment from Roche upon execution of the agreement. The Company is also entitled to receive up to a total of \$44 million in milestone payments, plus royalties on the commercial sales of Kadcyla or any other resulting products. Total milestones are categorized as follows: development milestones—\$13.5 million; and regulatory milestones—\$30.5 million. Through December 31, 2019, the Company has received and recognized \$13.5 million and \$25.5 million in development and regulatory milestone payments, respectively, related to Kadcyla. On May 3, 2019, Roche notified the Company that the FDA approved Kadcyla for adjuvant (after surgery) treatment of people with HER2-positive early breast cancer who have residual invasive disease after neoadjuvant (before surgery) taxane and Herceptin® (trastuzumab)-based treatment, resulting in a \$5 million regulatory milestone payment to the Company for a first extended indication, which is included in license and milestone fees for the year ended December 31, 2019. The next and final potential milestone the Company will be entitled to receive will be a \$5 million regulatory milestone for marketing approval of Kadcyla for a second extended indication as defined in the agreement.

The Company receives royalty reports and payments related to sales of Kadcyla from Roche one quarter in arrears. In accordance with the Company's revenue recognition policy, \$47.4, \$32.2, and \$28.1 million of non-cash royalties on net sales of Kadcyla were recorded and included in royalty revenue for the years ended December 31, 2019, 2018 and 2017. Kadcyla sales occurring after January 1, 2015 are covered by a royalty purchase agreement whereby the associated cash, except for a residual tail, would have been remitted to Immunity Royalty Holdings, L.P, or IRH. In January 2019, the Company announced the sale of its residual tail to OMERS, the defined benefit pension plan for municipal employees in the Province of Ontario, Canada, for \$65.2 million, net of fees, as discussed further in Note F. Simultaneously, OMERS purchased IRH's right to the royalties the Company previously sold as described above, thereby obtaining the rights to 100% of the royalties received from that date on.

Roche, through its Genentech unit, also has licenses for the exclusive right to use the Company's maytansinoid ADC technology with antibodies to four undisclosed targets, which were granted under the terms of a separate, now expired, 2000 right-to-test agreement with Genentech. For each of these licenses, the Company received a \$1 million license fee and is entitled to receive up to a total of \$38 million in milestone payments and also royalties on the sales of any resulting products. The total milestones are categorized as follows: development milestones—\$8 million; regulatory milestones—\$20 million; and sales milestones—\$10 million. The Company has not received any milestone payments from these agreements through December 31, 2019. Roche is responsible for the development, manufacturing, and marketing of any products resulting from these licenses. The next potential milestone the Company will be entitled to

receive under any of these agreements will be a development milestone for filing of an IND application which will result in a \$1 million payment being due.

Amgen/Oxford BioTherapeutics

Under a now-expired right-to-test agreement established in 2000, the Company granted Amgen four exclusive development and commercialization licenses, for which the Company received an exercise fee of \$1 million for each license taken. Three of the four licenses have since been terminated by Amgen, and Amgen has sublicensed its rights under the one remaining license to Oxford BioTherapeutics Ltd. (OBT).

For the remaining development and commercialization license, the Company is entitled to receive up to a total of \$34 million in milestone payments, plus royalties on the commercial sales of any resulting products. The total milestones are categorized as follows: development milestones—\$9 million; regulatory milestones—\$20 million; and sales milestones—\$5 million. Amgen (or its sublicensee(s)) is responsible for the manufacturing, development, and marketing of any products resulting from this development and commercialization license. Through December 31, 2019, the Company has received and recognized an aggregate of \$4 million in milestone payments for compounds covered under this agreement now or in the past. The next potential milestone the Company will be entitled to receive under the remaining license will be a development milestone for the first dosing of a patient in a U.S. Phase II clinical trial, which will result in a \$3 million payment being due.

Sanofi

In 2003, the Company entered into a broad collaboration agreement with Sanofi (formerly Aventis Pharmaceuticals) to discover, develop, and commercialize antibody-based products. The collaboration agreement provided Sanofi with worldwide development and commercialization rights to new antibody-based products directed to targets that are included in the collaboration, including the exclusive right to use the Company's maytansinoid ADC technology in the creation of products developed to these targets. Through December 31, 2019, the Company recognized an aggregate of \$26.5 million in development milestone payments for compounds covered under this agreement in the past, including \$6 million of milestone payments received and included in license and milestone fee revenue for the year ended December 31, 2017.

In May 2017, the Company and an affiliate of Sanofi amended the license agreements covering all compounds in development by Sanofi using the Company's technology. Under the terms of the amended 2003 collaboration and license agreement, the Company granted Sanofi a fully-paid, exclusive license to develop, manufacture, and commercialize four experimental compounds in development. The Company also amended a separate 2013 exclusive license entered into pursuant to a separate, now-expired right-to-test agreement to grant Sanofi a fully-paid, exclusive license to develop, manufacture, and commercialize another experimental compound being studied for the treatment of solid tumors. As consideration for these amendments, the Company received a \$30 million payment and agreed to forego a limited co-promotion option in the U.S. with respect to the compounds covered by the 2003 agreement, as well as future milestones or royalties with respect to all licensed products.

In accordance with ASC-605-25, the Company determined that there were no remaining deliverables upon execution of the amendments, and accordingly, the \$30 million was recognized as revenue and is included in license and milestone fee revenue for the year ended December 31, 2017.

Biotest

In 2006, the Company granted Biotest an exclusive development and commercialization license to our maytansinoid ADC technology for use with antibodies that target CD138. The product candidate indatuximab ravtansine is in development under this agreement. Biotest is responsible for the manufacturing, development, and marketing of any products resulting from the agreement. The Company received a \$1 million upfront payment upon execution of the agreement and could receive up to \$35.5 million in milestone payments, as well as royalties on the commercial sales of any resulting products. The total milestones are categorized as follows: development milestones—\$4.5 million; and regulatory milestones—\$31 million. In September 2008, Biotest began Phase 1 evaluation of indatuximab ravtansine which triggered a \$500,000 milestone payment to the Company. The next potential milestone the Company will be entitled to receive will be a development milestone for commencement of a Phase 2b clinical trial (as defined in the agreement) which will result in a \$2 million payment being due.

Bayer

In 2008, the Company granted Bayer an exclusive development and commercialization license to the Company's maytansinoid ADC technology for use with antibodies or other proteins that target mesothelin. Bayer HealthCare is responsible for the research, development, manufacturing, and marketing of any products resulting from

the license. The Company received a \$4 million upfront payment upon execution of the agreement which was recognized as revenue ratably over the Company's estimated period of substantial involvement which concluded in September 2012. For each compound developed and marketed by Bayer under this collaboration the Company is entitled to receive a total of \$170.5 million in milestone payments, plus tiered royalties between 4 - 7% on the commercial sales of any resulting products. The total milestones are categorized as follows: development milestones—\$16 million; regulatory milestones—\$44.5 million; and sales milestones—\$110 million. Through December 31, 2019, the Company has received and recognized an aggregate of \$13 million in milestone payments under this agreement. In July 2017, Bayer announced that its Phase 2 clinical study did not meet its primary endpoint of progression-free survival. The safety and tolerability of anetumab ravtansine were consistent with earlier clinical findings and Bayer is continuing development in additional studies, including a Phase 1b multi-indication study in six different types of advanced solid tumors, and a Phase 1b combination-study in patients with recurrent platinum-resistant ovarian cancer. The next potential milestone the Company will be entitled to receive will be either a development milestone for commencement of a pivotal clinical trial for a second indication for anetumab ravtansine which will result in a \$2 million payment being due or a regulatory milestone for filing of regulatory approval for its first indication for anetumab ravtansine which will result in a \$6 million payment being due.

Novartis

The Company granted Novartis exclusive development and commercialization licenses to the Company's maytansinoid and IGN ADC technology for use with antibodies to six specified targets under a now-expired right-to-test agreement established in 2010. The Company received a \$45 million upfront payment in connection with the execution of the right-to-test agreement in 2010, and for each development and commercialization license taken for a specific target, the Company received an exercise fee of \$1 million and is entitled to receive up to a total of \$199.5 million in milestone payments, plus royalties on the commercial sales of any resulting products. The total milestones are categorized as follows: development milestones—\$22.5 million; regulatory milestones—\$77 million; and sales milestones—\$100 million. The initial three-year term of the right-to-test agreement was extended by Novartis in October 2013 for an additional one-year period by payment of a \$5 million fee to the Company. The Company also is entitled to receive payments for research and development activities performed on behalf of Novartis. Novartis is responsible for the manufacturing, development, and marketing of any products resulting from this agreement.

In March 2013, the Company and Novartis amended the right-to-test agreement so that Novartis could take a license to develop and commercialize products directed at two undisclosed, related targets, one target licensed on an exclusive basis and the other target initially licensed on a non-exclusive basis. The target licensed on a non-exclusive basis may no longer be converted to an exclusive target due to the expiration of the right-to-test agreement. The Company received a \$3.5 million fee in connection with the execution of the amendment to the agreement.

In connection with the amendment, in March 2013, the Company granted Novartis the license referenced above under the right-to-test agreement, as amended, enabling it to develop and commercialize products directed at the two targets. The Company received a \$1 million upfront fee with the execution of this license. In May 2018, Novartis terminated the license. As a result, the Company recorded the remaining \$978,000 balance of the upfront payment that had been allocated to future performance obligations under this license as revenue, which is included in license and milestone fees for the year ended December 31, 2018.

In October 2013 and November 2013, the Company granted Novartis its second and third exclusive licenses to single targets, and in October 2014, the three remaining exclusive licenses, each triggering a \$1 million upfront payment to the Company and the opportunity to receive milestone payments totaling \$199.5 million, as outlined above, plus royalties on the commercial sales of any resulting products. In January 2015 and May 2015, Novartis initiated Phase 1, first-in-human clinical testing of its cKit-targeting ADC product candidate, LOP628, and P-cadherin-targeting ADC product candidate, PCA062, respectively, triggering a \$5 million development milestone payment to the Company with each event. In December 2016, Novartis initiated Phase 1, first-in-human clinical testing of its CDH6-targeting ADC product candidate, HKT288, triggering a \$5 million milestone payment which the Company received in 2017. Novartis later discontinued clinical testing of these three products. In December 2019, a development milestone related to dosing a first patient in a Phase 1 clinical trial for a separate licensed product became probable of being attained. Accordingly, \$4.7 million of the \$5.0 million milestone that was allocated to the delivered license was recorded as revenue and is included in license and milestone fees for the year ended December 31, 2019, and \$0.3 million that was allocated to future technological improvements was deferred and will be recognized as revenue ratably over the estimated term of the license. The next potential payment the Company could receive would be either a \$7.5 million development milestone for commencement of a Phase 2 clinical trial or a \$5 million development milestone for commencement of a Phase 1 clinical trial.

Lilly

The Company granted Eli Lilly and Company (Lilly) three exclusive development and commercialization licenses under a now-expired right-to-test agreement established in 2011. The Company received a \$20 million upfront payment in connection with the execution of the right-to-test agreement in 2011. Under the terms of this right-to-test agreement, the first license had no associated exercise fee, and the second and third licenses each had a \$2 million exercise fee. The first development and commercialization license was granted in August 2013 and the agreement was amended in December 2013 to provide Lilly with an extension provision and retrospectively include a \$2 million exercise fee for the first license in lieu of the fee due for either the second or third license. The second and third licenses were granted in December 2014, with one including the \$2 million exercise fee and the other not. In October 2018, Lilly terminated its three development and commercialization licenses. As a result, the Company recorded the remaining \$692,000 balance of the upfront payment that had been allocated to future performance obligations under this license as revenue, which is included in license and milestone fees for the year ended December 31, 2018.

CytomX

In 2016, the Company granted CytomX an exclusive development and commercialization license to the Company's maytansinoid ADC technology for use with Probodyes™ that target CD166 under a now expired reciprocal right-to-test agreement. The Company neither received nor made an upfront cash payment in connection with the execution of the right-to-test agreement or the license agreement. An amendment of the agreement executed simultaneously with the license, granted CytomX the right, for a specified period of time, to substitute the specified target with another as yet unspecified target. Accordingly, the revenue associated with this license was deferred until the expiration of that substitution right in January 2017, whereupon the Company recognized \$12.7 million of the \$13 million of arrangement consideration allocated to the development and commercialization license, which is included in license and milestone fee revenue for the year ended December 31, 2017. With respect to the development and commercialization license granted to CytomX, the Company is entitled to receive up to a total of \$160 million in milestone payments plus royalties on the commercial sales of any resulting product. The total milestones are categorized as follows: development milestones—\$10 million; regulatory milestones—\$50 million; and sales milestones—\$100 million. In June 2017, CytomX enrolled its first patient in a Phase 1 clinical trial for its product candidate, CX-2009, triggering a \$1 million development milestone payment which is included in license and milestone fee revenue for the year ended December 31, 2017. In December 2019, a development milestone related to dosing of a first patient in a Phase 2 clinical trial became probable of being attained, which resulted in \$3.0 million of license and milestone fee revenue being recorded in 2019. On February 21, 2020, CytomX notified the Company that it had enrolled its first patient in the aforementioned Phase 2 clinical trial. The next payment the Company could receive would be a \$6 million development milestone payment with commencement of a Phase III clinical trial. CytomX is responsible for the manufacturing, development, and marketing of any products resulting from the development and commercialization license taken by CytomX under this collaboration.

Costs directly attributable to the CytomX collaborative agreement are comprised of compensation and benefits related to employees who provided research and development services on behalf of CytomX as well as costs of clinical materials sold. Indirect costs are not identified to individual collaborators. The costs related to the research and development services amounted to \$195,000 and \$256,000 for the years ended December 31, 2018 and 2017, respectively. The costs related to clinical materials sold were \$3.5 million and \$1.0 million for the years ended December 31, 2018 and 2017, respectively. There were no similar costs recorded subsequently.

In 2017, we took exclusive development and commercialization licenses to CytomX's proprietary antibody-masking (Probody) technology for use with Probodyes that target two specified targets under the same reciprocal right-to-test agreement. The Company terminated one of these licenses for convenience prior to the end of 2017, and terminated the second license in December 2019 in connection with the grant of the EpCAM license to CytomX discussed further below. No upfront cash payments were made by the Company with the execution of these license agreements.

The arrangement was accounted for based on the fair value of the items exchanged. The items to be delivered to CytomX under the arrangement are accounted for under the Company's revenue recognition policy. The items that were received from CytomX were recorded as research and development expenses as incurred.

In December 2019, the Company granted CytomX an exclusive development and commercialization license to maytansinoid and IGN ADC technology for use with Probodyes™ that target EpCAM. Pursuant to the license agreement, in January 2020, the Company received a \$7.5 million upfront payment, of which \$7.3 million was recorded as license and milestone fee revenue upon delivery of the license to CytomX in December 2019 and \$200,000 was deferred until delivery of certain materials as these performance obligations were determined to be distinct. The Company is also

entitled to receive up to a total of \$355 million in milestone payments plus royalties on the commercial sales of any resulting product. The total milestones are categorized as follows: development milestones—\$35 million; regulatory milestones—\$170 million; and sales milestones—\$150 million. CytomX is responsible for the manufacturing, product development, and marketing of any products resulting from this license.

Takeda

In March 2015, the Company entered into a three-year right-to-test agreement with Takeda Pharmaceutical Company Limited (Takeda) through its wholly owned subsidiary, Millennium Pharmaceuticals, Inc. The agreement provides Takeda with the right to (a) take exclusive options, with certain restrictions, to individual targets selected by Takeda for specified option periods, (b) test the Company's ADC technology with Takeda's antibodies directed to the targets optioned under a right-to-test, or research, license, and (c) take exclusive licenses to use the Company's ADC technology to develop and commercialize products to targets optioned for up to two individual targets on terms specified in the right-to-test agreement by the end of the term of the right-to-test agreement, after which any then outstanding options would lapse. Takeda had the right to extend the three-year right-to-test period for one additional year by payment to the Company of \$4 million. Alternatively, Takeda had the right to expand the scope of the right-to-test agreement by payment to the Company of \$8 million. Takeda is responsible for the manufacturing, development, and marketing of any products resulting from this collaboration.

The Company received a \$20 million upfront payment in connection with the execution of the right-to-test agreement and, for each development and commercialization license taken, is entitled to receive up to a total of \$210 million in milestone payments, plus royalties on the commercial sales of any resulting products. The total milestones are categorized as follows: development milestones—\$30 million; regulatory milestones—\$85 million; and sales milestones—\$95 million. The Company also is entitled to receive payments for delivery of cytotoxic agents to Takeda and research and development activities performed on behalf of Takeda.

A first license was granted to Takeda in December 2015, whereupon the Company recognized \$8.6 million of the arrangement consideration allocated to the development and commercialization licenses. In March 2018, the right-to-test agreement expired without Takeda exercising its option to a second license or extending the agreement or expanding the agreement as it had the right to do for a third license. Accordingly, the remaining \$10.9 million of revenue that had been deferred for such performance obligations was recognized as revenue and is included in license and milestone fees for the year ended December 31, 2018. In May 2018, Takeda enrolled its first patient in a Phase I clinical trial, triggering a \$5 million milestone payment to the Company. Due to the likelihood of this milestone being attained, this milestone was recognized as a contract asset as part of the cumulative adjustment to transition to ASC 606. It had been previously allocated to the delivered license and the right to technological improvements. The next potential milestone payment the Company will be entitled to receive will be a \$10 million development milestone payment with the initiation of a Phase 2 clinical trial.

Costs directly attributable to the Takeda collaborative agreement are comprised of compensation and benefits related to employees who provided research and development services on behalf of Takeda. Indirect costs are not identified to individual collaborators. The costs related to the research and development services amounted to \$199,000 and \$913,000, for the years ended December 31, 2018 and 2017, respectively. The costs related to clinical materials sold were \$650,000 and \$2.1 million for the years ended December 31, 2018 and 2017, respectively. There were no similar costs recorded subsequently.

Fusion

In December 2016, the Company entered into an exclusive license agreement to a specified target with Fusion Pharmaceuticals Inc. The Company is entitled to receive up to a total of \$50 million in milestone payments, plus royalties on the commercial sales of any resulting products. The total milestones are categorized as follows: development milestones—\$15 million; and sales milestones—\$35 million. During the year ended December 31, 2018, a development milestone related to dosing of a first patient in a Phase I clinical trial became probable of being attained, which resulted in a \$500,000 contract asset and the related license and milestone fee revenue being recorded in that year. It was subsequently paid in 2019. The next potential milestone payment the Company will be entitled to receive will be a \$1.5 million development milestone payment with the initiation of a Phase II clinical trial. Fusion is responsible for the manufacturing, development, and marketing of any products resulting from the license.

Debiopharm

In May 2017, Debiopharm International SA (Debiopharm) acquired the Company's IMG529 program, a clinical-stage anti-CD37 ADC for the treatment of patients with B-cell malignancies, such as non-Hodgkin lymphomas (NHL). Under the terms of the Exclusive License and Asset Purchase agreement, the Company received a \$25 million

upfront payment for specified assets related to IMGN529 and a paid-up license to the Company's ADC technology and a \$5 million milestone payment upon substantial completion of the transfer of ImmunoGen technologies related to the program (technology transfer), which was completed in the fourth quarter of 2017. \$4.5 million was received for this milestone in December 2017, and the balance in January 2018 upon delivery of the final materials related to the transfer. Accordingly, the Company recorded \$500,000 and \$29.5 million of license and milestone fee revenue in 2018 and 2017, respectively. In addition, ImmunoGen is eligible for a second success-based milestone payment of \$25 million upon IMGN529 entering a Phase 3 clinical trial. The milestone payment will be significantly reduced if a Phase 3 trial using the Company's technology but not the IMGN529 antibody commences prior to IMGN529 entering a Phase 3 trial. The Company does not believe this scenario is likely to occur.

Jazz Pharmaceuticals

In August 2017, the Company entered into a Collaboration and Option Agreement (the "Option Agreement") with Jazz Pharmaceuticals Ireland Limited (Jazz), a subsidiary of Jazz Pharmaceuticals plc, granting Jazz exclusive, worldwide rights to opt into development and commercialization of two early-stage, hematology-related ADC programs, as well as an additional program to be designated during the term of the agreement. The programs covered under the agreement included IMGN779, a CD33-targeted ADC for the treatment of acute myeloid leukemia (AML) then in Phase 1 testing, IMGN632, a CD123-targeted ADC for hematological malignancies also then in Phase 1 testing, and an early-stage program to be determined at a later date.

In October 2019, Jazz exercised certain of its opt-out rights under the Option Agreement following the termination of the Company's IMGN779 development program. In addition, in November 2019, the Company executed a First Amendment (the "First Amendment") to the Option Agreement. The First Amendment included an exercise of their opt-out rights related to the termination of the Company's early research programs covered by the Option Agreement in connection with the Company's previously announced restructuring. Under the terms of the Option Agreement, the exercise of both of these opt-out rights will result in a pro-rata reduction in Jazz's obligation to provide development funding, which will now be limited to support of the Company's IMGN632 development program. The First Amendment also provides for a streamlining of the governance structure under the Option Agreement and a reduction in the option exercise fee that Jazz would pay for the remaining product under the Option Agreement or a back-up to that product.

As part of the Option agreement, Jazz made an upfront payment of \$75 million to the Company. Additionally, Jazz had also agreed to pay the Company up to \$100 million in development funding over seven years to support the three ADC programs. That obligation has now been reduced for years 2020 through 2024 pursuant to the terms of the First Amendment. Jazz may exercise its option with respect to IMGN632 at any time prior to a pivotal study or at any time prior to the filing of a biologics license application (BLA) upon payment of an option exercise fee of mid-double digit millions or low triple digit millions, respectively. Following any opt-in, Jazz would be generally responsible for any further development as well as for potential regulatory submissions and commercialization and Jazz and the Company would share costs associated with developing and obtaining regulatory approvals of the applicable product in the U.S. and EU. If Jazz elects to opt-in to IMGN632, the Company would be eligible to receive milestone payments based on receiving regulatory approvals aggregating \$100 million plus tiered royalties as a percentage of commercial sales by Jazz, which will vary depending upon sales levels and the stage of development at the time of opt-in. The Company has the right to co-commercialize IMGN632 in the U.S. with profit sharing in lieu of Jazz's payment of the U.S. milestone and royalties to the Company.

Due to the involvement the Company and Jazz both had in the development and commercialization of the products, as well as both parties being part of the cost share agreement and exposed to significant risks and rewards dependent on the commercial success of the products, the arrangement was determined to be a collaborative arrangement within the scope of ASC 808. Accordingly, the Company carved out the research and development activities and the related cost sharing arrangement with Jazz. Payments for such activities are recorded as research and development expense and reimbursements received from Jazz are recognized as an offset to research and development expense in the accompanying statement of operations during the development period. Included in research and development expense for the years ended December 31, 2019, 2018 and 2017, are \$12.5, \$10.0 and \$3.3 million of credits related to reimbursements from Jazz, respectively.

The non-refundable, upfront arrangement consideration of \$75 million was allocated to the three License Options. The amount allocated to the rights to future technological improvements under the relative selling price method was deemed immaterial and, therefore, not segregated from the License Options. In conjunction with the opt-out of IMGN779, the Company recognized \$14.5 million of the deferred revenue in the year ended December 31, 2019. In connection with the execution of the First Amendment, the amount of the transaction price originally allocated to the

early research product Options was reallocated to the to the IMG632 Option, which represents the only remaining material right. The amount allocated to the IMG632 option will be recognized as revenue when exercised by Jazz or upon expiration. The Company does not control when Jazz will exercise its option for its development and commercialization license. As a result, the Company cannot predict when it will recognize revenue related to the delivery of the license and, accordingly, the remaining upfront payment of \$60.5 million is included in long-term deferred revenue as of December 31, 2019.

D. Property and Equipment

Property and equipment consisted of the following at December 31, 2019 and 2018 (in thousands):

	December 31, 2019	December 31, 2018
Leasehold improvements	\$ 20,776	\$ 20,684
Machinery and equipment	9,384	22,558
Computer hardware and software	5,692	5,494
Furniture and fixtures	3,607	3,546
Assets under construction	—	113
	<u>\$ 39,459</u>	<u>\$ 52,395</u>
Less accumulated depreciation	(32,466)	(39,504)
Property and equipment, net	<u>\$ 6,993</u>	<u>\$ 12,891</u>

Included in the table above, the Company's investment in equipment under capital leases was \$1.1 million and \$595,000, net of accumulated amortization of \$1.0 million and \$684,000, at December 31, 2019 and 2018, respectively. Depreciation expense was \$4.0, \$7.4, and \$6.0 million for the years ended December 31, 2019, 2018 and 2017, respectively. As a result of the restructuring at the end of the second quarter of 2019, the Company recorded an impairment charge of \$2.5 million to write down excess equipment to fair value. During the fourth quarter of 2019, the Company executed an agreement to liquidate the equipment and transferred title to assets with a cost basis of \$14.2 million and accumulated depreciation of \$12.9 million, for which the Company received a \$2 million payment. Included in machinery and equipment in the table above is \$6.7 million of cost basis for the remaining equipment that is held for sale at December 31, 2019 and related accumulated depreciation of \$6.0 million, for which title will transfer in the first quarter of 2020, triggering an additional \$1 million payment to the Company.

E. Convertible 4.5% Senior Notes

In 2016, the Company issued Convertible 4.5% Senior Notes with an aggregate principal amount of \$100 million. The Company received net proceeds of \$96.6 million from the sale of the Convertible Notes, after deducting fees and expenses of \$3.4 million.

During the second half of calendar 2017, the Company entered into privately negotiated exchange agreements with a number of holders of the outstanding Convertible Notes, pursuant to which the Company agreed to exchange, in a private placement, \$97.9 million in aggregate principal amount of Convertible Notes held by the holders for 26,160,187 newly issued shares of common stock, equivalent to the number of shares based on the original conversion terms, plus an additional number of newly issued shares of common stock determined based on the volume-weighted average trading price of the common stock over certain trading days. As a result of the agreements, 2,784,870 additional shares were issued.

In accordance with ASC, Topic 470-20, "Debt – Debt with Conversion and Other Options," based on the short period of time the conversion offer was open and the substantive conversion feature offer, the Company accounted for the conversion of \$96.9 million of the debt as an inducement by expensing the fair value of the shares that were issued in excess of the original terms of the Convertible Notes. Due to the passage of time between the inducement offer and execution of the agreement, the Company accounted for the conversion of the other \$1 million of the debt as an extinguishment by expensing the fair value of the shares that were issued in excess of net book value of the Convertible Notes. As a result, the Company recorded a non-cash debt conversion expense in the amount of \$22.9 million in the year ended December 31, 2017. In addition, accrued interest on the bonds of \$743,000 which the noteholders forfeited, \$2.5 million of deferred financing costs and \$1.7 million in transaction costs were charged to paid-in capital as a result of the issuance of common stock upon conversion.

The remaining \$2.1 million of Convertible Notes are governed by the terms of an indenture between the Company, as issuer, and Wilmington Trust, National Association, as the trustee. The Convertible Notes are senior unsecured obligations and bear interest at a rate of 4.5% per year, payable semi-annually in arrears on January 1 and July

1 of each year, commencing on January 1, 2017. The Company recorded \$95,000, \$95,000, and \$3.0 million of interest expense in the years ended December 31, 2019, 2018 and 2017, respectively. The Convertible Notes will mature on July 1, 2021, unless earlier repurchased or converted. Holders may convert their notes at their option at any time prior to the close of business on the business day immediately preceding the stated maturity date. Upon conversion, the Company will deliver for each \$1,000 principal amount of converted notes a number of shares equal to the conversion rate, which will initially be 238.7775 shares of common stock, equivalent to an initial conversion price of approximately \$4.19. The conversion rate will be subject to adjustment in some circumstances, but will not be adjusted for any accrued and unpaid interest.

The Company analyzed the terms of the Convertible Notes and determined that under current accounting guidance the notes would be entirely accounted for as debt and none of the terms of the notes require separate accounting. As part of the issuance of the Convertible Notes, the Company incurred \$3.4 million of transaction costs, of which \$2.5 million was reclassified to equity upon conversion noted above. The remaining net unamortized balance of \$50,000 was netted against the Convertible Notes in the accompanying consolidated balance sheet and is being amortized to interest expense ratably over the term of the Convertible Notes.

F. Liability Related to Sale of Future Royalties

In 2015, IRH purchased the right to receive 100% of the royalty payments on commercial sales of Kadcyła arising under the Company's development and commercialization license with Genentech, until IRH had received aggregate royalties equal to \$235 million or \$260 million, depending on when the aggregate royalties received by IRH reached a specified milestone. Once the applicable threshold was met, if ever, the Company would thereafter have received 85% and IRH would have received 15% of the Kadcyła royalties for the remaining royalty term. At consummation of the transaction the Company received cash proceeds of \$200 million. As part of this sale, the Company incurred \$5.9 million of transaction costs, which are presented net of the liability in the accompanying consolidated balance sheet and are being amortized to interest expense over the estimated life of the royalty purchase agreement. Although the Company sold its rights to receive royalties from the sales of Kadcyła, as a result of its ongoing involvement in the cash flows related to these royalties, the Company will continue to account for these royalties as revenue and recorded the \$200 million in proceeds from this transaction as a liability related to sale of future royalties (Royalty Obligation) that will be amortized using the interest method over the estimated life of the royalty purchase agreement.

In January 2019, the Company sold its residual rights to receive royalty payments on commercial sales of Kadcyła to OMERS, the defined benefit pension plan for municipal employees in the Province of Ontario, Canada, for a net payment of \$65.2 million (amount is net of \$1.5 million in contingent broker fees). Simultaneously, OMERS purchased IRH's right to the royalties the Company previously sold as described above, therefore obtaining the rights to 100% of the royalties received from that date on. Because the Company will not be involved with the cash flows related to the residual royalties, the \$65.2 million of net proceeds received from the sale of its residual rights to receive royalty payments was recorded as long-term deferred revenue and will be amortized as the cash related to the residual rights is received using the units of revenue approach. During the year ended December 31, 2019, the Company did not receive any royalties related to the residual rights, therefore, no revenue was recognized. Additionally, the purchase of IRH's interest by OMERS did not result in an extinguishment or modification of the original instrument and, accordingly, the Company will continue to account for the remaining obligation as a liability as outlined above.

The following table shows the activity within the liability account during the year ended December 31, 2019 and the period from inception (in thousands):

	Year Ended December 31, 2019	Period from inception to December 31, 2019
Liability related to sale of future royalties, net — beginning balance	\$ 148,225	\$ —
Proceeds from sale of future royalties, net	—	194,135
Kadcyła royalty payments received and paid	(41,548)	(145,172)
Non-cash interest expense recognized	16,864	74,578
Liability related to sale of future royalties, net — ending balance	<u>\$ 123,541</u>	<u>\$ 123,541</u>

As royalties are remitted to IRH and subsequently OMERS, the balance of the Royalty Obligation will be effectively repaid over the life of the agreement. In order to determine the amortization of the Royalty Obligation, the Company is required to estimate the total amount of future royalty payments to be received and remitted as noted above

over the life of the agreement. The sum of these amounts less the \$200 million proceeds the Company received will be recorded as interest expense over the life of the Royalty Obligation. Since inception, the Company's estimate of this total interest expense results in an effective annual interest rate of 9.7% and a current effective interest rate of 15.5% as of December 31, 2019. The Company periodically assesses the estimated royalty payments to IRH/OMERS and to the extent such payments are greater or less than its initial estimates, or the timing of such payments is materially different than its original estimates, the Company will prospectively adjust the amortization of the Royalty Obligation. There are a number of factors that could materially affect the amount and timing of royalty payments from Genentech, most of which are not within the Company's control. Such factors include, but are not limited to, changing standards of care, the introduction of competing products, manufacturing or other delays, biosimilar competition, patent protection, adverse events that result in governmental health authority imposed restrictions on the use of the drug products, significant changes in foreign exchange rates as the royalties remitted to IRH/OMERS are made in U.S. dollars (USD) while significant portions of the underlying sales of Kadcyła are made in currencies other than USD, and other events or circumstances that could result in reduced royalty payments from Kadcyła, all of which would result in a reduction of non-cash royalty revenues and the non-cash interest expense over the life of the Royalty Obligation. Conversely, if sales of Kadcyła are more than expected, the non-cash royalty revenues and the non-cash interest expense recorded by the Company would be greater over the term of the Royalty Obligation.

In addition, the royalty purchase agreement grants IRH/OMERS the right to receive certain reports and other information relating to the royalties and contains other representations and warranties, covenants, and indemnification obligations that are customary for a transaction of this nature.

G. Income Taxes

The difference between the Company's expected tax benefit, as computed by applying the applicable U.S. federal corporate tax rate to loss before the benefit for income taxes, and actual tax is reconciled in the following chart (in thousands):

	Years Ended December 31,		
	2019	2018	2017
Loss before income tax expense	\$ (104,133)	\$ (168,843)	\$ (96,012)
Expected tax benefit at 21%, 34%, 34% and 34%, respectively	\$ (21,868)	\$ (35,457)	\$ (32,644)
Permanent differences	320	(103)	25
Incentive stock options	569	1,144	1,528
State tax benefit net of federal benefit	(6,726)	(10,622)	(3,537)
Change in valuation allowance, net	27,812	53,706	(63,238)
Federal research credit	(1,652)	(2,466)	(2,204)
Federal orphan drug credit	(4,426)	(6,934)	(7,118)
Expired loss and credit carryforwards	500	—	—
Change in U.S. tax law	—	—	97,479
Debt inducement	—	—	8,044
Lease incentive	—	109	—
Stock option expirations	5,471	623	1,665
Benefit for income taxes	<u>\$ —</u>	<u>\$ —</u>	<u>\$ —</u>

At December 31, 2019, the Company has net operating loss, or NOL, carryforwards of \$471.6 million available to reduce federal taxable income, if any, that begin to expire in 2028 through 2037 and \$269.2 million of the federal NOL carryforwards can be carried forward indefinitely. The Company has \$572.6 million of NOL carryforwards available to reduce state taxable income, if any, that expire in 2033 through 2039. The Company also has federal and state credit carryforwards of \$64.4 million and \$13.6 million, respectively, available to offset federal and state income taxes, which expire beginning in 2020. Due to the degree of uncertainty related to the ultimate use of the loss carryforwards and tax credits, the Company has established a valuation allowance to fully reserve these tax benefits.

Deferred income taxes reflect the net tax effects of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for income tax purposes. Significant components of the Company's deferred tax assets and liabilities as of December 31, 2019 and 2018 are as follows (in thousands):

	December 31,	
	2019	2018
Deferred tax assets:		
Net operating loss carryforwards	\$ 191,744	\$ 171,437
Research and development tax credit carryforwards	75,084	69,710
Property and other intangible assets	809	297
Deferred revenue	36,008	22,075
Stock-based compensation	9,630	12,849
Operating Lease Liability	6,767	2,639
Other liabilities	2,255	2,920
Royalty sale	30,030	38,593
Total deferred tax assets	<u>\$ 352,327</u>	<u>\$ 320,520</u>
Deferred tax liabilities:		
Stock-based compensation	(110)	(156)
Operating lease right of use asset	(4,258)	—
Royalty sale transaction costs	(408)	(625)
Total deferred tax liabilities	<u>\$ (4,776)</u>	<u>\$ (781)</u>
Valuation allowance	(347,551)	(319,739)
Net deferred tax assets/(liabilities)	<u><u>\$ —</u></u>	<u><u>\$ —</u></u>

The Company has evaluated the positive and negative evidence bearing upon the realizability of its deferred tax assets. As required by the provisions of ASC 740, the Company has determined that it is not more-likely-than-not that the tax benefits related to the federal and state deferred tax assets will be realized for financial reporting purposes.

Accordingly, the deferred tax assets have been fully reserved at December 31, 2019 and 2018. The valuation allowance increased by \$27.8 million during the year ended December 31, 2019 due primarily to additional net loss incurred during the year.

In December 2017, the Tax Cuts and Jobs Act, or the Tax Act ("TCJA"), was signed into law. Among other things, the Tax Act permanently lowers the corporate federal income tax rate to 21% from the existing maximum rate of 35%, effective for tax years including or commencing January 1, 2018. As a result of the reduction of the corporate federal income tax rate to 21%, U.S. GAAP requires companies to revalue their deferred tax assets and deferred tax liabilities as of the date of enactment, with the resulting tax effects accounted for in the reporting period of enactment. For 2017, this revaluation resulted in a provision of \$97.5 million to income tax expense in continuing operations and a corresponding reduction in the valuation allowance. As a result, there was no impact to the Company's income statement as a result of the reduction in tax rates. The other provisions of the TCJA did not have a material impact on the consolidated financial statements.

Utilization of the NOL and credit carryforwards may be subject to a substantial annual limitation due to ownership change limitations that have occurred previously or that could occur in the future as provided by Sections 382 and 383 of the Internal Revenue Code of 1986, as well as similar state and foreign provisions. These ownership changes may limit the amount of NOL and credit carry forwards that can be utilized annually to offset future taxable income and tax, respectively. In general, an ownership change, as defined by Section 382, results from transactions increasing the ownership of certain shareholders or public groups in the stock of a corporation by more than 50 percentage points over a three-year period. Since the Company's formation, it has raised capital through the issuance of capital stock on several occasions (both pre and post initial public offering) which, combined with the purchasing shareholders' subsequent disposition of those shares, may have resulted in a change of control, as defined by Section 382, or could result in a change of control in the future upon subsequent disposition. During fiscal year 2015, the Company completed a study to assess whether a change of control has occurred or whether there have been multiple changes of control since its formation and determined no ownership change occurred under Section 382. The study has not been updated beyond fiscal year 2015. Additionally, the Company has not completed a detailed Research and Development Credit Study (including the Orphan Drug Credit); accordingly, it is probable that a portion of the tax credit carryforward may not be available to offset future income.

The Company accounts for uncertain tax positions under the recognition and measurement criteria of ASC 740-10. For those tax positions for which it is more likely than not that a tax benefit will be sustained, the Company records the largest amount of tax benefit with a greater than 50% likelihood of being realized upon settlement with a taxing authority that has full knowledge of all relevant information. If the Company does not believe that it is not more likely than not that a tax benefit will be sustained, no tax benefit is recognized. As of December 31, 2019 and 2018, no uncertain tax positions have been recorded. Interest and penalties related to the settlement of uncertain tax positions, if any, will be reflected in income tax expense. The Company did not recognize any interest and penalties associated with unrecognized tax benefits in the accompanying consolidated financial statements. The Company does not expect any material changes to the unrecognized benefits within 12 months of the reporting date. Due to existence of the valuation allowance, future changes in the Company's unrecognized tax benefits will not impact our effective tax rate.

The statute of limitations for assessment by the Internal Revenue Service, or IRS, and state tax authorities is open for tax years ending after June 30, 2014, although carryforward attributes that were generated prior to fiscal year 2014 may still be adjusted upon examination by the IRS or state tax authorities if they either have been or will be used in a future period.

H. Capital Stock

Common Stock Reserved

At December 31, 2019, the Company has reserved 25.2 million shares of authorized common stock for the future issuance of shares under the 2006, 2016, 2018, ESPP and Inducement Plans. See "Stock-Based Compensation" in Note B for a description of the 2018, ESPP, and Inducement Plans.

Stock Options

As of December 31, 2019, the 2018 Plan and the Inducement Plan were the only employee share-based compensation plans of the Company under which grants can be made. During the year ended December 31, 2019, holders of options issued under the option plans exercised their rights to acquire an aggregate of 794,000 shares of common stock at prices ranging from \$1.84 to \$3.05 per share. The total proceeds to the Company from these option exercises were \$2.2 million.

The Company granted options with an exercise price equal to the fair market value of the common stock on the date of such grant. The following options and their respective weighted-average exercise prices per share were exercisable at December 31, 2019, 2018, and 2017:

	<u>Exercisable (in thousands)</u>	<u>Weighted- Average Exercise Price</u>
December 31, 2019	5,801	\$ 10.16
December 31, 2018	8,405	\$ 11.47
December 31, 2017	7,996	\$ 12.16

2001 Non-Employee Director Stock Plan

In 2001, the Company's shareholders approved the establishment of the 2001 Non-Employee Director Stock Plan, or the 2001 Director Plan, and 50,000 shares of common stock to be reserved for grant thereunder. The 2001 Director Plan provided for the granting of awards to Non-Employee Directors and, at the election of Non-Employee Directors, to have all or a portion of their awards in the form of cash, stock, or stock units. All stock or stock units are immediately vested. The number of stock or stock units issued was determined by the market value of the Company's common stock on the last date of the Company's fiscal quarter for which the services are rendered. The 2001 Director Plan was administered by the Board of Directors which was authorized to interpret the provisions of the 2001 Director Plan, determine which Non-Employee Directors would be granted awards, and determine the number of shares of stock for which a stock right will be granted. The 2001 Director Plan was replaced in 2004 by the 2004 Non-Employee Director Compensation and Deferred Share Unit Plan.

During the years ended December 31, 2018 and 2017, the Company recorded \$31,000 and \$28,000 in compensation expense, respectively, related to approximately 6,000 stock units outstanding under the 2001 Director Plan. The value of the stock units was adjusted to market value at each reporting period. A market value of \$72,000 for the stock units was paid to a retiring director in June 2018, effectively terminating the plan.

2004 Non-Employee Director Compensation and Deferred Share Unit Plan

Under the 2004 Non-Employee Director Compensation and Deferred Share Unit Plan, or the 2004 Director Plan, as amended, between 2004 and 2009 non-employee directors were paid their annual retainers in the form of deferred stock units, based on the fair market value of the Company's common stock on the last date of the Company's fiscal year prior to the year for which services were rendered, and in cash, with the option, at their discretion, to have all or a portion of the cash portion paid in additional deferred stock units. All deferred stock units awarded under the 2004 Director Plan have vested, and are redeemed on the date a director ceases to be a member of the Board, at which time such director's deferred stock units will be settled in shares of common stock of the Company issued under the 2006 Plan at a rate of one share for each vested.

Compensation Policy for Non-Employee Directors

In September 2009, the Board adopted a new Compensation Policy for Non-Employee Directors, which superseded the 2004 Plan and made certain changes to the compensation of its non-employee directors. The Compensation Policy for Non-Employee Directors, as amended as of March 2018, consists of three elements: cash compensation; deferred stock units; and stock options.

Cash Compensation

Each non-employee director receives annual meeting fees which are paid in quarterly installments in, at each director's election, either cash or deferred stock units.

Deferred Stock Units

Non-employee directors receive deferred stock units as follows:

- New non-employee directors are initially awarded 8,000 deferred stock units (6,500 deferred stock units prior to March 28, 2018), with each unit relating to one share of the Company's common stock. These awards vest quarterly over three years from the date of grant, contingent upon the individual remaining a director of the Company as of each vesting date.
- Thereafter, non-employee directors are annually awarded 4,000 deferred stock units (3,000 deferred stock units prior to March 28, 2018). If a non-employee director is first elected to the Board other than at an annual meeting of shareholders, such non-employee director's annual award of 4,000 deferred stock units will be pro-rated based on the number of days between his or her date of election and the date of grant of his or her first annual deferred stock unit award. These awards vest quarterly over approximately one year from the date of grant, contingent upon the individual remaining a director of the Company as of each vesting date.

Vested deferred stock units are redeemed on the date a director ceases to be a member of the Board, at which time such director's deferred stock units will generally be settled in shares of the Company's common stock issued under our 2018 Plan (or its predecessor plans, depending on the grant date of the deferred stock units) at a rate of one share for each vested deferred stock unit then held. Any deferred stock units that remain unvested at that time will be forfeited. All unvested deferred stock units will automatically vest immediately prior to the occurrence of a change of control, as defined in the 2018 Plan (or the substantially identical definition in the predecessor plans, as applicable). Pursuant to the Compensation Policy for Non-Employee Directors, in June 2018, February 2018 and January 2017, the Company issued retiring directors 95,497, 77,012, and 53,248 shares of common stock of the Company to settle outstanding deferred share units.

Pursuant to the Compensation Policy for Non-Employee Directors, as amended, the Company recorded:

- \$337,000 in compensation expense during the year ended December 31, 2019 related to the grant of 63,000 deferred share units and 18,000 deferred share units previously granted;
- \$361,000 in compensation expense during the year ended December 31, 2018 related to the grant of 46,000 deferred share units and 10,500 deferred share units previously granted;
- \$206,000 in compensation expense during the year ended December 31, 2017 related to the grant of 47,000 deferred share units and 12,000 deferred share units previously granted;

Stock Options

Non-employee directors also receive stock option awards as follows:

- **Initial Stock Option Awards.** Non-employee directors receive an initial stock option award covering 18,000 shares (10,000 shares prior to March 28, 2018) of our common stock on the date of his or her initial election or appointment to the Board, which is the grant date. These awards will have an exercise price equal to the market price of the Company’s stock on the grant date, will vest quarterly over a three-year period from the grant date, and will expire on the tenth anniversary of the grant date, contingent upon the individual remaining a director of the Company during such period.
- **Annual Stock Option Awards.** Non-employee directors receive an annual stock option award covering 18,000 shares (10,000 shares prior to March 28, 2018) of our common stock on the date of our annual meeting of shareholders, which is the grant date. These awards will have an exercise price equal to the market price of the Company’s stock on the grant date, will vest quarterly over approximately one year from the grant date, and will expire on the tenth anniversary of the grant date, contingent upon the individual remaining a director of the Company during such period.
- **Off-Cycle Initial Awards.** If a non-employee director is first elected to the Board other than at an annual meeting of shareholders, such non-employee director will receive an annual stock option award covering 18,000 shares (10,000 shares prior to March 28, 2018) of our common stock, pro-rated based on the number of days between his or her date of election and the date of grant of his or her first annual stock option award. These awards will have an exercise price equal to the market price of the Company’s stock on the date of grant, will vest quarterly over approximately one year from the grant date, and will expire on the tenth anniversary of the grant date, contingent upon the individual remaining a director of the Company during such period.

All unvested stock option awards granted to non-employee directors will automatically vest immediately as of the date of a change of control, as defined in the 2018 Plan (or predecessor plans as applicable, which have substantially the identical terms). The directors received a total of 108,000, 128,000 and 80,000 options in the years ended December 31, 2019, 2018 and 2017, and the related stock compensation expense is included in the amounts discussed in the “Stock-Based Compensation” section of footnote B above.

I. Restructuring Charge

2019 Corporate Restructuring

On June 26, 2019, the Board of Directors approved a plan to restructure the business to focus resources on continued development of mirvetuximab soravtansine and a select portfolio of three earlier-stage product candidates, resulting in a significant reduction of our workforce, with a majority of these employees separating from the business by mid-July 2019 and most of the remaining affected employees transitioning over varying periods of time of up to 12 months. Communication of the plan to the affected employees was substantially completed on June 27, 2019.

As a result of the workforce reduction, during the three months ended June 30, 2019, the Company recorded a \$16.0 million charge for severance related to a pre-existing plan in accordance with ASC 712, Compensation-Nonretirement Postemployment Benefits, as such amounts were probable and reasonably estimable. The estimate was reduced during the year to \$15.4 million due to minor adjustments to the plan. The related cash payments will be substantially paid out by June 30, 2020. In addition, an anticipated charge of \$4.0 million is expected to be incurred for incremental retention benefits over the same time period, of which \$2.1 million was recorded during the year ended December 31, 2019.

A summary of activity against the corporate restructuring charge related to the employee terminations in 2019 is as follows:

	Employee Termination Benefits Costs
Initial charge related to employee benefits - June 2019	\$ 16,030
Additional charges/adjustments during the period	(663)
Payments during the period	(11,280)
Balance at December 31, 2019	<u>\$ 4,087</u>

In addition to the termination benefits and other related charges, the Company will seek to sub-lease the majority of the laboratory and office space at 830 Winter Street in Waltham, Massachusetts. The financial impact of these efforts is dependent on the length of time it takes to find a tenant and the terms of the sub-lease. The decision to vacate part of its corporate office resulted in a change in asset groupings and also represented an impairment indicator. The Company determined that the right-of-use asset and leasehold improvements were recoverable based on expected sub-lease income and, therefore, no impairment was recorded.

In addition, the Company also decided to liquidate excess laboratory equipment and expected the proceeds to be less than the carrying value. As a result, at the end of the second quarter of 2019, the Company recorded an impairment charge of \$2.5 million to write down the equipment to fair value based on current market re-sale estimates obtained.

2018 Manufacturing Restructuring

In February 2018, following an in-depth review of manufacturing and quality operations, the Board of Directors authorized management to implement a new operating model that will rely on external manufacturing and quality testing for drug substance and drug product for the Company’s development programs. The implementation of this new operating model led to the ramp-down of manufacturing and quality activities at the Norwood, Massachusetts facility by the end of 2018, and a full decommissioning of the facility in February 2019. Implementation of the new operating model resulted in the separation of 22 employees. Communication of the plan to the affected employees was substantially completed on February 8, 2018.

In connection with the implementation of the new operating model, the Company recorded a one-time charge of \$1.2 million for severance related to a pre-existing plan in the first quarter of 2018 in accordance with ASC 712, Compensation-Nonretirement Postemployment Benefits, as such amounts were probable and reasonably estimable. Additional expense was recorded for incremental retention benefits over the remaining service period of the related employees, as well as marginal adjustments to severance resulting from voluntary terminations, which totaled \$2.3 million for the remainder of 2018. Cash payments related to retention benefits were paid in the fourth quarter of 2018 and those related to severance were substantially paid out by the end of the second quarter of 2019. Additionally, certain options held by the employees to be separated were modified to extend the exercise period, resulting in a stock compensation charge of \$157,000 in the first quarter of 2018.

A summary of activity against the manufacturing restructuring charge related to the employee terminations in 2018 is as follows:

	Employee Termination Benefits Costs
Balance at December 31, 2018	\$ 841
Payments during the period	(841)
Balance at December 31, 2019	\$ —

Charge Related to Unoccupied Office Space

The Company has sought to sub-lease 10,281 square feet of unoccupied office space at 930 Winter Street in Waltham, Massachusetts that was leased in 2016. During 2017, based on evaluation of the prospects for sub-leasing excess office space previously determined to be impaired, the Company determined that additional time would be required to find a tenant. Accordingly, the calculation for the potential sub-lease loss was updated and it was determined that the remaining balance of the leasehold improvements was impaired. Also, due to the longer period of time it was expected to take to secure a tenant, an additional lease loss was recorded based on the change in estimate of the sub-lease assumption. The total of these charges in 2017 was \$779,000. During 2019, the Company recorded \$559,000 of impairment charges related to this lease, which represents the remaining balance of the right to use asset as the likelihood of finding a sub-lessor has diminished significantly as the lease approaches termination.

J. Leases

Leases

The Company currently has the following two real estate leases: (i) an agreement with CRP/King 830 Winter L.L.C. for the rental of approximately 120,000 square feet of laboratory and office space at 830 Winter Street, Waltham, MA through March 2026. The Company uses this space for its corporate headquarters and other operations; the Company may extend the lease for two additional terms of five years; the Company is required to pay certain operating expenses for the leased premises subject to escalation charges for certain expense increases over a base amount; the

Company is actively seeking to sub-lease approximately 80,000 square feet of this space and, in January 2020, executed a sublease for approximately 18,000 square feet through the remaining initial term of the lease; and (ii) an agreement with PDM 930 Unit, LLC for the rental of 10,281 square feet of additional office space at 930 Winter Street, Waltham, MA through August 31, 2021; the Company is required to pay certain operating expenses for the leased premises based on its pro-rata share of such expenses for the entire rentable space of the building; the Company is actively seeking to sub-lease this space. The Company ended its lease and vacated its manufacturing and office space at 333 Providence Highway, Norwood, MA in February 2019 pursuant to the restructuring plan described previously.

In addition to the two real estate leases noted above, the Company currently has a lease agreement through November 2023 for the rental of copier equipment.

During the first quarter of 2019, the Company adopted the new lease standard by recognizing and measuring leases existing at, or entered into after, January 1, 2019. In accordance with the transition method provided by ASC Update No. 2018-11, Leases (Topic 842): Targeted Improvements, the Company adopted and initially applied the new leasing rules on January 1, 2019, rather than at the earliest comparative period presented in the financial statements. Therefore, prior periods presented are in accordance with the previous lease guidance (ASC 840). As permitted by the new lease standard, the Company elected to apply the following practical expedients to the entire lease portfolio: (i) not to reassess whether any expired or existing contracts are or contain leases or the classification of any expired or existing leases; (ii) not to apply the recognition requirements to short-term leases; and, (iii) not to separate fixed nonlease components from associated lease components for the underlying assets.

Upon adoption, a ROU asset of \$17.6 million and a lease liability of \$27.3 million were recorded and are identified separately in the Company's consolidated balance sheets for the existing operating leases. There was no impact to the consolidated statements of operations. Upon adoption, the amount of the ROU assets recorded was offset by the applicable unamortized lease incentive and straight-line lease liability balances of \$9.7 million and, therefore, there was no impact to accumulated deficit. There were no initial direct costs related to the leases to consider. The Company's operating lease liabilities related to its real estate lease agreements were calculated using a collateralized incremental borrowing rate. The Company's operating lease liability related to its equipment lease was calculated using an implicit rate provided in the lease. The weighted average discount rate for the operating lease liability is approximately 11%. A 100 basis point change in the incremental borrowing rate would result in less than a \$1 million impact to the ROU assets and liabilities recorded. Lease expense for operating lease payments is recognized on a straight-line basis over the lease term, which for the year ended December 31, 2019 and 2018 was \$4.3 million and \$5.8 million, respectively, and is included in operating expenses in the consolidated income statements. During 2019, the Company recorded \$559,000 of impairment charges related to its 930 Winter Street lease, which represents the remaining balance of the right to use asset as the likelihood of finding a sub-lessor has diminished significantly as the lease approaches termination. Cash paid against operating lease liabilities during the year ended December 31, 2019 was \$5.3 million. As of December 31, 2019, the Company's ROU assets and lease liabilities for operating leases totaled \$15.6 million and \$24.8 million, respectively, and the weighted average remaining term of the operating leases is approximately six years.

The Company's finance leases consist entirely of single payment obligations that have been made for equipment. The related asset balances, net of accumulated amortization, of \$1.1 million and \$595,000 as of December 31, 2019 and December 31, 2018, respectively, are included in property and equipment in the consolidated balance sheets. Amortization expense of \$334,000 and \$205,000 for the year ended December 31, 2019 and 2018, respectively, is included in operating expenses in the consolidated income statements. There are no obligations under finance leases as of December 31, 2019, as all of the finance leases were single payment obligations which have all been made.

The maturities of operating lease liabilities discussed above are as follows (in thousands):

2020	\$	5,485
2021		5,323
2022		5,389
2023		5,510
2024		5,470
Thereafter		6,866
Total lease payments		34,043
Less imputed interest		(9,274)
Total lease liabilities	\$	24,769

In addition to the amounts in the table above, the Company is also responsible for variable operating costs and real estate taxes approximating \$3.1 million per year through March 2026.

K. Commitments and Contingencies

Manufacturing Commitments

In 2018, the Company executed a commercial agreement with one of its manufacturers for future production of antibody through calendar 2025. In May 2019, the agreement was amended to reduce the number of committed antibody batches for an agreed-upon exit fee, which was recorded as research and development expense in the first quarter of 2019. After further negotiations, the Company's noncancelable commitment for future production is approximately €5 million at December 31, 2019.

Litigation

The Company is not party to any material litigation.

L. Employee Benefit Plans

The Company has a deferred compensation plan under Section 401(k) of the Internal Revenue Code (the 401(k) Plan). Under the 401(k) Plan, eligible employees are permitted to contribute, subject to certain limitations, up to 100% of their gross salary and the Company's matching contribution is 50% of the first 6% of the eligible employees' contributions. In the years ended December 31, 2019, 2018 and 2017, the Company's contributions to the 401(k) Plan totaled \$828,000, \$1.0 million, and \$982,000, respectively.

M. Quarterly Financial Information (Unaudited)

	Calendar Year 2019			
	First Quarter Ended	Second Quarter Ended	Third Quarter Ended	Fourth Quarter Ended
	March 31, 2019	June 30, 2019	September 30, 2019	December 31, 2019
	(In thousands, except per share data)			
Revenues:				
License and milestone fees	\$ 79	\$ 5,079	\$ 79	\$ 29,551
Non-cash royalty revenue related to the sale of future royalties	8,488	10,412	13,202	15,313
Research and development support	17	51	—	—
Total revenues	8,584	15,542	13,281	44,864
Expenses:				
Research and development	38,893	28,559	21,015	26,055
General and administrative	10,778	8,700	9,208	9,803
Restructuring charge	559	19,342	1,020	512
Total expenses	50,230	56,601	31,243	36,370
(Loss) income from operations	(41,646)	(41,059)	(17,962)	8,494
Non-cash interest expense on liability related to sale of future royalty	(3,432)	(3,818)	(4,275)	(5,354)
Interest expense on senior convertible notes	(24)	(23)	(24)	(24)
Other income, net	1,351	1,454	511	1,698
Net (loss) income	\$ (43,751)	\$ (43,446)	\$ (21,750)	\$ 4,814
Basic and diluted net (loss) income per common share	\$ (0.30)	\$ (0.29)	\$ (0.15)	\$ 0.03

	Calendar Year 2018			
	First Quarter Ended	Second Quarter Ended	Third Quarter Ended	Fourth Quarter Ended
	March 31, 2018	June 30, 2018	September 30, 2018	December 31, 2018
	(In thousands, except per share data)			
Revenues:				
License and milestone fees	\$ 11,540	\$ 1,321	\$ 672	\$ 1,747
Non-cash royalty revenue related to the sale of future royalties	7,190	7,242	8,441	9,281
Research and development support	383	388	388	218
Clinical materials revenue	702	336	1,427	2,170
Total revenues	19,815	9,287	10,928	13,416
Expenses:				
Research and development	44,831	38,701	47,243	43,681
General and administrative	9,995	8,652	8,347	9,752
Restructuring charge	1,731	686	870	406
Total expenses	56,557	48,039	56,460	53,839
Loss from operations	(36,742)	(38,752)	(45,532)	(40,423)
Non-cash interest expense on liability related to sale of future royalty	(3,046)	(2,611)	(2,546)	(2,428)
Interest expense on senior convertible notes	(24)	(23)	(23)	(25)
Other income (expense), net	1,199	(238)	1,294	1,077
Net loss	\$ (38,613)	\$ (41,624)	\$ (46,807)	\$ (41,799)
Basic and diluted net loss per common share	\$ (0.30)	\$ (0.31)	\$ (0.32)	\$ (0.28)

	Calendar Year 2017			
	First Quarter Ended March 31, 2017	Second Quarter Ended June 30, 2017	Third Quarter Ended September 30, 2017	Fourth Quarter Ended December 31, 2017
	(In thousands, except per share data)			
Revenues:				
License and milestone fees	\$ 18,730	\$ 31,080	\$ 79	\$ 29,580
Royalty revenue	—	—	—	—
Non-cash royalty revenue related to the sale of future royalties	7,613	6,439	6,503	7,587
Research and development support	1,478	902	650	452
Clinical materials revenue	678	599	1,248	1,829
Total revenues	28,499	39,020	8,480	39,448
Expenses:				
Research and development	32,888	35,319	31,689	39,843
General and administrative	8,119	8,836	7,908	9,048
Restructuring charge	386	—	—	393
Total expenses	41,393	44,155	39,597	49,284
Loss from operations	(12,894)	(5,135)	(31,117)	(9,836)
Non-cash interest expense on liability related to sale of future royalty and convertible senior notes	(3,575)	(3,501)	(3,385)	(3,221)
Interest expense on senior convertible notes	(1,125)	(1,125)	(762)	(28)
Non-cash debt conversion expense	—	—	(22,191)	(724)
Other income, net	249	894	773	691
Net loss	\$ (17,345)	\$ (8,867)	\$ (56,682)	\$ (13,118)
Basic and diluted net loss per common share	\$ (0.20)	\$ (0.10)	\$ (0.61)	\$ (0.11)

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

None.

Item 9A. Controls and Procedures

1. *Disclosure Controls and Procedures*

Our management, with the participation of our principal executive officer and principal financial officer, has evaluated the effectiveness of our disclosure controls and procedures (as defined in Rules 13a-15(e) or 15d-15(e) under the Securities Exchange Act of 1934, as amended, or the Exchange Act) as of the end of the period covered by this Annual Report on Form 10-K. Based on such evaluation, our principal executive officer and principal financial officer have concluded that, as of the end of such period, our disclosure controls and procedures were adequate and effective.

2. *Internal Control Over Financial Reporting*

(a) *Management's Annual Report on Internal Control Over Financial Reporting*

Our management is responsible for establishing and maintaining adequate internal control over financial reporting. Internal control over financial reporting is defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act as a process designed by, or under the supervision of, our principal executive and principal financial officers and effected by our board of directors, management, and other personnel to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles in the U.S. and includes those policies and procedures that:

- pertain to the maintenance of records that in reasonable detail accurately and fairly reflect our transactions and dispositions of our assets;
- provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that our receipts and expenditures are being made only in accordance with authorizations of our management and directors; and
- provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of our assets that could have a material effect on the financial statements.

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

Management assessed the effectiveness of our internal control over financial reporting as of December 31, 2019. In making this assessment, management used the criteria established in *Internal Control—Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission, or COSO, in 2013.

Based on this assessment, management has concluded that, as of December 31, 2019 our internal control over financial reporting is effective.

Ernst & Young LLP, our independent registered public accounting firm, has issued a report on the effectiveness of our internal control over financial reporting as of December 31, 2019. This report appears immediately below.

(b) *Attestation Report of the Independent Registered Public Accounting Firm*

Report of Independent Registered Public Accounting Firm

To the Shareholders and the Board of Directors of ImmunoGen Inc.

Opinion on Internal Control over Financial Reporting

We have audited ImmunoGen, Inc.'s internal control over financial reporting as of December 31, 2019, based on criteria established in Internal Control—Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework), (the COSO criteria). In our opinion, ImmunoGen, Inc. (the Company) maintained, in all material respects, effective internal control over financial reporting as of December 31, 2019, based on the COSO criteria.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated balance sheets of the Company as of December 31, 2019 and 2018, the related consolidated statements of operations and comprehensive loss, shareholders' (deficit) equity and cash flows for each of the three years in the period ended December 31, 2019 and the related notes and our report dated March 11, 2020 expressed an unqualified opinion thereon.

Basis for Opinion

The Company's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting included in the accompanying Management's Annual Report on Internal Control Over Financial Reporting. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects.

Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

Definition and Limitations of Internal Control Over Financial Reporting

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

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

/s/ Ernst & Young LLP

Boston, Massachusetts

March 11, 2020

(c) *Changes in Internal Control Over Financial Reporting*

There have not been any changes in our internal control over financial reporting (as such term is defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act) during the quarter ended December 31, 2019 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

3. *Limitations on the Effectiveness of Controls*

Our management, including our principal executive officer and principal financial officer, does not expect that our disclosure controls and procedures or its internal control over financial reporting will prevent all error and all fraud. A control system, no matter how well conceived and operated, can provide only reasonable, not absolute, assurance that the objectives of the control system are met. Further, the design of a control system must reflect the fact that there are resource constraints, and the benefits of controls must be considered relative to their costs. 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 an organization have been detected. These inherent limitations include the realities that judgments in decision-making can be faulty, and that breakdowns can occur because of 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 control. 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 our stated goals under all potential future conditions. Over time, controls may become inadequate because of changes in conditions, or the degree of compliance with the policies or procedures may deteriorate. 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

The information called for by Part III of Form 10-K (Item 10—Directors, Executive Officers and Corporate Governance of the Registrant, Item 11—Executive Compensation, Item 12—Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters, Item 13—Certain Relationships and Related Transactions, and Director Independence, and Item 14—Principal Accounting Fees and Services) is incorporated by reference from our proxy statement related to our 2020 annual meeting of shareholders, which will be filed with the Securities and Exchange Commission not later than April 29, 2020 (120 days after the end of the year covered by this report), except that information required by Item 10 concerning our executive officers appears in Part I, Item 3.1 of this report.

PART IV

Item 15. Exhibits, Financial Statement Schedules

- (a) Documents filed as part of this Report:
- (1) See the financial statements of ImmunoGen, Inc. at Item 8 of this report. Financial Statement Schedules.
 - (2) Financial Statement Schedules:
Schedules not included herein are omitted because they are not applicable or the required information appears in the accompanying Consolidated Financial Statements or Notes thereto.
 - (3) Exhibit Index

[Table of Contents](#)

Exhibit Number	Exhibit Description	Filed with this Form 10-K	Incorporated by Reference		
			Form	Filing Date with SEC	Exhibit Number
3.1	Restated Articles of Organization, as amended		10-Q	April 30, 2010	3.1
3.1(a)	Articles of Amendment		10-Q	January 30, 2013	3.1
3.1(b)	Articles of Amendment		10-Q	August 4, 2017	3.1
3.2	Amended and Restated By-Laws		8-K	June 20, 2016	3.1
4.1	Article 4 of Restated Articles of Organization, as amended (see Exhibit 3.1)				
4.1(a)	Indenture, dated as of June 20, 2016, by and between the Registrant and Wilmington Trust, National Association, as Trustee		8-K	June 20, 2016	4.1
4.2	Form of Common Stock certificate		S-1	November 15, 1989 (File No. 33-31219)	4.2
4.2(a)	Form of Note representing the Registrant's 4.50% Convertible Senior Notes due 2021 (included as Exhibit A to the Indenture filed as Exhibit 4.1(a))				
4.3	Description of Securities	X			
10.1	Lease Agreement, dated as of July 27, 2007, by and between Intercontinental Fund III 830 Winter Street LLC, landlord, and the Registrant		10-Q	November 7, 2007	10.2
10.1(a)	First Amendment to Lease Agreement dated as of December 9, 2013, by and between Intercontinental Fund III 830 Winter Street LLC, landlord, and the Registrant		10-Q	February 5, 2014	10.1
10.1(b)	Second Amendment to Lease Agreement dated as of April 28, 2014, by and between Intercontinental Fund III 830 Winter Street LLC, landlord, and the Registrant		10-Q	May 2, 2014	10.1
10.1(c)	Third Amendment to Lease Agreement dated as of December 14, 2015 by and between CRP/King 830 Winter, L.L.C., landlord, and the Registrant		10-Q	February 4, 2016	10.1
10.1(d)	Fourth Amendment to Lease Agreement dated as of April 6, 2018 by and between CRP/King 830 Winter, L.L.C., landlord, and the Registrant		10-Q	May 9, 2018	10.2
10.2*	Development and License Agreement dated as of October 20, 2008 by and between the Registrant and Bayer HealthCare AG		10-Q	May 9, 2018	10.3
10.3*	Multi-Target Agreement dated as of October 8, 2010 by and between the Registrant and Novartis Institutes for BioMedical Research, Inc.		10-Q/A	August 19, 2015	10.2
10.3(a)*	First Amendment, effective as of March 29, 2013, to Multi-Target Agreement by and between the Registrant and Novartis Institutes for BioMedical Research, Inc.		10-Q	May 6, 2013	10.1
10.4*	Clinical Supply Agreement effective as of December 12, 2010 by and between the Registrant and Società Italiana Corticosteroidi S.r.l. (Sicor)		10-Q	February 8, 2011	10.1
10.5*	Multi-Target Agreement dated as of March 20, 2015 by and between the Registrant and Millennium Pharmaceuticals, Inc.		10-Q	May 8, 2015	10.1
10.6*	Exclusive License and Asset Purchase Agreement dated as of May 23, 2017 by and between the Registrant and Debiopharm International, S.A.		10-Q	August 4, 2017	10.1
10.7*	Collaboration and Option Agreement dated as of August 28, 2017 by and between the Registrant and Jazz Pharmaceuticals Ireland Limited		10-Q	November 9, 2017	10.1
10.7(a)**	First Amendment to Collaboration and Option Agreement dated as of November 20, 2019 by and between the Registrant and Jazz Pharmaceuticals Ireland Limited	X			

[Table of Contents](#)

Exhibit Number	Exhibit Description	Filed with this Form 10-K	Incorporated by Reference		
			Form	Filing Date with SEC	Exhibit Number
10.8*	Royalty Purchase Agreement dated as of January 8, 2019 among the Registrant, Hurricane, LLC, Immunity Royalty Holdings, L.P., and OMERS IP Healthcare Holdings Limited		10-K	March 1, 2019	10.13
10.9†	2006 Employee, Director and Consultant Equity Incentive Plan, as amended and restated through November 11, 2014		8-K	November 13, 2014	10.1
10.9(a)†	Form of Incentive Stock Option Agreement for Executives		S-8	November 15, 2006	99.4
10.9(b)†	Form of Non-Qualified Stock Option Agreement for Executives		S-8	November 15, 2006	99.5
10.9(c)†	Form of Non-Qualified Stock Option Agreement for Directors		10-Q	October 29, 2010	10.1
10.9(d)†	Form of Director Deferred Stock Unit Agreement		10-Q	October 29, 2010	10.1
10.9(e)†	Form of Incentive Stock Option Agreement for all employees (including executives)		10-K	August 29, 2012	10.14(g)
10.9(f)†	Form of Non-Qualified Stock Option Agreement for all employees (including executives)		10-K	August 29, 2012	10.14(h)
10.9(g)†	Form of Non-Qualified Stock Option Agreement for Directors		10-K	August 29, 2012	10.14(i)
10.9(h)†	Form of Restricted Stock Agreement for all employees (including executives)		S-8	November 21, 2012	99.1
10.9(i)†	Form of Incentive Stock Option for all employees (including executives)		8-K	April 26, 2016	10.1
10.9(j)†	Form of Non-Qualified Stock Option Agreement for all employees (including executives)		8-K	April 26, 2016	10.2
10.10†	2016 Employee, Director and Consultant Equity Incentive Plan, as amended and restated through June 13, 2017		8-K	June 16, 2017	10.1
10.10(a)†	Form of Incentive Stock Option Agreement		8-K	December 13, 2016	10.2
10.10(b)†	Form of Non-Qualified Stock Option Agreement for employees		8-K	December 13, 2016	10.3
10.10(c)†	Form of Non-Qualified Stock Option Agreement for Non-Employee Directors		8-K	December 13, 2016	10.4
10.10(d)†	Form of Deferred Stock Unit Agreement for Non-Employee Directors		8-K	December 13, 2016	10.5
10.10(e)†	Form of Restricted Stock Agreement for employees		10-Q	August 4, 2017	10.3
10.10(f)†	Form of Performance-Based Restricted Stock Agreement dated February 21, 2017 and June 14, 2017		10-Q	August 4, 2017	10.4
10.11†	2018 Employee, Director and Consultant Equity Incentive Plan		8-K	June 22, 2018	10.1
10.11(a)†	Form of Incentive Stock Option Agreement		8-K	June 22, 2018	10.2
10.11(b)†	Form of Non-Qualified Stock Option Agreement for employees		8-K	June 22, 2018	10.3
10.11(c)†	Form of Restricted Stock Unit Agreement		8-K	June 22, 2018	10.4
10.11(d)†	Form of Non-Qualified Option Agreement for Non-Employee Directors		8-K	June 22, 2018	10.5
10.11(e)†	Form of Deferred Stock Unit Agreement for Non-Employee Directors		8-K	June 22, 2018	10.6
10.11(f)†	Form of Performance-Based Stock Option Agreement dated February 7, 2020	X			
10.12†	Employee Stock Purchase Plan, as amended through September 27, 2019		10-Q	November 5, 2019	10.7
10.13†	2004 Non-Employee Director Compensation and Deferred Stock Unit Plan, as amended on September 16, 2009		10-Q	November 4, 2009	10.1
10.14†	Form of Proprietary Information, Inventions and Competition Agreement between the Registrant and each of its executive officers		10-Q	February 8, 2007	10.15

[Table of Contents](#)

Exhibit Number	Exhibit Description	Filed with this Form 10-K	Incorporated by Reference		
			Form	Filing Date with SEC	Exhibit Number
10.15†	Change in Control Severance Agreement dated as of March 31, 2017 between the Registrant and Anna Berkenblit		10-Q	May 5, 2017	10.3
10.16†	Change in Control Severance Agreement dated as of March 31, 2017 between the Registrant and Mark J. Enyedy		10-Q	May 5, 2017	10.4
10.17†	Change in Control Severance Agreement dated as of March 31, 2017 between the Registrant and Thomas Ryll		10-Q	May 5, 2017	10.7
10.18†	Change in Control Severance Agreement dated as of March 31, 2017 between the Registrant and Theresa G. Wingrove		10-Q	May 5, 2015	10.9
10.19†	Compensation Policy for Non-Employee Directors, as amended through March 28, 2018		10-Q	May 9, 2018	10.1
10.20†	Severance Pay Plan for Vice Presidents and Higher, as amended through June 20, 2019		10-Q	August 7, 2019	10.1
10.21†	Summary of ImmunoGen Incentive Bonus Plan		8-K	February 20, 2018	10.1
10.22†	Inducement Equity Incentive Plan		8-K	December 20, 2019	10.1
10.22(a)†	Form of Non-Qualified Stock Option Agreement		8-K	December 20, 2019	10.2
10.22(b)†	Form of Restricted Stock Unit Agreement		8-K	December 20, 2019	10.3
21	Subsidiaries of the Registrant	X			
23	Consent of Ernst & Young LLP	X			
31.1	Certifications of the principal executive officer and principal financial officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002	X			
32	Certifications of principal executive officer and principal financial officer pursuant to Section 906 of the Sarbanes-Oxley Act of 2002	X			
101	Financial statements from the annual report on Form 10-K of ImmunoGen, Inc. for the year ended December 31, 2019 formatted in inline XBRL (eXtensible Business Reporting Language): (i) the Consolidated Balance Sheets; (ii) the Consolidated Statements of Operations and Comprehensive Loss; (iii) the Consolidated Statements of Shareholder's (Deficit) Equity; (iv) the Consolidated Statements of Cash Flows; and (v) the Notes to Consolidated Financial Statements	X			
104	Cover Page Interactive Data File (formatted as Inline XBRL and contained in Exhibit 101)	X			

* Portions of this Exhibit were omitted, as indicated by [***], and have been filed separately with the Secretary of the Commission pursuant to the Registrant's application requesting confidential treatment.

** Certain confidential portions of this Exhibit were omitted by means of marking such portions with brackets [***] because the identified confidential portions (i) are not material and (ii) would be competitively harmful if publicly disclosed.

† Exhibit is a management contract or compensatory plan, contract or arrangement required to be filed as an exhibit to this report on Form 10-K.

Item 16. Form 10-K Summary

None

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

As of March [11], 2020, ImmunoGen, Inc. ("ImmunoGen," "we," "us" or the "Company") had one class of securities registered under Section 12 of the Securities Exchange Act of 1934, as amended (the "Exchange Act"): Common Stock, \$.01 par value per share ("Common Stock"). The Company's securities registered under Section 12(b) of the Exchange Act are listed on The Nasdaq Global Select Market.

Description of Common Stock

We are authorized to issue 200,000,000 shares of common stock, par value \$.01 per share.

The following summary of certain provisions of our common stock does not purport to be complete. You should refer to our restated articles of organization, as amended, and our amended and restated by-laws, both of which are included as exhibits to this Form 10-K. The summary below is also qualified by provisions of applicable law.

General

Holders of common stock are entitled to one vote for each share held of record on all matters submitted to a vote of the shareholders, and do not have cumulative voting rights. Subject to preferences that may be applicable to any outstanding shares of preferred stock, holders of common stock are entitled to receive ratably such dividends, if any, as may be declared from time to time by our board of directors out of funds legally available for dividend payments. All shares of common stock outstanding as of the date of this annual report on Form 10-K are fully paid and nonassessable. The holders of common stock have no preferences or rights of conversion, exchange, pre-emption or other subscription rights. There are no redemption or sinking fund provisions applicable to the common stock. In the event of any liquidation, dissolution or winding-up of our affairs, holders of common stock will be entitled to share ratably in our assets that are remaining after payment or provision for payment of all of our debts and obligations and after liquidation payments to holders of outstanding shares of preferred stock, if any.

Transfer Agent and Registrar

The transfer agent and registrar for our common stock is Broadridge Corporate Issuer Solutions, Inc.

The Nasdaq Global Select Market

Our common stock is listed for quotation on The Nasdaq Global Select Market under the symbol "IMGN."

Certain Provisions of Massachusetts Law and of the Company's Articles of Organization and By-Laws

Anti-Takeover Provisions under Massachusetts law and our Massachusetts Articles of Organization and By-Laws

Provisions of Massachusetts law and our restated articles of organization, as amended, and amended and restated by-laws contain other provisions that are intended to enhance the likelihood of continuity and stability in the composition of the board of directors and which may have the effect of delaying, deferring or preventing a future takeover or change in control of our company unless such takeover or change in control is approved by our board of directors.

These provisions, summarized below, are expected to discourage coercive takeover practices and inadequate takeover bids. These provisions are also designed to encourage persons seeking to acquire control of us to first

negotiate with our board of directors. We believe that the benefits of increased protection of our potential ability to negotiate with the proponent of an unfriendly or unsolicited proposal to acquire or restructure us outweigh the disadvantages of discouraging these proposals because negotiation of these proposals could result in an improvement of their terms.

Massachusetts statutory business combinations provisions. We are subject to Chapter 110F of the Massachusetts General Laws, an anti-takeover law. In general, this statute prohibits a publicly-held Massachusetts corporation from engaging in a "business combination" with an "interested stockholder" for a period of three years after the date of the transaction in which the person becomes an interested stockholder, unless (i) the interested stockholder obtains the approval of the board of directors prior to becoming an interested stockholder, (ii) the interested stockholder acquires 90% of the outstanding voting stock of the corporation (excluding shares held by certain affiliates of the corporation) at the time it becomes an interested stockholder, or (iii) the business combination is approved by both the board of directors and the holders of two-thirds of the outstanding voting stock of the corporation (excluding shares held by the interested stockholder). Generally, an "interested stockholder" is a person who, together with affiliates and associates, owns (or at any time within the prior three years did own) 5% or more of the outstanding voting stock of the corporation. A "business combination" includes a merger, a stock or asset sale, and certain other transactions resulting in a financial benefit to the interested shareholders.

Massachusetts General Laws Chapter 110D, entitled "Regulation of Control Share Acquisitions," in general provides that any shareholder of a company subject to this statute who acquires 20% or more of the outstanding voting stock of a company may not vote such stock unless the shareholders of the company so authorize. Although our amended and restated by-laws currently exclude us from this statute, the board of directors may amend our by-laws to subject us to this statute prospectively.

Chapter 110C of the Massachusetts General Laws requires the person commencing a takeover bid to file certain information with the Secretary of the Commonwealth and the target company and provides that a bidder who fails to disclose its intent to gain control over a target corporation prior to acquiring 5% of the target company's stock is precluded from making any takeover bid for a period of one year after crossing the 5% threshold.

Blank check preferred stock. Our restated articles of organization, as amended, allows our board of directors to issue shares of preferred stock without the approval of our shareholders, which is referred to as "blank check" preferred stock. The effects of such issuance, among other things, could include the dilution in the voting power of our common stock if the preferred stock has voting rights and the reduction or restriction in the rights of holders of our common stock to receive a payment in the event of any liquidation, dissolution or winding-up of our company. In some circumstances, the issuance of shares of preferred stock may render more difficult or expensive or tend to discourage a merger, tender offer or proxy contest, the assumption of control by a holder of a large block of our securities or the removal of incumbent management. In addition, the board of directors could also utilize the shares of preferred stock in order to adopt a shareholder rights plan, or "poison pill," which could have the effect of discouraging or delaying a takeover of the company.

Advance notice provisions for shareholder proposals and shareholder nominations of directors. Our amended and restated by-laws provide that, for nominations to the board of directors or for other business to be properly brought by a shareholder before a meeting of shareholders, the shareholder must first have given timely notice of the proposal in writing to our Secretary. For an annual meeting, a shareholder's notice generally must be delivered not less than 45 days nor more than 75 days prior to the anniversary of the mailing date of the proxy statement for the previous year's annual meeting. For special meetings called to elect directors, a shareholder's notice must generally be delivered not less than 60 days (or ten days after public disclosure of the meeting date if later) nor more than 90 days prior to the meeting. Detailed requirements as to the form of the notice and information required in the notice are specified in the amended and restated by-laws. If it is determined that business was not properly brought before a meeting in accordance with our amended and restated by-laws, such business will not be conducted at the meeting. Although our amended and restated by-laws do not give our board of directors the power to approve or disapprove shareholder nominations of candidates or proposals regarding other business to be conducted at a special or annual meeting, our amended and restated by-laws may have the effect of precluding the conduct of some business at a meeting if the proper procedures are not followed or may discourage or defer a potential acquirer from conducting a solicitation of proxies to elect its own slate of directors or otherwise attempting to obtain control of us.

Classified board of directors. Section 8.06(b) of the Massachusetts Business Corporation Act provides that unless a company decides otherwise, the terms of directors of a public Massachusetts company shall be staggered by dividing the directors into three groups, as nearly equal in number as possible, with only one group of directors being elected each year. Sections 8.06(d) and (e) of the Massachusetts Business Corporation Act provide that when directors are so classified, (i) shareholders may remove directors only for cause, (ii) the number of directors shall be fixed only by the vote of the board of directors, (iii) vacancies and newly created directorships shall be filled solely by the affirmative vote of a majority of the remaining directors, and (iv) a decrease in the number of directors will not shorten the term of any incumbent director. Our board of directors opted out of this staggered board of directors requirement, and all of our directors currently serve for one-year terms and are elected annually. Under Section 8.06(c)(2) of the Massachusetts Business Corporation Act, our board of directors may opt into the staggered board of directors requirements of Section 8.06(b) and application of Sections 8.06(d) and (e). If the board of directors opts into this structure, these provisions are likely to increase the time required for shareholders to change the composition of the board of directors. For example, in general, at least two annual meetings would be necessary for shareholders to effect a change in a majority of the members of the board of directors. The provision for a classified board could prevent a party who acquires control of a large portion of our outstanding common stock from obtaining control of our board of directors until our second annual shareholders meeting following the date the acquirer obtains the stock interest. The classified board provision could have the effect of discouraging a potential acquirer from making a tender offer or otherwise attempting to obtain control of us and could increase the likelihood that incumbent directors will retain their positions.

Shareholder can only act by unanimous written consent and restrictions on who can call a special meeting of shareholders. Although our restated articles of organization, as amended, and amended and restated by-laws allow our shareholders to act by written consent, such written consent must be signed by all shareholders entitled to vote on the matter approved. This significantly restricts the ability of our shareholders to act by written consent and essentially provides that our shareholders may only act at a duly called shareholders meeting. In addition, special meetings of the shareholders may be called only by our President, our board of directors and one or more shareholders holding at least 40% of our voting stock.

Limitations on Liability and Indemnification of Officers and Directors

Our restated articles of organization, as amended, and amended and restated by-laws limit the liability of our officers and directors to the fullest extent permitted by the Massachusetts Business Corporation Act and provides that we will indemnify them to the fullest extent permitted by such law

Confidential

First Amendment to Collaboration and Option Agreement

This **First Amendment to Collaboration and Option Agreement** (this “**First Amendment**”) is effective as of November 20, 2019 (the “**First Amendment Effective Date**”) by and between **ImmunoGen, Inc.**, a Massachusetts corporation with its principal place of business at 830 Winter Street, Waltham, Massachusetts 02451 (“**ImmunoGen**”) and **Jazz Pharmaceuticals Ireland Limited**, a corporation organized under the laws of Ireland with its principal place of business at Waterloo Exchange, Waterloo Road, Dublin 4, Ireland (“**Jazz**”), and amends that certain Collaboration and Option Agreement between ImmunoGen and Jazz dated August 28, 2017 (the “**Agreement**”). ImmunoGen and Jazz may each be referred to individually as a “**Party**” and collectively as the “**Parties**”. Capitalized terms not expressly defined herein shall have the meaning set forth in the Agreement.

Recitals

Whereas, pursuant to the Agreement, the Parties have been collaborating in the research and development of Collaboration Products, and Jazz has an option to take an exclusive, worldwide license to develop and commercialize Collaboration Products; and

Whereas, the Parties now wish to amend the Agreement in accordance with Section 13.4 thereof to (a) reflect ImmunoGen’s termination of IMG779 development for efficacy reasons and the research programs and Jazz’s subsequent exercise of the Jazz Opt-Outs as a result thereof with respect to IMG779 and the New Product pursuant to Section 6.2.4 of the Agreement, (b) revise the governance structure of the collaboration to combine the responsibilities of the JSC and the JRDC into the JSC, and (c) revise certain financial terms relating to option exercise;

Now, Therefore, the Parties hereby agree to amend the terms of the Agreement as provided below, effective as of the First Amendment Effective Date.

- 1. Exercise of Jazz Opt-Outs.** The Parties acknowledge that Jazz exercised the Jazz Opt-Out with respect to IMG779 by written notice delivered to ImmunoGen on October 8, 2019. The Parties hereby agree that Jazz shall be deemed to have exercised the Jazz Opt-Out with respect to the New Product, effective as of November 1, 2019.

As a result of these Jazz Opt-Outs, the Jazz Development Funding Obligations under Section 6.2.1 for the remainder of the Funding Term have been reduced by [***] of the applicable Jazz Development Funding Cap set forth in Section 6.2.1(a). For clarity, the Revised Jazz Development Funding Cap for the remainder of 2019 is [***] and the Revised Jazz Development Funding Caps for the Fourth through Eighth Calendar Years are as follows:

Calendar Year (or portion thereof) within the Funding Term	Revised Jazz Development Funding Cap
Fourth Calendar Year (2020)	[***]
Fifth Calendar Year (2021)	[***]
Sixth Calendar Year (2022)	[***]
Seventh Calendar Year (2023)	[***]
Eighth partial Calendar Year (that portion of 2024 up to the seventh anniversary of the Effective Date).	[***]

Under no circumstances shall the total of all Revised Jazz Development Funding Caps for the Fourth through Eighth Calendar Years exceed [***].

For the avoidance of doubt, if Jazz [***] of a Collaboration Product containing IMG632 [***] pursuant to Section 5.2 or 5.3, or if Jazz exercises a Jazz Option or a Jazz Opt-Out with respect to such Collaboration Product, then (a) Jazz shall [***], (b) the Revised Jazz Development Funding Cap shall thereafter be [***], and (c) [***].

2. Amendment of Section 2.3.6. Section 2.3.6 of the Agreement is hereby amended and restated to read in its entirety, as follows:

“2.3.6 Discontinuation of the JRDC. As of the First Amendment Effective Date, (a) the JRDC shall be discontinued, (b) all responsibilities designated to the JRDC under this Agreement (including without limitation those set forth in Sections 2.3.1 and 2.3.5) shall instead be responsibilities of the JSC, and (c) all references to the “JRDC” in this Agreement (except for Section 2.3) shall be deemed, with respect to events happening on or after the First Amendment Effective Date, to be references to the “JSC” except that the JSC shall continue, pursuant to Section 2.2.5(c), to serve as a forum for resolution of any disputes referred to it by the JRDC prior to the First Amendment Effective Date.”

3. Amendment to Schedule A. Schedule A of the Agreement is hereby amended and restated in its entirety, as set forth in Schedule A herein.

4. Effect of Amendment. Except as amended herein, all other provisions of the Agreement shall remain unchanged and in full force and effect.

5. Counterparts. This First Amendment may be executed in counterparts, each such counterpart will be deemed an original agreement, but all such counterparts together will constitute one and the same instrument.

In Witness Whereof, the Parties have caused this First Amendment to be executed and effective as of the First Amendment Effective Date.

ImmunoGen, Inc.

Jazz Pharmaceuticals Ireland Limited

By: /s/ Blaine H. McKee

By: /s/ Aoife Campbell

Name: Blaine H. McKee

Name: Aoife Campbell

Title: EVP and Chief Business Officer

Title: Director

*****] = CERTAIN CONFIDENTIAL INFORMATION CONTAINED IN THIS DOCUMENT, MARKED BY BRACKETS, HAS BEEN OMITTED BECAUSE THE INFORMATION (I) IS NOT MATERIAL AND (II) WOULD BE COMPETITIVELY HARMFUL IF PUBLICLY DISCLOSED**

SCHEDULE A
FINANCIAL TERMS

Jazz Option Exercise Fee

Collaboration Product	Early-Stage Option Payment (\$M)	Late-Stage Option Payment (\$M)
IMGN632 [***]	[***]	[***] ¹
IMGN632 [***]	[***]	[***] ²

¹Jazz shall pay ImmunoGen (a) [***] at the time that Jazz exercises the Late Stage Option for IMGN632 triggered by [***] and (b) an additional [***] within [***] days after the earlier of (i) ImmunoGen's notice to Jazz that it is not exercising the ImmunoGen Opt-In Right and (ii) expiration of the ImmunoGen Opt-in Right without exercise.

²Jazz shall pay ImmunoGen (a) [***] at the time Jazz exercises the Late Stage Option for IMGN632 [***] and (b) an additional [***] within [***] days after the earlier of (i) ImmunoGen's notice to Jazz that it is not exercising the ImmunoGen Opt-In Right and (ii) expiration of the ImmunoGen Opt-In Right without exercise.

[*] = CERTAIN CONFIDENTIAL INFORMATION CONTAINED IN THIS DOCUMENT, MARKED BY BRACKETS, HAS BEEN OMITTED BECAUSE THE INFORMATION (I) IS NOT MATERIAL AND (II) WOULD BE COMPETITIVELY HARMFUL IF PUBLICLY DISCLOSED**

IMMUNOGEN, INC.

**PERFORMANCE-BASED NON-QUALIFIED STOCK OPTION TERMS AND
CONDITIONS**

The following supplements the Grant Detail (the “Grant Detail”) to which these Performance-Based Non-Qualified Stock Option Terms and Conditions apply, and together with the Grant Detail, constitutes the “Option Agreement” referenced in the Grant Detail.

This Option Agreement is entered into and made effective as of the grant date referenced in the Grant Detail (the “Date of Grant”) and is between ImmunoGen, Inc., a Massachusetts corporation (the “Company”), and the employee or consultant of the Company (the “Participant”) referenced in the Grant Detail. Certain capitalized terms, to the extent not defined where they first appear in this Option Agreement, are defined in the Company’s 2018 Employee, Director and Consultant Equity Incentive Plan (the “Plan”).

1. GRANT OF OPTION.

The Company has granted to the Participant the right and option to purchase all or any part of the aggregate number of shares of the Company’s common stock, \$.01 par value per share (the “Shares”), referenced in the Grant Detail, on the terms and conditions and subject to all the limitations set forth herein, under United States securities and tax laws, and in the Plan, which is incorporated herein by reference. The Participant acknowledges receipt of a copy of the Plan.

2. PURCHASE PRICE.

The per share purchase price of the Shares covered by the Option shall be as referenced as the “Grant Price” in the Grant Detail, subject to adjustment, as provided in the Plan, in the event of a stock split, reverse stock split or other events affecting the holders of Shares after the date hereof (the “Purchase Price”). Payment shall be made in accordance with Paragraph 10 of the Plan.

3. EXERCISABILITY OF OPTION.

Subject to the terms and conditions set forth in this Option Agreement and the Plan, the Option shall become exercisable with respect to the percentage of the Granted Shares indicated below in connection with the achievement of the following performance goals, as follows:

- 25% of the Granted Shares shall vest upon acceptance of a biologics license application (“BLA”) for mirvetuximab soravtansine (IMGN853) by the U.S. Food and Drug Administration (the “FDA”) based on data from the Company’s SORAYA clinical trial (the “First Performance Goal”); provided that the First Performance Goal shall be deemed not to have been met if the Company has not completed its submission of such BLA to the FDA on or prior to December 31, 2021. If the First Performance Goal is not met, 25% of the Granted Shares will be forfeited.

- 50% of the Granted Shares shall vest upon receipt of accelerated marketing approval for IMGN853 from the FDA on or prior to December 31, 2022 (the “Second Performance Goal”); provided, however, that if the Third Performance Goal (as defined below) is met before the Second Performance Goal is met, 37.5% of the Granted Shares shall vest when the Second Performance Goal is met. If the Second Performance Goal is not met, 25% of the Granted Shares will be forfeited.
- 25% of the Granted Shares shall vest upon acceptance of a BLA for IMGN853 by the FDA based on data from the Company’s MIRASOL clinical trial (the “Third Performance Goal”); provided, that the Third Performance Goal shall be deemed not to have been met if the Company has not completed its submission of such BLA on or prior to December 31, 2022; and provided, further, that if the Second Performance Goal is met before the Third Performance Goal is met, then 12.5% of the Granted Shares shall vest when the Third Performance Goal is met. If the Third Performance Goal is not met, 12.5% of the Granted Shares will be forfeited if the Second Performance Goal has been met, or (b) 25% of the Granted Shares will be forfeited if the Second Performance Goal has not been met.
- All remaining Granted Shares not previously vested or forfeited shall vest upon receipt of full marketing approval for IMGN853 from the FDA on or prior to December 31, 2023 (the “Fourth Performance Goal”). If the Fourth Performance Goal is not met, all remaining unvested Granted Shares will be forfeited.

The determination of achievement of the performance goals shall be based on certification of achievement of a performance goal by the Compensation Committee, which certification date shall be deemed to be the vesting date with respect to any of the Granted Shares for all purposes of this Option Agreement.

Anything contained in this Option Agreement to the contrary notwithstanding, if for any reason the Company does not achieve a performance goal set forth above by March 31, 2024 (the “Performance End Date”), then the Option subject hereto shall, on the Performance End Date, automatically terminate and be cancelled with respect to any Granted Shares that have not become vested and exercisable on or prior to such date.

Notwithstanding the foregoing, if a performance goal is achieved prior to the first anniversary of the Date of Grant, then the Granted Shares that would otherwise vest upon achievement of such performance goal shall not vest until the first anniversary of the Date of Grant, and if a Termination Date occurs prior to such one-year anniversary, the Option subject hereto shall terminate and be cancelled as if the performance goal had not been achieved as of the date of the Termination; provided, however, that if such Termination Date occurs due to the Participant’s death or Disability (as defined in the Plan), or there occurs a Change of Control (as defined in the Plan) prior to the first anniversary of the Date of Grant and prior to a Termination, the Option shall vest with respect to the Granted Shares subject to such achieved performance goal, as of the Termination Date or immediately prior to the Change of Control transaction.

Notwithstanding the foregoing, in the event a Corporate Transaction (as defined in the Plan) where the outstanding options are terminated or cashed out in accordance with Paragraph 25(b) of the Plan, this Option shall become fully vested and immediately exercisable for purposes of Paragraph 25(b) of the Plan unless this Option has otherwise expired or been terminated pursuant to this Agreement of the terms of the Plan.

The foregoing rights are cumulative and are subject to the other terms and conditions of this Option Agreement and the Plan.

4. TERM OF OPTION.

The Option shall terminate ten years from the Date of Grant, but shall be subject to earlier termination as provided herein or in the Plan.

If the Participant ceases to be an Employee or director of, or Consultant to, the Company or of an Affiliate for any reason other than death or Disability of the Participant or termination of the Participant for Cause (as defined in the Plan)) (the "Termination Date"), the Option, to the extent then vested and exercisable pursuant to Section 3 hereof as of the Termination Date, and not previously terminated, may be exercised within three months (or one year in the case of Retirement (as defined below)) after the Termination Date, or within the originally prescribed term of the Option, whichever is earlier, but may not be exercised thereafter except as set forth below. In such event, the unvested portion of the Option shall not be exercisable and shall expire and be cancelled on the Termination Date. "Retirement" means cessation of service as aforesaid on or after age 60 and with at least 5 years of service.

Notwithstanding the foregoing, in the event of the Participant's Disability or death within three months after the Termination Date, the Participant or the Participant's survivors may exercise the Option within one year after the Termination Date, but in no event after the date of expiration of the term of the Option.

In the event the Participant's service is terminated by the Company or an Affiliate for Cause (as defined in the Plan), the Participant's right to exercise any unexercised portion of this Option shall cease immediately as of the time the Participant is notified his or her service is terminated for Cause, and this Option shall thereupon terminate. Notwithstanding anything herein to the contrary, if subsequent to the Participant's termination, but prior to the exercise of the Option, the Board of Directors of the Company determines that, either prior or subsequent to the Participant's termination, the Participant engaged in conduct which would constitute Cause, then the Participant shall immediately cease to have any right to exercise the Option and this Option shall thereupon terminate.

In the event of the Disability of the Participant, as determined in accordance with the Plan, the Option shall be exercisable within one year after the Participant's termination by reason of Disability or, if earlier, within the term originally prescribed by the Option. In such event, the Option shall be exercisable to the extent that the Option has become exercisable but has not been exercised as of the date of Disability.

In the event of the death of the Participant while an Employee or director of, or Consultant to, the Company or of an Affiliate, the Option shall be exercisable by the

Participant's survivors within one year after the date of death of the Participant or, if earlier, within the originally prescribed term of the Option. In such event, the Option shall be exercisable to the extent that the Option has become exercisable but has not been exercised as of the date of death.

5. METHOD OF EXERCISING OPTION.

Subject to the terms and conditions of this Option Agreement, the Option may be exercised by notice to the Company or its designee stating the number of Shares with respect to which the Option is being exercised and shall be delivered in such form as may be designated from time to time by the Company. Payment of the purchase price for such Shares shall be made in accordance with Paragraph 10 of the Plan. The Company shall deliver such Shares as soon as practicable after the notice shall be received, provided, however, that the Company may delay issuance of such Shares until completion of any action or obtaining of any consent, which the Company deems necessary under any applicable law (including, without limitation, state securities or "blue sky" laws). The Shares as to which the Option shall have been so exercised shall be registered in the Company's share register in the name of the person so exercising the Option (or, if the Option shall be exercised by the Participant and if the Participant shall so request in the notice exercising the Option, shall be registered in the name of the Participant and another person jointly, with right of survivorship) and shall be delivered as provided above to or upon the written order of the person exercising the Option. In the event the Option shall be exercised, pursuant to Section 4 hereof, by any person other than the Participant, such notice shall be accompanied by appropriate proof of the right of such person to exercise the Option. All Shares that shall be purchased upon the exercise of the Option as provided herein shall be fully paid and nonassessable.

6. PARTIAL EXERCISE.

Exercise of this Option to the extent above stated may be made in part at any time and from time to time within the above limits, except that no fractional share shall be issued pursuant to this Option.

7. NON-ASSIGNABILITY.

The Option shall not be transferable by the Participant otherwise than by will or by the laws of descent and distribution or pursuant to a qualified domestic relations order as defined by the Code or Title I of the Employee Retirement Income Security Act or the rules thereunder. However, the Participant, with the approval of the Administrator, may transfer the Option for no consideration to or for the benefit of the Participant's Immediate Family (including, without limitation, to a trust for the benefit of the Participant's Immediate Family or to a partnership or limited liability company for one or more members of the Participant's Immediate Family), subject to such limits as the Administrator may establish, and the transferee shall remain subject to all the terms and conditions applicable to the Option prior to such transfer and each such transferee shall so acknowledge in writing as a condition precedent to the effectiveness of such transfer. Except as provided in the previous sentence, the Option shall be exercisable, during the Participant's lifetime, only by the Participant (or, in the event of legal incapacity or incompetency, by the Participant's guardian or representative) and shall not be assigned, pledged or hypothecated in any way (whether by operation of law or otherwise) and shall not be subject

to execution, attachment or similar process. Any attempted transfer, assignment, pledge, hypothecation or other disposition of the Option or of any rights granted hereunder contrary to the provisions of this Section 7, or the levy of any attachment or similar process upon the Option shall be null and void. The term "Immediate Family" shall mean the Participant's spouse, former spouse, parents, children, stepchildren, adoptive relationships, sisters, brothers, nieces, nephews and grandchildren (and, for this purpose, shall also include the Participant.)

8. NO RIGHTS AS SHAREHOLDER UNTIL EXERCISE.

The Participant shall have no rights as a shareholder with respect to Shares subject to this Option Agreement until registration of the Shares in the Company's share register in the name of the Participant. Except as is expressly provided in the Plan with respect to certain changes in the capitalization of the Company, no adjustment shall be made for dividends or similar rights for which the record date is prior to the date of such registration.

9. ADJUSTMENTS.

The Plan contains provisions covering the treatment of Options in a number of contingencies such as stock splits and mergers. Provisions in the Plan for adjustment with respect to stock subject to Options and the related provisions with respect to successors to the business of the Company are hereby made applicable hereunder and are incorporated herein by reference.

10. TAXES.

The Participant acknowledges that upon exercise of the Option the Participant will be deemed to have taxable income measured by the difference between the then fair market value of the Shares received upon exercise and the price paid for such Shares pursuant to this Option Agreement. The Participant acknowledges that any income or other taxes due from him or her with respect to this Option or the Shares issuable pursuant to this Option shall be the Participant's responsibility.

The Participant agrees that the Company may withhold from the Participant's remuneration, if any, the minimum statutory amount of federal, state and local withholding taxes attributable to such amount that is considered compensation includable in such person's gross income. At the Company's discretion, the amount required to be withheld may be withheld in cash from such remuneration, or in kind from the Shares otherwise deliverable to the Participant on exercise of the Option. The Participant further agrees that, if the Company does not withhold an amount from the Participant's remuneration sufficient to satisfy the Company's income tax withholding obligation, the Participant will reimburse the Company on demand, in cash, for the amount under-withheld.

11. PURCHASE FOR INVESTMENT.

Unless the offering and sale of the Shares to be issued upon the particular exercise of the Option shall have been effectively registered under the Securities Act of 1933, as now in force or hereafter amended (the "1933 Act"), the Company shall be under no obligation to issue the Shares covered by such exercise unless and until the following conditions have been fulfilled:

- (a) The person(s) who exercise the Option shall warrant to the Company, at the time of such exercise, that such person(s) are acquiring such Shares for their own respective accounts, for investment, and not with a view to, or for sale in connection with, the distribution of any such Shares, in which event the person(s) acquiring such Shares shall be bound by the provisions of the following legend which shall be endorsed upon the certificate(s) evidencing the Shares issued pursuant to such exercise:

“The shares represented by this certificate have been taken for investment and they may not be sold or otherwise transferred by any person, including a pledgee, unless (1) either (a) a Registration Statement with respect to such shares shall be effective under the Securities Act of 1933, as amended, or (b) the Company shall have received an opinion of counsel satisfactory to it that an exemption from registration under such Act is then available, and (2) there shall have been compliance with all applicable state securities laws;” and

- (b) If the Company so requires, the Company shall have received an opinion of its counsel that the Shares may be issued upon such particular exercise in compliance with the 1933 Act without registration thereunder. Without limiting the generality of the foregoing, the Company may delay issuance of the Shares until completion of any action or obtaining of any consent, which the Company deems necessary under any applicable law (including without limitation state securities or “blue sky” laws).

12. RESTRICTIONS ON TRANSFER OF SHARES.

12.1 The Participant agrees that in the event the Company proposes to offer for sale to the public any of its equity securities and such Participant is requested by the Company and any underwriter engaged by the Company in connection with such offering to sign an agreement restricting the sale or other transfer of Shares, then it will promptly sign such agreement and will not transfer, whether in privately negotiated transactions or to the public in open market transactions or otherwise, any Shares or other securities of the Company held by him or her during such period as is determined by the Company and the underwriters, not to exceed 90 days following the closing of the offering, plus such additional period of time as may be required to comply with Marketplace Rule 2711 of the National Association of Securities Dealers, Inc. or similar rules thereto (such period, the “Lock-Up Period”). Such agreement shall be in writing and in form and substance reasonably satisfactory to the Company and such underwriter and pursuant to customary and prevailing terms and conditions. Notwithstanding whether the Participant has signed such an agreement, the Company may impose stop-transfer instructions with respect to the Shares or other securities of the Company subject to the foregoing restrictions until the end of the Lock-Up Period.

12.2 The Participant acknowledges and agrees that neither the Company, its shareholders nor its directors and officers, has any duty or obligation to disclose to the Participant any material information regarding the business of the Company or affecting the value of the Shares before, at the time of, or following a termination of the employment of the

Participant by the Company, including, without limitation, any information concerning plans for the Company to make a public offering of its securities or to be acquired by or merged with or into another firm or entity.

13. NO OBLIGATION TO MAINTAIN RELATIONSHIP.

The Company is not by the Plan or this Option obligated to continue the Participant as an Employee or director of, or Consultant to, the Company or an Affiliate. The Participant acknowledges: (i) that the Plan is discretionary in nature and may be suspended or terminated by the Company at any time; (ii) that the grant of the Option is a one-time benefit which does not create any contractual or other right to receive future grants of options, or benefits in lieu of options; (iii) that all determinations with respect to any such future grants, including, but not limited to, the times when options shall be granted, the number of shares subject to each option, the option price, and the time or times when each option shall be exercisable, will be at the sole discretion of the Company; (iv) that the Participant's participation in the Plan is voluntary; (v) that the value of the Option is an extraordinary item of compensation which is outside the scope of the Participant's employment contract, if any; and (vi) that the Option is not part of normal or expected compensation for purposes of calculating any severance, resignation, redundancy, end of service payments, bonuses, long-service awards, pension or retirement benefits or similar payments.

14. NOTICES.

Any notices to the Company required or permitted by the terms of this Option Agreement or the Plan shall be given by recognized courier service, facsimile, certified mail, return receipt requested, addressed as follows:

If to the Company:

ImmunoGen, Inc.
Attn: Finance
830 Winter Street
Waltham, MA 02451

or to such other address or addresses of which notice in the same manner has previously been given. Any such notice shall be deemed to have been given upon the earlier of receipt, one business day following delivery to a recognized courier service or three business days following mailing by certified mail.

15. GOVERNING LAW.

This Option Agreement shall be construed and enforced in accordance with the law of the Commonwealth of Massachusetts, without giving effect to the conflict of law principles thereof.

16. BENEFIT OF AGREEMENT.

Subject to the provisions of the Plan and the other provisions hereof, this Option Agreement shall be for the benefit of and shall be binding upon the heirs, executors, administrators, successors and assigns of the parties hereto.

17. ENTIRE AGREEMENT.

This Option Agreement, together with the Plan, embodies the entire agreement and understanding between the parties hereto with respect to the subject matter hereof and supersedes all prior oral or written agreements and understandings relating to the subject matter hereof. No statement, representation, warranty, covenant or agreement not expressly set forth in this Option Agreement shall affect or be used to interpret, change or restrict, the express terms and provisions of this Option Agreement, provided, however, in any event, this Option Agreement shall be subject to and governed by the Plan.

18. MODIFICATIONS AND AMENDMENTS.

The terms and provisions of this Option Agreement may be modified or amended as provided in the Plan.

19. WAIVERS AND CONSENTS.

Except as provided in the Plan, the terms and provisions of this Option Agreement may be waived, or consent for the departure therefrom granted, only by written document executed by the party entitled to the benefits of such terms or provisions. No such waiver or consent shall be deemed to be or shall constitute a waiver or consent with respect to any other terms or provisions of this Option Agreement, whether or not similar. Each such waiver or consent shall be effective only in the specific instance and for the purpose for which it was given, and shall not constitute a continuing waiver or consent.

20. DATA PRIVACY.

By accepting the Option, the Employee acknowledges that the processing of certain personal data by the Company and each Affiliate (and any agent of the Company or any Affiliate administering the Plan or providing Plan record keeping services) is necessary for the performance of contractual duties to the Employee under the Option in order to facilitate the grant of the Option and the issuance of Shares and the administration of the Plan. Any storage, transfer or processing of personal data shall be in accordance with applicable law and, where required, in accordance with any Company Privacy Notice made available to the Employee.

SUBSIDIARIES

<u>Name</u>	<u>Jurisdiction of Organization</u>
Hurricane, LLC	Massachusetts
ImmunoGen BioPharma (Ireland) Limited	Ireland
ImmunoGen (Bermuda) Ltd.	Bermuda
ImmunoGen Europe Limited	United Kingdom
ImmunoGen Securities Corp.	Massachusetts

Consent of Independent Registered Public Accounting Firm

We consent to the incorporation by reference in the following Registration Statements:

- (1) Registration Statement (Form S-8 Nos. 333-138713, 333-147738, 333-155540, 333-170788, 333-185086, 333-215196, 333-225281, 333-225860, 333-235632 and 333-235633) of ImmunoGen, Inc., and
- (2) Registration Statement (Form S-3 Nos. 333-216438 and 333-223507) of ImmunoGen Inc.;

of our reports dated March 11, 2020, with respect to the consolidated financial statements of ImmunoGen Inc. and the effectiveness of internal control over financial reporting of ImmunoGen Inc. included in this Annual Report (Form 10-K) of ImmunoGen Inc. for the year ended December 31, 2019.

/s/ Ernst & Young LLP

Boston, Massachusetts
March 11, 2020

CERTIFICATIONS UNDER SECTION 302

I, Mark J. Enyedy, certify that:

1. I have reviewed this Report on Form 10-K of ImmunoGen, 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 11, 2020

/s/ Mark J. Enyedy

Mark J. Enyedy
President and Chief Executive Officer
(Principal Executive Officer and Principal Financial Officer)

CERTIFICATIONS UNDER SECTION 906

Pursuant to section 906 of the Sarbanes-Oxley Act of 2002 (subsections (a) and (b) of section 1350, chapter 63 of title 18, United States Code), each of the undersigned officers of ImmunoGen, Inc., a Massachusetts corporation (the "Company"), does hereby certify, to such officer's knowledge, that:

The Report for the year ended December 31, 2019 (the "Form 10- K") of the Company fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, and the information contained in the Form 10-K fairly presents, in all material respects, the financial condition and results of operations of the Company.

Dated: March 11, 2020

/s/ Mark J. Enyedy
Mark J. Enyedy
President and Chief Executive Officer
(Principal Executive Officer and Principal Financial Officer)

A signed original of this written statement required by Section 906 has been provided to the Company and will be retained by the Company and furnished to the Securities and Exchange Commission or its staff upon request.
