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

FORM 10-K

(Mark One)

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

For the fiscal year ended December 31, 2021

or

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

For the transition period from _____ to _____
Commission file number: 001-38068

ZYMEWORKS INC.

(Exact name of registrant as specified in its charter)

British Columbia, Canada

(State or other jurisdiction of incorporation or organization)

98-1398788

(I.R.S. Employer Identification Number)

Suite 800 — 114 East 4th Avenue
Vancouver, BC V5T 1G4

(Address of principal executive offices, including zip code)

Registrant's telephone number, including area code: (604) 678-1388

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 shares, no par value per share

ZYME

New York Stock Exchange

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

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

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

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

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes No

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer,"

"smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer

Accelerated filer

Non-accelerated filer

Smaller reporting company

Emerging growth company

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

Indicate by check mark whether the registrant has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report.

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Securities Exchange Act of 1934). Yes No

The aggregate market value of the voting and non-voting common shares held by non-affiliates of the registrant, based on the closing sale price of the registrant's common shares on the last business day of its most recently completed second fiscal quarter, as reported on the NYSE was approximately \$1,590.8 million.

The number of outstanding common shares of the registrant, no par value per share, as of February 22, 2022 was 57,736,293.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the registrant's definitive proxy statement in connection with the registrant's 2022 annual meeting of shareholders, which will be filed with the Securities and Exchange Commission (the "SEC") subsequent to the date hereof, are incorporated by reference into Part III of this Form 10-K. Such proxy statement will be filed with the SEC not later than 120 days following the end of the registrant's fiscal year ended December 31, 2021.

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ZYMEWORKS INC.

FORM 10-K

For the Fiscal Year Ended December 31, 2021

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CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

This Annual Report on Form 10-K includes “forward-looking statements” within the meaning of the U.S. Private Securities Litigation Reform Act of 1995 and “forward-looking information” within the meaning of Canadian securities laws, or collectively, forward-looking statements. Forward-looking statements include statements that may relate to our plans, objectives, goals, strategies, future events, future revenue or performance, capital expenditures, financing needs and other information that is not historical information. Many of these statements appear, in particular, under the headings “Business”, “Risk Factors” and “Management’s Discussion and Analysis of Financial Condition and Results of Operations”. Forward-looking statements can often be identified by the use of terminology such as “subject to,” “believe,” “anticipate,” “plan,” “expect,” “intend,” “estimate,” “project,” “may,” “will,” “should,” “would,” “could,” “can,” the negatives thereof, variations thereon and similar expressions, or by discussions of strategy. In addition, any statements or information that refer to expectations, beliefs, plans, projections, objectives, performance or other characterizations of future events or circumstances, including any underlying assumptions, are forward-looking. In particular, these forward-looking statements include, but are not limited to, statements about:

- the size of our addressable markets and our ability to commercialize product candidates;
- the achievement of advances in and expansion of our therapeutic platforms and antibody engineering expertise;
- the likelihood of product candidate development and clinical trial progression, initiation or success;
- our ability to predict and manage government regulation; and
- the impact of the COVID-19 pandemic on our business and operations.

All forward-looking statements, including, without limitation, those related to our examination of historical operating trends, are based upon our current expectations and various assumptions. Certain assumptions made in preparing the forward-looking statements include:

- our ability to implement our restructuring announced in January 2022 and to manage the size of our organization effectively;
- the absence of material adverse changes in our industry or the global economy;
- our ability to understand and predict trends in our industry and markets;
- our ability to maintain good business relationships with our strategic partners;
- our ability to comply with current and future regulatory standards;
- our ability to protect our intellectual property rights;
- our continued compliance with third-party license terms and the non-infringement of third-party intellectual property rights;
- our ability to manage and integrate acquisitions;
- our ability to retain key personnel; and
- our ability to raise sufficient debt or equity financing to support our continued growth.

We believe there is a reasonable basis for our expectations and beliefs, but they are inherently uncertain. We may not realize our expectations, and our beliefs may not prove correct. Actual results could differ materially from those described or implied by such forward-looking statements. The following uncertainties and factors, among others (including those set forth under “Risk Factors”), could affect future performance and cause actual results to differ materially from those matters expressed in or implied by forward-looking statements:

- our ability to obtain regulatory approval for our product candidates without significant delays;
- the predictive value of our current or planned clinical trials;
- delays with respect to the development and commercialization of our product candidates, which may cause increased costs or delay receipt of product revenue;
- our or any of our partners’ ability to enroll subjects in clinical trials and thereby complete trials on a timely basis;

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- the design or our execution of clinical trials may not support regulatory approval, including where clinical trials are conducted outside the United States;
- the extent to which our business may be adversely affected by the COVID-19 pandemic;
- the Fast Track and Breakthrough Therapy designations for any of our product candidates may not expedite regulatory review or approval;
- the U.S. Food and Drug Administration (the “FDA”) may not accept data from trials we conduct outside the United States;
- disruptions at the FDA and other government agencies caused by funding shortages or global health concerns;
- our discretion to discontinue or reprioritize the development of any of our product candidates;
- the potential for our product candidates to have undesirable side effects;
- no regulatory agency has made a determination that any of our product candidates are safe or effective for use by the general public or for any indication;
- our ability to face significant competition, including biosimilar products;
- the likelihood of broad market acceptance of our product candidates;
- our ability to obtain Orphan Drug Designation or exclusivity for some or all of our product candidates;
- our ability to commercialize products outside of the United States;
- the outcome of reimbursement decisions by third-party payors relating to our products;
- our expectations with respect to the market opportunities for any product that we or our strategic partners develop;
- our ability to pursue product candidates that may be profitable or have a high likelihood of success;
- our ability to use our therapeutic platforms to build a pipeline of product candidates;
- our ability to meet the requirements of ongoing regulatory review;
- the threat of product liability lawsuits against us or any of our strategic partners;
- changes in product candidate manufacturing or formulation that may result in additional costs or delay;
- the potential disruption of our business and dilution of our shareholdings associated with acquisitions and joint ventures;
- the potential for governments to impose strict price controls;
- the risk of security breaches and incidents or data loss, which could compromise sensitive business or health information;
- current and future legislation that may increase the difficulty and cost of commercializing our product candidates;
- economic, political, regulatory and other risks associated with international operations;
- our exposure to legal and reputational penalties as a result of any of our current and future relationships with various third parties;
- our ability to comply with export control and import laws and regulations;
- our history of significant losses since inception;
- our ability to generate revenue from product sales and achieve profitability;
- our requirement for substantial additional funding;
- the potential dilution to our shareholders associated with future financings;
- restrictions on our ability to seek financing, which may be imposed by future debt;
- our ability to maintain existing and future strategic partnerships;
- our ability to realize the anticipated benefits of our strategic partnerships;
- our ability to secure future strategic partners;
- our reliance on third-party manufacturers to produce our product candidate supplies and on other third parties to provide supplies and store, monitor and transport bulk drug substance and drug product;

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- our reliance on third parties to oversee clinical trials of our product candidates and, in some cases, maintain regulatory files for those product candidates;
- our reliance on third parties for various operational and administrative aspects of our business including our reliance on third parties' cloud-based software platforms;
- our ability to operate without infringing the patents and other proprietary rights of third parties;
- our ability to obtain and enforce patent protection for our product candidates and related technology;
- our patents could be found invalid or unenforceable if challenged;
- our intellectual property rights may not necessarily provide us with competitive advantages;
- we may become involved in expensive and time-consuming patent lawsuits;
- the risk that the duration of our patents will not adequately protect our competitive position;
- our ability to obtain protection under the Drug Price Competition and Patent Term Restoration Act of 1984 (the "Hatch-Waxman Amendments") and similar legislation;
- we may be unable to protect the confidentiality of our proprietary information;
- our ability to comply with procedural and administrative requirements relating to our patents;
- the risk of claims challenging the inventorship of our patents and other intellectual property;
- our intellectual property rights for some of our product candidates are dependent on the abilities of third parties to assert and defend such rights;
- patent reform legislation and court decisions can diminish the value of patents in general, thereby impairing our ability to protect our products;
- we may not be able to protect our intellectual property rights throughout the world;
- we will require FDA approval for any proposed product candidate names and any failure or delay associated with such approval may adversely affect our business;
- the risk of employee misconduct including noncompliance with regulatory standards and insider trading;
- our ability to market our products in a manner that does not violate the law and subject us to civil or criminal penalties;
- if we do not comply with laws regulating the protection of the environment and health and human safety, our business could be adversely affected;
- our ability to retain key executives and attract and retain qualified personnel;
- our exposure to potential securities class action litigation; and
- if securities or industry analysts do not publish research or publish inaccurate or unfavorable research about our business, our share price and trading volume could decline.

Consequently, forward-looking statements should be regarded solely as our current plans, estimates and beliefs. You should not place undue reliance on forward-looking statements. We cannot guarantee future results, events, levels of activity, performance or achievements. We do not undertake and specifically decline any obligation to update, republish or revise forward-looking statements to reflect future events or circumstances or to reflect the occurrences of unanticipated events, except as required by law. Our Risk Factors are not guarantees that no such conditions exist as of the date of this report and should not be interpreted as an affirmative statement that such risks or conditions have not materialized, in whole or in part.

In addition, statements that "we believe" and similar statements reflect our beliefs and opinions on the relevant subject. These statements are based upon information available to us as of the date of this Annual Report on Form 10-K, and although we believe such information forms a reasonable basis for such statements, such information may be limited or incomplete, and our statements should not be read to indicate that we have conducted a thorough inquiry into, or review of, all potentially available relevant information. These statements are inherently uncertain and you are cautioned not to unduly rely upon these statements.

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We own or have rights to trademarks, service marks or trade names that we use in connection with the operation of our business. In addition, our names, logos and website names and addresses are our service marks or trademarks. Azymetric, Zymeworks, ZymeCAD, EFECT, ZymeLink and the phrase “Building Better Biologics” are our registered trademarks. The other trademarks, trade names and service marks appearing in this Annual Report on Form 10-K are the property of their respective owners. Solely for convenience, the trademarks, service marks, tradenames and copyrights referred to in this Annual Report on Form 10-K are listed without the ©, ® and TM symbols, but we will assert, to the fullest extent under applicable law, our rights or the rights of the applicable licensors to these trademarks, service marks and tradenames.

We express all amounts in this Annual Report on Form 10-K in U.S. dollars, except where otherwise indicated. References to “\$” and “US\$” are to U.S. dollars and references to “C\$” are to Canadian dollars.

Except as otherwise indicated, references in this Annual Report on Form 10-K to “Zymeworks,” the “Company,” “we,” “us” and “our” refer to Zymeworks Inc. and its subsidiary.

PART I

Item 1. Business

Overview

Zymeworks is a clinical-stage biopharmaceutical company dedicated to the development of next-generation multifunctional biotherapeutics. Our suite of complementary therapeutic platforms and our fully integrated drug development engine provide the flexibility and compatibility to precisely engineer and develop highly differentiated product candidates. These capabilities have resulted in multiple product candidates with the potential to drive positive outcomes in large underserved and unaddressed patient populations.

Our lead product candidate, zanidatamab, is a novel bispecific antibody that targets two distinct domains of the human epidermal growth factor receptor 2 (“HER2”). Zanidatamab’s unique binding properties result in multiple mechanisms of action that may enable it to address unmet need in patient populations with HER2-expressing cancers. In clinical trials, zanidatamab monotherapy and zanidatamab in combination with chemotherapy have been well tolerated with promising antitumor activity in patients with treatment-naïve and heavily pretreated HER2-expressing cancers, including individuals whose disease had progressed on multiple prior treatment regimens that included HER2-targeted agents. Based on these data, a number of global multicenter clinical trials have been initiated to evaluate zanidatamab in specific indications and lines of therapy. These include pivotal clinical trials in (i) previously treated HER2 gene amplified biliary tract cancer (“BTC”) and (ii) first-line locally advanced or metastatic HER2-positive gastroesophageal adenocarcinomas (“GEA”) in combination with chemotherapy with or without BeiGene, Ltd.’s (“BeiGene”) tislelizumab, as well as proof of concept trials in (iii) first-line locally advanced or metastatic HER2-positive colorectal cancer (“CRC”), GEA, or BTC in combination with standard of care chemotherapy, (iv) first-line locally advanced or metastatic HER2-positive GEA in combination with tislelizumab and chemotherapy, (v) first-line locally advanced or metastatic HER2-positive breast cancer in combination with docetaxel, (vi) previously-treated locally advanced or metastatic HER2-positive, hormone receptor-positive breast cancer in combination with Pfizer’s Ibrance (palbociclib) and fulvestrant, (vii) previously-treated locally advanced or metastatic HER2-expressing cancers (including HER2-positive and HER2-low breast cancer) in combination with ALX Oncology Inc.’s (“ALX Oncology”) evopacept (ALX148), and (viii) previously-treated locally advanced or metastatic HER2-expressing breast cancer in combination with Seagen, Inc.’s (“Seagen”) Tukysa (tucatinib) and chemotherapy.

Our second product candidate, ZW49, combines the unique design of zanidatamab with our ZymeLink antibody-drug conjugate (“ADC”) platform, comprised of our proprietary cytotoxin (cancer cell-killing compound) and cleavable linker. We designed ZW49 to be a best-in-class HER2-targeting ADC to further address unmet need across a range of HER2-expressing cancers. A Phase 1 clinical trial to establish safety and antitumor activity of ZW49 is currently ongoing.

We are also advancing a deep pipeline of preclinical product candidates and discovery-stage programs in oncology (including immuno-oncology agents) and other therapeutic areas.

Our proprietary capabilities and technologies include several modular, complementary therapeutic platforms that can be used in combination with each other and with existing approaches. This ability to layer technologies without compromising manufacturability enables us to engineer next-generation biotherapeutics with synergistic activity, which we believe will result in improved patient outcomes. Our platforms include:

- **Azymetric**, our bispecific platform, which enables therapeutic antibodies to simultaneously bind multiple distinct locations on a target (known as an epitope) or to multiple targets. This is achieved by tailoring multiple configurations of the antibody’s Fab regions (locations on the antibody to which epitopes bind);
- **ZymeLink**, our ADC platform, comprised of cytotoxins and the linker technology used to couple these cytotoxins to tumor-targeting antibodies or proteins. This platform can be used in conjunction with our other therapeutic platforms to increase safety and efficacy as compared to existing ADC technologies;
- **EFFECT**, which enables finely tuned modulation (both up and down) of immune cell recruitment and function; and
- **PROTECT**, which enables tumor-specific activity that may reduce systemic toxicity and simultaneously enhances localized immune co-stimulation or checkpoint modulation that may increase efficacy.

Our protein engineering expertise and proprietary structure-guided molecular modeling capabilities enable these therapeutic platforms. Together with our internal antibody discovery and generation technologies, we have established a fully integrated drug development engine and toolkit capable of rapidly delivering a steady pipeline of next-generation product candidates in oncology and other therapeutic areas.

Our Azymetric, EFFECT and ZymeLink therapeutic platforms have been further leveraged through multiple revenue-generating strategic partnerships and collaborations with the following global pharmaceutical companies: Merck Sharp & Dohme Research GmbH (“Merck”), Eli Lilly and Company (“Lilly”), Celgene Corporation and Celgene Alpine Investment Co. LLC (now a Bristol-Myers Squibb company, “BMS”), GlaxoSmithKline Intellectual Property Development Limited (“GSK”), Daiichi

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Sankyo Co., Ltd. (“Daiichi Sankyo”), Janssen Biotech, Inc. (“Janssen”), LEO Pharma A/S (“LEO”), BeiGene, and Exelixis, Inc. (“Exelixis”).

Our Strategy

Our goal is to leverage our next-generation therapeutic platforms and proprietary protein engineering capabilities to become a leader in the discovery, development and commercialization of best-in-class multifunctional biotherapeutics for the treatment of cancer and other diseases with high unmet medical need.

Our key priorities to achieve this goal are to:

- Fully recruit the HERIZON-BTC-01 pivotal clinical study for zanidatamab by mid-2022;
- Fully recruit the HERIZON-GEA-01 pivotal clinical study for zanidatamab by the end of 2023;
- Complete or close out other ongoing early-stage clinical studies for zanidatamab as data become available, and use these data to identify and support strategic decisions regarding future clinical development opportunities beyond the ongoing pivotal clinical studies;
- Finalize a clear clinical development path for ZW49 based on additional clinical data expected in the second half of 2022 from the ongoing Phase 1 clinical trial;
- Select and advance two new antibody-drug conjugate or multispecific product candidates leveraging Zymeworks’ novel, therapeutic platforms (Azymetric™, ZymeLink™, EFECT™ and ProTECT™) to Investigational New Drug (“IND”)-enabling studies to provide the ability to submit two IND applications by the end of 2024;
- Execute on new partnerships and collaborations to support the development and commercialization of zanidatamab and Zymeworks’ early-stage R&D pipeline and technology platforms;
- Continue to support and advance Zymeworks’ core technology platforms and collaborations; and
- Improve Zymeworks’ financial position over 2022 and 2023 through a combination of alternatives, including forming additional partnerships and collaborations, monetizing existing assets and products and securing additional financing.

Product Candidate Pipeline

We currently have two lead product candidates in clinical development and several product candidates in preclinical development that leverage our multiple therapeutic platforms to address areas of significant unmet medical need. Our lead product candidates, zanidatamab and ZW49, utilize the Azymetric platform to address patient populations with HER2-expressing cancers. We are also actively advancing a diverse set of preclinical programs, which leverage one or more of our proprietary therapeutic platforms to create a deep pipeline of well-differentiated product candidates for oncology and other therapeutic areas.

The table below summarizes our current product candidate pipeline.

PROGRAMS	Indication	PHASE 1	PHASE 2	PIVOTAL	COMMERCIAL RIGHTS
Zanidatamab HER2 X HER2 Bispecific	Biliary Tract Cancer (BTC)	2L Zanidatamab Monotherapy		HERIZON	with  BeiGene
		1L Zanidatamab + SOC (cisplatin + gemcitabine)			
	Gastroesophageal Adenocarcinoma (GEA)	1L Zanidatamab + SOC Chemo ± Tislelizumab vs Herceptin + SOC Chemo		HERIZON	with  BeiGene
		1L Zanidatamab + SOC Chemotherapy + Tislelizumab			
		1L Zanidatamab + SOC Chemotherapy			
		3L+ Zanidatamab + Ibrance (anti-CDK4/6) + Fulvestrant			with  Pfizer
	Breast Cancer	1L Zanidatamab + Docetaxel			with  BeiGene
		3L+ Zanidatamab + Evopacept (CD47-blocker)			with  ALX Oncology
		3L+ Zani + Chemo			
	Colorectal Cancer	1L Zanidatamab + SOC (mFOLFOX6 ± bevacizumab)			
ZW49 HER2 X HER2 Bispecific ADC	HER2-Expressing Solid Tumors	ZW49 Monotherapy			with  Zymeworks  BeiGene*

SOC = Standard of Care

*BeiGene to develop and commercialize in Asia Pacific countries including China, South Korea, Australia, and New Zealand but excluding Japan.

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The table below summarizes the stage of each of our partners' most advanced publicly disclosed program.

PROGRAMS PLATFORMS	PRECLINICAL	PHASE 1	PHASE 2	COMMERCIAL RIGHTS
PARTNERSHIPS				
Bispecific Antibody	Oncology			Bristol Myers* Squibb'
XB002 (ICON-2) Tissue Factor ADC	Solid Tumors			EXELIXIS**
JNJ-78278343 CD3 x KLK2 Bispecific	Castration-Resistant Prostate Cancer			Johnson & Johnson IMMUNOTHERAPY
JNJ-78306358 CD3 x HLA-G Bispecific	Solid Tumors			Johnson & Johnson IMMUNOTHERAPY
Bispecific Antibody	Undisclosed			MERCK
Bispecific Antibody	Immuno-Oncology			Daiichi-Sankyo
Bispecific Antibody	Infectious Disease/Undisclosed			gsk
Bispecific Antibody	Dermatology			L E O
Bispecific Antibody	Undisclosed			BeiGene

Azymetric EFFECT ZymeLink

*Original Agreement with Celgene (which is now a Bristol-Myers Squibb company)

**Original Agreement with Iconic; XB002 in-licensed by Exelixis

Zanidatamab: HER2-Targeted Bispecific Antibody

Overview

Zanidatamab, our lead product candidate, is currently being evaluated in Phase 1, Phase 2 and pivotal clinical trials. It is a biparatopic antibody, based on our Azymetric™ platform, that can simultaneously bind two non-overlapping epitopes of HER2. Zanidatamab's unique binding properties result in multiple mechanisms of action including HER2-receptor clustering, internalization, and downregulation; inhibition of growth factor-dependent and -independent tumor cell proliferation; antibody-dependent cellular cytotoxicity and phagocytosis; and complement-dependent cytotoxicity. These combined mechanisms of action have led to promising antitumor activity in preclinical models of HER2-expressing cancers, including trastuzumab-resistant (currently branded as Herceptin) tumors.

Clinical Development of Zanidatamab

In clinical trials, zanidatamab monotherapy and zanidatamab in combination with chemotherapy have been well tolerated with promising antitumor activity in patients with treatment-naïve and heavily pretreated HER2-expressing cancers, including individuals whose disease had progressed on multiple prior treatment regimens that included HER2-targeted agents. Based on these data, a number of global multicenter clinical trials have been initiated to evaluate zanidatamab in specific indications and lines of therapy, as described above under "Overview".

In January 2021, we presented updated clinical data at the American Society of Clinical Oncology ("ASCO") Gastrointestinal Cancers Symposium for HER2-expressing GEA patients who received zanidatamab either as monotherapy (n=35) or in combination with chemotherapies (n=28). The groups had a median of two to three (range 0-7) prior therapies, with a high percentage (88-91%) having received prior HER2-targeted therapies. In 33 response-evaluable patients who received zanidatamab as monotherapy (10 mg/kg weekly or 20 mg/kg every two weeks), the objective response rate ("ORR") was 39% (13/33), 11 (33%) of which were confirmed by a subsequent scan. The disease control rate ("DCR") was 61% (20/33) and median duration of response ("mDOR") was six months. In ten response-evaluable patients who received zanidatamab (20 mg/kg every two weeks) plus paclitaxel, the ORR was 60% (6/10), five (50%) of which were confirmed by a subsequent scan including one patient who experienced a complete response. The DCR was 90% (9/10) for this group. In 14 response-evaluable patients who received zanidatamab (20 mg/kg every two weeks or 30 mg/kg every three weeks) plus capecitabine, the confirmed ORR was 57% (8/14) and the DCR was 71% (10/14). Overall, the mDOR for zanidatamab plus chemotherapy was 8.9 months and the median progression-free survival ("mPFS") was 5.6 months with eight (29%) patients still on study at the time of data cut-off.

At the 2021 ASCO Gastrointestinal Cancers Symposium, we also presented data from 21 patients diagnosed with HER2-amplified BTC who received zanidatamab at the recommended dose of 20 mg/kg every two weeks. Patients received a median



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of two (range 1-8) prior therapies and five (24%) of the patients were previously treated with the HER2-targeted therapy trastuzumab. Zanidatamab was well tolerated and demonstrated durable antitumor activity in these patients. The confirmed ORR in trastuzumab-naïve patients was 47% (7/15) and overall ORR was 40% (8/20). The overall DCR was 65% (13/20), and median DOR was 7.4 months with several patients still on study at the time of data cut-off.

In September 2021, we presented Phase 2 clinical data for zanidatamab in combination with chemotherapy in first-line locally advanced or metastatic HER2-positive GEA at the European Society for Medical Oncology (“ESMO”) Annual Congress. The data presented are from a clinical study of 36 patients with HER2-expressing GEA who received zanidatamab in combination with either CAPOX (capecitabine/oxaliplatin; n=14), FP (5FU/cisplatin; n=2), or mFOLFOX6 (5FU/leucovorin/oxaliplatin; n=20). None of the patients had received prior HER2-targeted therapies. In 28 response-evaluable patients with locally advanced or metastatic HER2-positive GEA, zanidatamab plus chemotherapy resulted in a confirmed ORR of 75% and DCR of 89% overall, with a confirmed ORR of 93% and a DCR of 100% in the announced Phase 3 regimen of zanidatamab + CAPOX/FP. All patients except one experienced a decrease in their tumor size. The mDOR is 16.4 months and the mPFS is 12.0 months across all treatment regimens with 61% of patients still on study at the time of data cutoff. In addition, the data demonstrated that zanidatamab plus chemotherapy is generally well tolerated, with the majority of treatment-related adverse events (“TRAE’s) considered mild to moderate in severity (Grade 1 or 2). The most common grade \geq 3 TRAE is diarrhea, which was manageable in the outpatient setting; introduction of prophylactic loperamide reduced the incidence in cycle 1 from 44% to 18%. No severe (grade \geq 3) infusion-related reactions or cardiac events were observed. The data presented compare favorably to current standard of care and support initiation of the global, randomized Phase 3 trial, HERIZON-GEA-01.

In December 2021, we announced new clinical data for zanidatamab in heavily pretreated HER2-positive breast cancer. The data presented at the San Antonio Breast Cancer Symposium are from a clinical study of 24 patients with heavily pretreated HER2-positive locally advanced or metastatic breast cancer who received zanidatamab in combination with either vinorelbine (n=12), capecitabine (n=8), or paclitaxel (n=4). Patients received multiple prior regimens containing HER2-targeted agents including trastuzumab (96%), pertuzumab (96%), and T-DM1 (96%), and many also received a tyrosine kinase inhibitor. In 22 efficacy-evaluable patients, treatment with zanidatamab and chemotherapy resulted in a confirmed ORR of 36.4% and DCR of 86.4%, and the majority of patients experienced a decrease in their tumor size. The mPFS is 7.3 months across all treatment regimens with 42% of patients still on study at the time of data cutoff. Zanidatamab in combination with single agent chemotherapy is well tolerated, with the majority of TRAEs considered mild to moderate in severity (Grade 1 or 2).

Also in December 2021, we announced that our partner, BeiGene, dosed the first patient in the HERIZON-GEA-01 trial, a global, randomized, Phase 3 clinical trial designed to evaluate the efficacy and safety of zanidatamab in combination with physician’s choice chemotherapy (CAPOX or FP) with or without the PD-1 inhibitor, tislelizumab, compared to trastuzumab plus physician’s choice chemotherapy for first-line treatment in subjects with locally advanced or metastatic HER2-positive GEA. Primary endpoints are progression-free survival per RECIST 1.1 criteria, as assessed by blinded independent central review, and overall survival. The trial is expected to enroll approximately 700 patients at approximately 300 sites across 38 countries. BeiGene will oversee trial sites in Asia (excluding Japan), Australia and New Zealand, and we will oversee trial sites in the rest of the world, including North and South America, Japan, Europe, Middle East and Africa.

Overall, zanidatamab has been well tolerated. The majority of treatment-related adverse events were mild or moderate (Grade 1 or 2) in severity, and response rates and median duration of response in refractory BTC and GEA compare favorably to current standard of care and emerging treatments.

Zanidatamab is currently being evaluated in the following clinical trials:

- NCT05035836 – A Phase 2, single-site, single-arm open-label study to determine the efficacy of zanidatamab for patients with early stage HER2/neu positive breast cancer.
- NCT05027139 – A Phase 1b/2 single-arm, open-label, multi-cohort, multicenter study of zanidatamab in combination with evopacept (formerly ALX148) in patients with advanced HER2-expressing cancer. Part one of the study will evaluate safety and tolerability and establish the recommended doses (“RD”). Part two of the study will evaluate the antitumor activity of the combination at the RD levels in indication-specific expansion cohorts.
- NCT04578444 – An intermediate-size Expanded Access Protocol for use of zanidatamab in patients with HER2-positive advanced solid tumors who are not eligible for other zanidatamab clinical trials, and who in the opinion of the treating oncologist, would potentially benefit from treatment with zanidatamab.
- NCT05152147 – A randomized, global, multicenter, Phase 3 Study of zanidatamab in combination with chemotherapy with or without tislelizumab in subjects with HER2-positive unresectable locally advanced or metastatic GEA.

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- NCT02892123 – A Phase 1 study to evaluate the maximal tolerated dose, optimal biological dose or other recommended dose, and overall safety and tolerability of zanidatamab in patients with unresectable locally advanced and/or metastatic HER2-expressing cancers.
- NCT03929666 – A multicenter, global, Phase 2, open-label, 2-part, first-line study to investigate the safety, tolerability, and antitumor activity of zanidatamab plus standard first-line combination chemotherapy regimens for selected gastrointestinal (GI) cancers. Eligible patients include those with unresectable, locally advanced, recurrent or metastatic HER2-expressing GEA, BTC, or CRC.
- NCT04224272 – A multicenter, global, Phase 2, open-label, two-part study. Part one of the study will evaluate the safety and tolerability of zanidatamab in combination with palbociclib and fulvestrant and identify the RD of zanidatamab and palbociclib. Part two of the study will evaluate antitumor activity at the recommended dose level.
- NCT04466891 – A multicenter, pivotal, open-label, single-arm trial evaluating the antitumor activity of zanidatamab monotherapy in patients with HER2-amplified, inoperable and advanced or metastatic BTC, including intra-hepatic cholangiocarcinoma, extra-hepatic cholangiocarcinoma, and gallbladder cancer.
- NCT04513665 – A study to evaluate zanidatamab monotherapy in women with HER2-overexpressed endometrial cancer or carcinosarcoma that has been treated in the past.
- NCT04276493 – A study to assess the safety, tolerability and preliminary antitumor activity of zanidatamab in combination with docetaxel in participants with HER2-positive breast cancer, and zanidatamab in combination with tislelizumab and chemotherapy in participants with HER2-positive gastric/gastroesophageal junction adenocarcinoma.

Zanidatamab has been granted Breakthrough Therapy designation by the FDA for patients with previously-treated HER2 gene-amplified BTC as well as two Fast Track designations, one for previously treated or recurrent HER2-positive BTC and another for first-line GEA in combination with standard of care chemotherapy. Zanidatamab also received Orphan Drug designation for the treatment of BTC and GEA in the United States and for gastric cancer and BTC in the European Union.

ZW49: HER2-Targeted Bispecific ADC

Overview

ZW49, our second product candidate, is currently being evaluated in a Phase 1 clinical trial. It is a biparatopic anti-HER2 ADC developed based on Zymeworks' proprietary Azymetric and ZymeLink platforms and combines the unique design of zanidatamab with a proprietary ZymeLink cytotoxin and cleavable linker. We are developing ZW49 to be a best-in-class HER2-targeting ADC for several indications characterized by HER2 expression, especially for patients whose tumors have progressed or are refractory to HER2-targeted agents and those that express lower levels of HER2 and are ineligible for treatment with HER2-targeted therapies including T-DM1.

ZW49 combines the Azymetric biparatopic anti-HER2 antibody zanidatamab with our proprietary ZymeLink cytotoxin and cleavable linker. Our cytotoxin destabilizes tubulin, a protein necessary for cell division, and therefore kills rapidly dividing cancer cells. In preclinical models, compared to certain approved HER2-targeted therapies, ZW49 mediates a superior therapeutic effect on HER2-expressing tumors through multiple potential mechanisms, including:

- increased maximum HER2 binding density;
- unique biparatopic-induced HER2 receptor clustering;
- increased HER2-mediated ADC internalization; and
- enhanced toxin-mediated cytotoxicity and tumor growth inhibition.

Preclinical Development of ZW49

In preclinical studies, ZW49 demonstrated complete tumor regressions in a panel of high and low HER2-expressing patient-derived xenografts and promising efficacy in a model of breast cancer brain metastases. These results compared favorably when benchmarked against approved and leading HER2 ADCs in clinical development. In a repeat dose toxicology study in non-human primates, ZW49 was well tolerated at 18 mg/kg, suggesting a broad therapeutic window.

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Clinical Development of ZW49

We are currently evaluating ZW49 as a monotherapy in a non-randomized, open-label Phase 1 clinical trial in patients with HER2 High breast, gastric and other HER2-expressing cancers, whose disease has progressed after all standard of care therapies. The primary objective of the Phase 1 clinical trial is to characterize the safety, tolerability, pharmacokinetics and maximum tolerated dose of ZW49. The secondary objectives for the trial include evaluation of preliminary antitumor activity of ZW49, as well as an exploration of potential biomarkers of response. Based upon the observed safety and activity, subsequent development may focus on patients with HER2 High breast cancer, HER2 High gastric cancer, other HER2 High cancers, as well as cancers with lower levels of HER2 expression, including breast cancer.

In January 2021, we announced an interim update from the ongoing ZW49 Phase 1 dose-escalation study. In 35 patients who have received ZW49 across all dosing regimens, there have been no dose limiting toxicities, no treatment-related hematologic, pulmonary, or liver toxicity, and no treatment-related deaths. Over 90% of treatment-related adverse events have been mild or moderate (Grade 1 or 2) in severity, with the most common being keratitis, fatigue, and diarrhea, which have been reversible and manageable in an outpatient setting. There have been no discontinuations due to treatment-related adverse events, and the maximum tolerated dose has not yet been established. ZW49 has demonstrated antitumor activity at all dose levels evaluated in the once every three week regimen including confirmed partial responses and stable disease per RECIST 1.1. Three indication-specific expansion cohorts (HER2-positive breast cancer, HER2-positive GEA, and a basket cohort of other HER2-positive cancers) utilizing the 2.5 mg/kg once every three week regimen were also initiated to better ascertain antitumor activity in more homogeneous patient populations.

As of January 2022, the expansion cohorts evaluating 2.5 mg/kg every three weeks have completed enrollment (30 patients). The weekly dose regimen continues to enroll patients and to dose escalate as the maximum tolerable dose has not been reached. No dose-limiting toxicities have been observed to date.

Other Product Candidates

We maintain ongoing discovery efforts to identify and test new target combinations, product candidates and platform technologies that have the potential to address unmet clinical needs. We have developed multiple undisclosed preclinical product candidates targeting a combination of known and novel tumor antigens based on our platform technologies. All of these candidates remain unpartnered. We will continue to focus on advancing multiple well-differentiated product candidates into clinical trials to build our pipeline portfolio as well as exploiting our protein engineering expertise to develop innovative therapeutic platforms.

Our Proprietary Therapeutic Platforms

Our expertise in protein engineering has enabled the development of our proprietary therapeutic platforms, a complementary suite of highly-tailored biologics solutions. Our therapeutic platforms can be used alone or in combination to develop multifunctional fit-for-purpose biotherapeutics with bispecific capabilities (Azymetric), targeted cytotoxin payload delivery (ZymeLink), finely tuned immune function modulation (EFFECT), and tumor-specific immune co-stimulation (ProTECT). The modular design and ease of use of our therapeutic platforms allow for the design and evaluation of multiple candidates with different formats to determine the optimal therapeutic combination early in development. We continue to leverage these therapeutic platforms to expand our pipeline of next-generation biotherapeutics that we believe could represent significant improvements to the standard of care in multiple cancer types.

Azymetric™ Bispecific Antibody Platform	ZymeLink™ Next-Gen Drug Conjugate Platform	EFFECT™ Immune Function Modulating Platform	ProTECT™ Tumor-Specific Immune Co-stimulation
<ul style="list-style-type: none">Dual targeting of receptors and ligandsIgG1-like biophysical and functional propertiesIgG1-like manufacturing and purification protocols	<ul style="list-style-type: none">Suite of proprietary toxinsStable, cleavable linkersIgG1-like PK and exposureDemonstrated tolerabilityWide therapeutic window	<ul style="list-style-type: none">Tailored sets of Fc modifications that can modulate immune cell recruitment and functionEnhance or eliminate immune effector function to optimize therapeutics	<ul style="list-style-type: none">Tumor-specific activity via conditional blocking to reduce off-tumor toxicitiesFunctional block adds co-stimulation or checkpoint modulation to enhance efficacy

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Azymetric Bispecific Antibody Platform

The Azymetric platform consists of a library of proprietary amino acid substitutions that enable the transformation of monospecific antibodies into bispecific antibodies, which gives them the ability to simultaneously bind two non-overlapping epitopes. The Azymetric platform enables the development of biotherapeutics with dual-targeting of receptors/ligands and simultaneous blockade of multiple signaling pathways, increasing tumor-specific targeting and efficacy while reducing toxicities and the potential for drug resistance. In preclinical studies, the dual-targeting of Azymetric antibodies has demonstrated synergistic activity relative to the application of an equivalent dose of the corresponding monospecific antibodies. Azymetric bispecifics can also be engineered to enhance internalization of the antibody into the tumor cell and consequently increase the delivery of cytotoxins.

Azymetric bispecifics retain the desirable drug-like qualities of monoclonal antibodies, including long half-life, stability and low immunogenic potential, which increases their probability of success. Azymetric bispecifics are also compatible with standard manufacturing processes with high production yields and purity.

ZymeLink ADC Platform

The ZymeLink ADC platform is a suite of proprietary cytotoxins, stable linkers, and conjugation technologies that are compatible with our product candidates and enable delivery of cytotoxins directly to target cells. We believe that ZymeLink provides multiple competitive advantages over existing ADC approaches, including optimized activity and tolerability profiles through increased drug delivery to target cells with reduced off-target effects, as well as improved pharmacokinetics and stability.

EFFECT Antibody Effector Function Modulation Platform

The EFFECT platform consists of sets of modifications to the crystallizable fragment (“Fc”) region of antibodies that enable the selective modulation of recruited cytotoxic immune cells for diverse therapeutic applications. This allows us to rationally tailor the selective enhancement or suppression of immune effector function to optimize product candidates.

ProTECT Tumor-Specific Immune Co-stimulation Platform

The ProTECT platform is a novel conditionally-active antibody technology that can simultaneously increase the tolerability and efficacy for therapeutics, thereby potentially enhancing therapeutic window and clinical utility. Functional, natural immunomodulatory heterodimers are introduced to sterically block antigen binding outside the tumor, enabling therapeutics with limited activity in normal healthy tissue, avoiding on-target, off-tumor toxicities. Once in the tumor microenvironment, specific proteases cleave and release one half of the functional block activating both the targeting antibody and the immunomodulatory function. The resulting activated multifunctional therapeutic enables immune modulation in concert with antigen binding, which enables an overall increase in the therapeutic window through selective tumor activity and enhanced potency.

Strategic Partnerships and Collaborations

Our novel product candidates, together with the unique combination of proprietary protein engineering capabilities and resulting therapeutic platform technologies, have enabled us to enter into a number of strategic partnerships, many of which were subsequently expanded in scope. Our strategic partnerships and collaborations, including with Merck, BMS, GSK, Daiichi Sankyo, Janssen, LEO, BeiGene, and Exelixis, provide us with the ability to accelerate clinical development of our product candidates in certain geographical regions and provide our strategic partners with access to components of our proprietary therapeutic platforms for their own therapeutics development. In addition, these strategic partnerships have provided us with non-dilutive funding as well as access to proprietary therapeutic assets, which increase our ability to rapidly advance our product candidates while maintaining commercial rights to our own therapeutic pipeline. Under our strategic partnerships and collaboration agreements, we have received over \$235.0 million to date in the form of non-refundable upfront payments and milestone payments. In addition, under our active strategic partnerships and collaboration agreements, we are eligible to receive up to \$2.7 billion in preclinical and development milestone payments and \$5.6 billion in commercial milestone payments, as well as tiered royalties on potential future product sales. It is possible, however, that our strategic partners’ programs will not advance as currently contemplated, which would negatively affect the amount of development and commercial milestone payments and royalties on potential future product sales we may receive. Importantly, these partnerships include predominantly non-target-exclusive licenses for any of our therapeutic platforms, so we maintain the ability to develop therapeutics directed to many high-value targets utilizing our platforms. Our strategic partnerships include the following:

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Merck

In August 2011, we entered into a research and license agreement with Merck, which was amended and restated in December 2014, to develop and commercialize three bispecific antibodies generated through the use of our Azymetric and EFECT platforms. Under the terms of the agreement, we granted Merck a worldwide, royalty-bearing antibody sequence pair exclusive license to research, develop and commercialize certain licensed products. To date, we have received an upfront payment of \$1.25 million and research and development related payments totaling \$5.5 million. Currently, there are no active programs under development pursuant to this agreement. The agreement contains customary termination rights for Merck and us, including the right for Merck to terminate the agreement in its sole discretion with advance notice to us. The agreement will terminate on the later of (i) the expiry of the last patent covering a Merck licensed product excluding methods of making the product, or (ii) the expiry of the royalty payment obligations by Merck.

In July 2020, we entered into a second licensing agreement with Merck granting Merck a worldwide, royalty-bearing license to research, develop and commercialize up to three new multispecific antibodies toward Merck's therapeutic targets in the human health field and up to three new multispecific antibodies toward Merck's therapeutic targets in the animal health field using our Azymetric and EFECT platforms. We are eligible to receive up to \$419.3 million in option exercise fees and clinical development and regulatory approval milestone payments and up to \$502.5 million in commercial milestone payments, as well as tiered royalties on worldwide sales.

Lilly

In December 2013, we entered into a licensing and collaboration agreement with Lilly, under which Lilly has the right to research, develop and commercialize one bispecific antibody generated through the use of our Azymetric platform. Under the terms of the agreement, we granted Lilly a worldwide, royalty-bearing antibody target pair-specific exclusive license to research, develop and commercialize certain licensed products. To date, we have received an upfront payment of \$1.0 million and research and development related payments of \$3.0 million. Currently, there are no active programs under development pursuant to this agreement. The agreement contains customary termination rights for Lilly and us, including the right for Lilly to terminate the agreement in its sole discretion with advance notice to us. The agreement will terminate on a product-by-product and country-by-country basis upon the latter of the product being no longer covered by certain patents related to the Lilly licensed product, or ten years after the first commercial sale of the Lilly licensed product in such a country.

In October 2014, we entered into a second licensing and collaboration agreement with Lilly to research, develop and commercialize one bispecific antibody generated through the use of our Azymetric platform. This agreement did not alter or amend the initial 2013 agreement. Under the terms of this 2014 agreement, we granted Lilly a worldwide, royalty-bearing antibody sequence pair-specific license to research, develop and commercialize certain licensed products. To date, we have received research and development related payments for the 2014 agreement totaling \$10.0 million. Currently, there are no active programs under development pursuant to this agreement. The agreement contains customary termination rights for Lilly and us, including the right for Lilly to terminate the agreement in its sole discretion with advance notice to us. In addition, (i) both Lilly and us have certain rights to terminate on a program-by-program basis due to scientific failure, (ii) Lilly can terminate the agreement on a target-pair-by-target-pair basis in its sole discretion after the payment of the initial license fee for such a target pair, (iii) Lilly can terminate the agreement or specific target pairs due to an incurable material breach by us, and under specific conditions, Lilly shall have certain rights to continue the research, development and commercialization of products with their license payment, milestone and royalty obligations reduced by 50%, and (iv) Lilly shall have the right to terminate the agreement or specific target pairs in the event of us undergoing a change of control, while retaining certain rights. The agreement will also terminate on a product-by-product and country-by-country basis upon the latter of the product being no longer covered by certain patents related to the Lilly licensed product, or ten years after the first commercial sale of the Lilly licensed product in such a country. If the affected research programs have not completed specific research stages, Lilly's obligations to the license payments, milestones and royalties shall be reduced in a tiered fashion ranging from 25-75%.

BMS

In December 2014, we entered into a collaboration agreement with Celgene (now BMS) to research, develop and commercialize bispecific antibodies generated through the use of our Azymetric platform. This agreement was expanded in 2018 to increase the number of programs from eight to ten and to extend BMS's research period. Under the terms of the agreement, we granted BMS a right to exercise options to worldwide, royalty-bearing, antibody sequence pair-specific exclusive licenses to research, develop and commercialize certain licensed products. We received an upfront payment of \$8.0 million and an expansion fee of \$4.0 million. BMS has the right to exercise options on up to ten programs and if BMS opts in on a program, we are eligible to receive up to \$164.0 million per product candidate (up to \$1.64 billion for all ten programs), comprised of a commercial license option payment of \$7.5 million, development milestone payments of up to \$101.5 million and commercial milestone payments of up to \$55.0 million. To date, BMS has exercised one commercial license option and we have received a total of \$7.5 million in product candidate-specific payments. After conclusion of BMS's research period, BMS will be solely responsible for the research, development, manufacturing and commercialization of the products. In June 2020, our existing collaboration agreement with BMS was amended to expand the license grant to include the use of our EFECT

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platform for the development of therapeutic candidates and to extend the research term. We received an upfront expansion fee of \$12.0 million and all other financial terms were unchanged. The agreement contains customary termination rights for BMS and us, including the right of BMS to terminate the agreement in its entirety or on a product-by-product basis in its sole discretion with advance notice to us. The agreement will terminate on a product-by-product and country-by-country basis upon the later of the expiration of the last-expiring patent related to the BMS licensed product, or ten years after the first commercial sale of the BMS licensed product in such a country. If BMS does not exercise its option for the commercial license, the agreement will terminate on a product-by-product basis for which the option was not exercised.

GSK

In December 2015, we entered into a collaboration and license agreement with GSK to research, develop and commercialize up to ten Fc-engineered monoclonal and bispecific antibodies generated through the use of our EFFECT and Azymetric platforms. Under the terms of the agreement, we granted GSK a worldwide, royalty-bearing antibody target-exclusive license to new intellectual property generated to the EFFECT platform under this collaboration and a non-exclusive license to the Azymetric platform to research, develop and commercialize future licensed products. We are eligible to receive up to \$1.1 billion, including research, development and commercial milestone payments of up to \$110.0 million for each product. In addition, we are eligible to receive tiered royalties in the low single digits on net sales of products. No development or commercial milestone payments or royalties have been received to date. We retained the right to develop up to four products, free of royalties, using the new intellectual property generated in this collaboration, and after a period of time, to grant licenses to such intellectual property for development of additional products by third parties. Under this agreement, we are sharing certain research and development responsibilities with GSK to generate new Fc-engineered antibodies. Each party will bear its own costs for the responsibilities assigned to it during the research period. After the conclusion of the research period, each party will be solely responsible for the further research, development, manufacturing and commercialization of its own respective products. The agreement contains customary termination rights for GSK and us, including the right for GSK to terminate the agreement in its sole discretion with advance notice to us, and allowing the parties to terminate the agreement by mutual agreement. The agreement will terminate on the earlier of (i) the end of the research period if GSK does not elect to advance one or more products incorporating intellectual property generated under the research period for further research and development or (ii) on a product-by-product and country-by-country basis upon the latter of the product being no longer covered by a patent related to the GSK licensed product, or ten years after the first commercial sale of the GSK licensed product in such a country.

In April 2016, we entered into a platform technology transfer and license agreement with GSK to research, develop and commercialize up to six bispecific antibodies generated through the use of our Azymetric platform. This may include bispecific antibodies incorporating new engineered Fc regions generated under the 2015 GSK agreement. Under the terms of this 2016 agreement, we granted GSK a worldwide, royalty-bearing antibody sequence pair-specific exclusive license to research, develop and commercialize licensed products. In May 2019, this agreement was expanded to provide GSK access to Zymeworks' unique heavy-light chain pairing technology under the Azymetric platform. Under the expanded agreement, we are eligible to receive up to \$1.1 billion in milestone and other payments. To date, we have received an upfront technology access fee payment of \$6.0 million. We are also eligible to receive research milestone payments of up to \$37.5 million, development milestone payments of up to \$183.5 million and commercial milestone payments of up to \$867.0 million. In addition, we are eligible to receive tiered royalties in the low to mid-single digits on product sales. GSK bears all responsibility and costs associated with research, development and commercialization of products generated using the Azymetric platform. The agreement contains customary termination rights for GSK and us, including the right for GSK to terminate the agreement in its sole discretion with advance notice to us. Termination provisions allow for GSK to terminate the agreement or specific antibody sequence pairs due to an incurable material breach by us, and under specific conditions, GSK shall have certain rights to continue the research, development, and commercialization of products with their license payment, milestone, and royalty obligations reduced by 50%.

Daiichi Sankyo

In September 2016, we entered into a collaboration and cross-license agreement with Daiichi Sankyo to research, develop and commercialize one bispecific antibody generated through the use of our Azymetric and EFFECT platforms. Under the terms of the agreement, we granted Daiichi Sankyo a worldwide, royalty-bearing antibody sequence pair-specific exclusive license to research, develop and commercialize certain licensed products. We are eligible to receive up to \$149.9 million in milestone and other payments. To date, we have received an upfront technology access fee payment of \$2.0 million and research and commercial option related payments totaling \$4.5 million. We are also eligible to receive additional development milestone payments of up to \$63.4 million, and commercial milestone payments of up to \$80.0 million. In addition, we are eligible to receive tiered royalties ranging from the low single digits up to 10% on product sales. We also gained non-exclusive rights to develop and commercialize up to three products using Daiichi Sankyo's proprietary immune-oncology antibodies, with royalties in the low single digits to be paid to Daiichi Sankyo on sales of such products. Daiichi Sankyo is solely responsible for the research, development, manufacturing and commercialization of the products. Under the non-exclusive immuno-oncology antibody license to Zymeworks, we are solely responsible for all research, development and commercialization of the resulting products. The agreement contains customary termination rights for Daiichi and us, including the right for Daiichi to terminate

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the rights to our therapeutic platforms in its sole discretion with advance notice to us and for us to terminate our rights to Daiichi's antibodies with advance notice to Daiichi. The agreement shall terminate, with respect to Daiichi's license, if Daiichi fails to exercise its option or, on a product-by-product basis, until expiration of Daiichi's royalty obligations.

In May 2018, we entered into a new license agreement with Daiichi Sankyo to research, develop and commercialize two bispecific antibodies generated through the use of our Azymetric and EFECT platforms. This agreement did not alter or amend the initial 2016 agreement. Under the terms of this 2018 agreement, we granted Daiichi Sankyo a worldwide, royalty-bearing, antibody sequence pair-specific, exclusive license to research, develop and commercialize certain products. We are eligible to receive up to \$484.7 million in various milestone and other payments. To date, we have received an upfront technology access fee payment of \$18.0 million. We are also eligible to receive development milestone payments totaling up to \$126.7 million and commercial milestone payments of up to \$340.0 million. In addition, we are eligible to receive tiered royalties ranging from the low single digits up to 10% on product sales. Daiichi Sankyo is solely responsible for the research, development, manufacturing and commercialization of the products. The agreement contains customary termination rights for Daiichi Sankyo and us, including the right for Daiichi Sankyo to terminate the rights to our therapeutic platforms in its sole discretion with advance notice to us. The agreement shall terminate, with respect to Daiichi Sankyo's licenses, on a product-by-product basis, with the last payment obligation for the respective product.

Janssen

In November 2017, we entered into a collaboration and license agreement with Janssen to research, develop and commercialize up to six bispecific antibodies generated through the use of our Azymetric and EFECT platforms. Under the terms of the agreement, we granted Janssen a worldwide, royalty-bearing, antibody sequence group-specific exclusive license to research, develop and commercialize certain products. We are eligible to receive up to \$1.45 billion in various license and milestone payments. To date, we have received an upfront payment of \$50.0 million and development milestones totaling \$8.0 million in connection with the initiation of clinical trials of two bispecific antibodies. We are also eligible to receive development milestone payments of up to \$274.0 million and commercial milestone payments of up to \$1.12 billion. In addition, we are eligible to receive tiered royalties in the mid-single digits on product sales. Janssen has the option to develop two additional bispecific antibodies under this agreement subject to a future option payment. Janssen is solely responsible for the research, development, manufacturing and commercialization of the products. The agreement contains customary termination rights for Janssen and us, including the right for Janssen to terminate the agreement in its sole discretion with advance notice to us. The agreement will terminate, on a product-by-product basis, on the expiry of the royalty term for the product. Furthermore, if Janssen does not designate an antibody sequence group during the research program term, the agreement will also terminate.

LEO

In October 2018, we entered into a research and license agreement with LEO whereby we granted LEO a worldwide, royalty-bearing, antibody sequence pair-specific exclusive license to research, develop and commercialize two bispecific antibodies, generated through the use of our Azymetric and EFECT platforms, for dermatologic indications. Zymeworks retains rights to develop antibodies resulting from this collaboration in all other therapeutic areas. Pursuant to this agreement, we received an upfront payment of \$5.0 million. In addition, (i) for the first therapeutic candidate, we are eligible to receive preclinical and development milestone payments of up to \$74.0 million and commercial milestone payments of up to \$157.0 million together with tiered royalties on future sales of up to 20% in the United States and up to high single digits elsewhere, and (ii) for the second therapeutic candidate, we are eligible to receive preclinical and development milestone payments of up to \$86.5 million and commercial milestone payments of up to \$157.0 million together with tiered royalties on future sales of up to low double digits globally. For products developed by Zymeworks outside of dermatology, LEO is eligible to receive commercial milestone payments and up to single-digit royalties on future sales. No development or commercial milestone payments or royalties have been received to date. Zymeworks and LEO are jointly responsible for certain research activities, with Zymeworks' cost to be fully reimbursed by LEO. Each party is solely responsible for the development, manufacturing, and commercialization of its own products. The agreement contains customary termination rights for LEO and us, including the right for LEO to terminate its rights to our therapeutic platforms in its sole discretion with advance notice to us. The agreement shall terminate, with respect to LEO's licenses, on a product-by-product basis, with the expiration of the last-to-expire royalty term for the respective product.

BeiGene

In November 2018, we entered into agreements with BeiGene whereby we granted BeiGene royalty-bearing exclusive licenses for the research, development and commercialization of zanidatamab and ZW49 in Asia (excluding Japan but including the People's Republic of China, South Korea and other countries), Australia and New Zealand. In addition, we also granted BeiGene a worldwide, royalty-bearing, antibody sequence pair-specific license to research, develop and commercialize globally three bispecific antibodies generated through the use of our Azymetric and EFECT platforms.

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Zanidatamab & ZW49

For the research, development and commercialization licenses to zanidatamab and ZW49, we received an upfront payment of \$40.0 million. In aggregate for both zanidatamab and ZW49, we are also eligible to receive development and commercial milestone payments of up to \$390.0 million, together with tiered royalties from high single digits and up to 20% on future sales of the products. In March 2020, BeiGene dosed the first patient in a two-arm Phase 1b/2 trial evaluating zanidatamab in combination with chemotherapy as a first-line treatment for patients with metastatic HER2-positive breast cancer and in combination with chemotherapy and BeiGene's PD-1-targeted antibody tislelizumab as a first-line treatment for patients with metastatic HER2-positive GEA. We received a payment of \$5.0 million in relation to this milestone. In November 2020, BeiGene dosed the first patient in South Korea in the pivotal HERIZON-BTC-01 study, and we received a payment of \$10.0 million in relation to this milestone. In December 2021, BeiGene dosed the first patient in South Korea in the pivotal HERIZON-GEA-01 study, and we received a payment of \$8.0 million in relation to this milestone.

Under the agreements, Zymeworks and BeiGene are collaborating on certain global clinical studies and both Zymeworks and BeiGene will independently conduct other clinical studies in their own respective territories. Each of Zymeworks and BeiGene are responsible for all of the development and commercialization costs in their own territories. Unless earlier terminated, these agreements will terminate on a licensed product-by-product and country-by-country basis upon the expiration of the royalty term in such country for such licensed product. The agreements may be terminated by BeiGene upon prior written notice or by either party upon the other party's bankruptcy or uncured material breach.

Azymetric & EFECT Platforms

We received an upfront payment of \$20.0 million for the development and commercialization licenses of up to three bispecific antibody therapeutics using our Azymetric and EFECT platforms. We are also eligible to receive development and commercial milestone payments of up to an aggregate of \$702.0 million. In addition, we are eligible to receive tiered royalties in the mid-single digits on product sales. No development or commercial milestone payments or royalties have been received to date. BeiGene is solely responsible for the research, development, manufacturing, and commercialization of the products. Unless earlier terminated, this agreement will terminate on a licensed product-by-product and country-by-country basis upon the expiration of the royalty term in such country for such licensed product. This agreement may be terminated by BeiGene upon prior written notice, or by either party upon the other party's uncured material breach.

Iconic / Exelixis

In May 2019, we entered into a license agreement with Iconic Therapeutics, Inc. ("Iconic") to develop and commercialize its antibody-drug conjugate (ICON-2) targeting Tissue Factor, generated through the use of our ZymeLink platform. Under the terms of this agreement, we granted Iconic a worldwide, royalty-bearing, antibody sequence-specific, exclusive license to develop and commercialize certain products. In December 2020, Iconic licensed ICON-2 (also known as XB002) to Exelixis, and under our agreement with Iconic, we received a share of the \$20.0 million option fee paid to Iconic by Exelixis. Under a December 2021 amendment to the license agreement between Iconic and Exelixis, we received a share of the one-time fee received by Iconic in exchange for all future milestones owing to Iconic from Exelixis. We continue to be eligible to receive future royalties on the ICON-2 program pursuant to the agreement with Iconic. Iconic and its partners are responsible for the development, manufacturing, and commercialization of the products. The Agreement contains customary termination rights for Iconic and Zymeworks, including the right for Iconic to terminate the Agreement, in its sole discretion, with advance notice to Zymeworks.

Intellectual Property

Our business success will depend significantly on our ability to:

- secure, maintain and enforce patent and other proprietary protection for our core technologies, inventions and know-how;
- obtain and maintain licenses to key third-party intellectual property owned by such third parties;
- preserve the confidentiality of our trade secrets; and
- operate without infringing upon valid, enforceable third-party patents and other rights.

We seek to secure and maintain patent protection for the composition of matter, manufacturing processes and methods of use for our drug candidates and for our underlying protein engineering capabilities and therapeutic platforms including Azymetric, EFECT, ZymeLink, ZymeCAD and ProTECT. We also utilize trade secrets, careful monitoring and limited disclosure of our proprietary information where patent protection is not appropriate. We also protect our proprietary information by ensuring that our employees, consultants, contractors and other advisors execute agreements requiring non-disclosure and assignment of inventions prior to their engagement. We intend to continue to expand our intellectual property holdings by seeking patent protection for new compositions of matter, new features and applications of our core therapeutic platforms, and innovative new therapeutic platforms, in the United States and other jurisdictions. We also intend to supplement internal innovation through in-

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licensing of new technologies and compositions of matter as appropriate. We intend to take advantage of any available data exclusivity, market exclusivity, patent term adjustment and patent term extensions.

We routinely monitor the status of existing and emerging intellectual property disclosed by third parties that may impact our business, and to the extent we identify any such disclosures, by evaluating them and taking appropriate courses of action.

As of December 31, 2021, our patent portfolio consists of 66 active patent families. Of these, 18 families relate to our key product candidates and programs including zanidatamab, ZW49 and our therapeutic platform technology. The remaining 48 patent families relate to other earlier stage potential product candidates or platforms that we do not consider material to our business at this time. One of our patent families is exclusively licensed from a third party. Two of our patent families are co-owned with VAR2 Pharmaceuticals ApS, and one patent family is co-owned with the Provincial Health Services Authority and University of Victoria Industry Partnerships. None of the licensed or co-owned patent families relate to our therapeutic platforms or our lead product candidates, zanidatamab and ZW49, and they are not material to our business at this time. As of December 31, 2021, we have 170 issued patents, 49 of which are U.S. patents.

Therapeutic Antibody Portfolio

Our therapeutic antibody patent portfolio is directed to specific compositions of matter and methods of treatment for our product candidates, including target-specific interactions and immunomodulatory mechanisms.

- We own the zanidatamab and ZW49 patent portfolio. Zanidatamab is covered by an international patent application filed under the Patent Cooperation Treaty (“PCT”) that is in the national phase with applications pending or issued in Australia, Brazil, Canada, China, Europe, India, Japan, Korea, Mexico, Russia and the United States. This application relates to the composition of matter, methods of making and uses of zanidatamab, and if issued, is expected to expire in 2034, absent any adjustments or extensions. Two U.S. patents have issued in this family. An additional PCT application in the national phase in Australia, Canada, Europe, Japan and the United States is directed to treatment methods using zanidatamab.
- We have filed a PCT application covering ZW49 composition of matter and methods of making and using ZW49, which is in the national phase with applications pending in Australia, Brazil, Canada, China, Europe, Israel, India, Japan, Korea, Mexico, New Zealand, Russia, Singapore and the United States. One patent from this family has issued in the United States. Corresponding applications were filed in Argentina and Taiwan that are not part of the PTC. Any patents that issue from national phase filings are expected to expire in 2039, absent any adjustments or extensions.
- Both zanidatamab and ZW49 are also protected by our two patent families relating to the Azymetric Fc, as described below. ZW49 is also protected by one of the ZymeLink patent families, as described below.

Therapeutic Platform Technology Portfolio

The therapeutic platform technology portfolio includes biological formats and variants thereof, including the Azymetric platform, the ZymeLink platform, the EFECT platform, and specific applications, manufacturing methods and assays related to the platform constructs and underlying computational chemistry.

- **Azymetric:** We own a portfolio of six patent families relating to the Azymetric platform for engineering Fc and Fab constructs for the development of bispecific antibodies.
Azymetric Fc: Two of the patent families relate to engineered antibody Fc region polypeptides having amino acid substitutions that preferentially form heterodimers, with PCT national phase applications pending or issued in Australia, Brazil, Canada, China, Europe, India, Japan, Korea, Mexico, Russia and the United States. One U.S. patent has issued with 1,102 days of patent term adjustment and is expected to expire on November 10, 2034. A second U.S. patent has issued with 372 days of patent term adjustment and is expected to expire on November 9, 2033. Two additional U.S. patents have issued. If issued, the remaining patents in these families are expected to expire between 2031 and 2032, absent any adjustments or extensions. An additional issued U.S. patent covers method of expressing antibodies containing heterodimeric Fc regions in cells.
Azymetric Fab: Four patent families in the PCT national phase are pending or issued in Australia, Brazil, Canada, China, Europe, India, Japan, Korea, Mexico, Russia and the United States and relate to antibodies having amino acid substitutions in Fab-region heavy and light chains for making correctly paired bispecific antibodies. Two U.S. patents have issued. These patent families are directed to compositions, methods of producing and uses of heterodimeric antibodies. If issued, patents in these families are expected to expire between 2031 and 2038, absent any adjustments or extensions.

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- **ZymeLink:** We own the ZymeLink patent portfolio relating to novel toxin molecules and novel linkers by means of which these toxins can be conjugated to antibodies and other protein scaffolds. Two national phase PCT applications are pending or issued in Australia, Brazil, Canada, China, Europe, India, Israel, Japan, Korea, Mexico, South Africa and the United States, and are directed to novel hemiasterlin toxin derivatives, novel linker compositions, hemiasterlin-linker compositions, and antibody-hemiasterlin conjugate compositions, two of which have issued in the United States. An additional national phase PCT application is directed to novel auristatin derivatives, auristatin-linker compositions and antibody-auristatin conjugates, including the one used in ZW49, and is pending or issued in Australia, Brazil, Canada, China, Europe, India, Israel, Japan, Korea, Mexico, Russia, Singapore and the United States. Three U.S. patents have issued from this patent family. Any patents that may issue from these families are expected to expire between 2034 and 2037, absent any adjustments or extensions.
- **EFFECT:** The EFFECT platform for engineering Fc constructs with modulated FcgR-binding and Fc effector function is protected by three PCT patent applications that we own, two of which are in the national stage with one application pending or issued in Australia, Canada, Mexico and the United States and the other pending or issued in Australia, Brazil, Canada, China, Europe, India, Japan, Russia and the United States. Two patents have issued from these families in the United States. These patent families are directed to compositions of matter and methods of making Fc constructs with altered FcgR-binding and Fc effector function; if issued, they are expected to expire between 2031 and 2034, absent any adjustments or extensions. The third PCT application was filed on May 20, 2021 and relates to Fc modifications that modulate other aspects of Fc effector function.
- **ProTECT:** A PCT application covering the ProTECT platform technology was filed on July 20, 2021. This application covers the composition of matter of polypeptide constructs comprising immunomodulatory ligands and their cognate receptors derived from the immunoglobulin superfamily (such as PDL1 and PD1) fused to antibody variable heavy and light chain region termini respectively via protease-cleavable linkers.
- **Computational Chemistry:** We own a portfolio of 15 families of computational chemistry patents and patent applications that relate to the computational and algorithmic advances incorporated into the ZymeCAD suite of applications, including advances in general molecular modeling, conformational dynamics, docking, distal mutations, and molecular packing, as well as parallelization and graphical data analysis. Fourteen of these patents have issued in the United States. Any patents that issue from these families are expected to expire between 2027 and 2042, absent any adjustments or extensions.

Technology Licensing and In-Licensed Intellectual Property

We identify and selectively enter into technology licensing agreements and intellectual property in-licensing agreements to support pipeline advancement. For example, we entered into an assignment agreement with CDRD Ventures Inc. (“CVI”), as part of our 2016 acquisition of Kairos Therapeutics Inc. (“Kairos”) to have all of CVI’s interests in the Kairos patents and intellectual property assigned to Zymeworks. We may be required to make future payments to CVI for ZW49 or other product candidates upon the direct achievement of certain clinical development milestones for products incorporating certain Kairos intellectual property, as well as low single-digit royalty payments on the net sales of such products. For out-licensed products and technologies incorporating certain Kairos intellectual property, we may be required to pay CVI a mid-single-digit percentage of the future revenue as a result of a revenue sharing agreement.

Manufacturing

We rely on third-party contract manufacturing organizations to provide manufacturing, linker-toxin conjugation, and fill-finish services in order to generate all of the therapeutic antibody supply required for our clinical studies and other research and development activities. To retain focus on our expertise in developing new product candidates, we do not currently plan to develop or operate in-house manufacturing capacity. Our bispecific therapeutic antibody candidates require standard chemistry, manufacturing and control (“CMC”) processes typical of those required for monoclonal antibody manufacturing. We therefore expect to continue to be able to develop product candidates that can be manufactured in a cost-effective fashion by our network of qualified third-party contract manufacturing organizations.

Through our contract manufacturing organizations, we currently have sufficient supply of our product candidates to carry out ongoing and planned preclinical studies. For zanidatamab, we also have sufficient current good manufacturing practices (“cGMP”)-grade supply, together with planned additional manufacturing runs, to complete our Phase 1 and Phase 2 clinical trials and initiate a Phase 3 clinical trial. For ZW49, we have sufficient cGMP-grade supply, together with planned additional manufacturing runs, to complete our Phase 1 clinical trial.

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Competition

The biopharmaceutical industry is characterized by rapidly advancing technologies, intense competition and a strong emphasis on proprietary products. While we believe that our technology, knowledge, experience and scientific resources provide us with competitive advantages, we face potential competition from many different sources, including major pharmaceutical, specialty pharmaceutical and biotechnology companies, academic institutions and governmental agencies and public and private research institutions. Any product candidates that we successfully develop and commercialize will compete with existing therapies and new therapies that may become available in the future.

With respect to target discovery activities, competitors and other third parties, including academic and clinical researchers, may be able to access rare families and identify targets before we do.

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

The key competitive factors affecting the success of all of our product candidates, if approved, are likely to be their efficacy, safety, convenience and price, the effectiveness of alternative products, the level of competition and the availability of coverage and adequate reimbursement from government and other third-party payors.

Our commercial opportunity could be reduced or eliminated if our competitors develop and commercialize products or therapies that are safer, more effective, have fewer or less severe side effects, are more convenient or are less expensive than any products that we may develop. Our competitors also may obtain FDA, European Medicines Agency (“EMA”) or other regulatory approval for their products more rapidly than we may obtain approval for ours, which could result in our competitors establishing a strong market position before we are able to enter the market. In addition, our ability to compete may be affected in many cases by insurers or other third-party payors seeking to encourage the use of generic or biosimilar products.

Zanidatamab and ZW49 are being developed for patients with solid tumors that express HER2, including patients with tumors expressing low levels of HER2. Competing approved HER2-targeted therapies include F. Hoffmann-La Roche Ltd.’s (“Roche”) Herceptin, Perjeta, Phesgo, and Kadcyla as well as Novartis Pharmaceuticals Corporation’s Tykerb, Puma Biotechnology, Inc.’s Nerlynx, AstraZeneca PLC (“AstraZeneca”) / Daiichi Sankyo’s Enhertu, Seagen Inc.’s Tukysa, MacroGenics, Inc.’s Margenza, and various trastuzumab biosimilars. None of these drugs have been approved to treat tumors expressing low levels of HER2.

The FDA and corresponding regulatory authorities will ultimately review our clinical results and determine whether our product candidates are effective. No regulatory agency has made any such determination that any of our product candidates are effective for use by the general public for any indication.

Government Regulation

Government authorities in the United States, at the federal, state and local level, and in other countries extensively regulate, among other things, the research, development, testing, manufacturing, quality control, approval, labeling, packaging, storage, record-keeping, promotion, advertising, distribution, post-approval monitoring and reporting, marketing and export and import of products such as those we are developing. Our ADC product candidates are comprised of both a drug product and a biologic product, and will therefore be subject to regulation in the United States as combination products. If marketed individually, each component would be subject to different regulatory pathways and would require approval of independent marketing applications by the FDA. A combination product, however, is assigned to an FDA center that will have primary jurisdiction over its regulation based on a determination of the combination product’s primary mode of action, which is the single mode of action that provides the most important therapeutic action. In the case of our ADCs, we believe that the primary mode of action is attributable to the biologic component of the product. Thus, our product candidates are regulated as therapeutic biologics, with the FDA’s Center for Drug Evaluation and Research having primary jurisdiction over premarket development.

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Biological products are subject to regulation under the Federal Food, Drug, and Cosmetic Act (“FD&C Act”), the Public Health Service Act (“PHS Act”), and other federal, state, local and foreign statutes and regulations. Our product candidates must be approved by the FDA before they may be legally marketed in the United States and by the appropriate foreign regulatory agency before they may be legally marketed in foreign countries.

U.S. Biological Products Development Process

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

- completion of extensive nonclinical, sometimes referred to as preclinical, laboratory tests and preclinical animal trials and applicable requirements for the humane use of laboratory animals and formulation studies in accordance with applicable regulations, including good laboratory practices (“GLP”);
- submission to the FDA of an IND application, which must become effective before human clinical trials may begin;
- performance of adequate and well-controlled human clinical trials according to the FDA’s regulations commonly referred to as current good clinical practice (“cGCP”) regulations and any additional requirements for the protection of human research subjects and their health information, to establish the safety and efficacy of the proposed biological product for its intended use. The FDA may also impose clinical holds on a biological product candidate at any time before or during clinical trials due to safety concerns or noncompliance. If the FDA imposes a clinical hold, trials may not recommence without FDA authorization and then only under terms authorized by the FDA.
- submission to the FDA of a Biologics License Application (“BLA”) for marketing approval that includes substantive evidence of safety, purity, and potency from results of nonclinical testing and clinical trials;
- satisfactory completion of an FDA inspection of the manufacturing facility or facilities where the biological product is produced to assess compliance with cGMP requirements to assure that the facilities, methods and controls are adequate to preserve the biological product’s identity, strength, quality and purity;
- potential FDA audit of the nonclinical and clinical study sites that generated the data in support of the BLA; and
- FDA review and approval, or licensure, of the BLA.

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

- **Phase 1.** The biological product candidate is initially introduced into healthy human volunteers and tested for safety. In the case of some products for severe or life-threatening diseases, 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 2.** The biological product candidate is evaluated 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, optimal dosage and dosing schedule.
- **Phase 3.** Clinical trials are undertaken to further evaluate dosage, clinical efficacy, potency, and safety in an expanded patient population at geographically dispersed clinical study sites. These clinical trials are intended to establish the overall risk/benefit ratio of the product and provide an adequate basis for product labelling.

During all phases of clinical development, regulatory agencies require extensive reporting, monitoring and auditing of all clinical activities, clinical data, and clinical study investigators.

A sponsor, an institutional review board (“IRB”) or independent ethics committee, the FDA or other regulatory or monitoring authorities may suspend a clinical study at any time on various grounds, including a finding that the research subjects or patients are being exposed to an unacceptable health risk, failure to conduct the clinical trial in accordance with regulatory requirements or clinical protocols, failure to demonstrate a benefit from using the investigational drug, changes in government regulations or administrative actions.

Sponsors of clinical trials of FDA-regulated products, including biologics, are required to register and disclose certain clinical trial information, which is publicly available at www.clinicaltrials.gov. Information related to the product, patient population, phase of investigation, study 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.

U.S. Review and Approval Processes

After the completion of clinical trials of a biological product candidate, FDA approval of a BLA must be obtained before commercial marketing of the biological product. When a BLA is submitted, the FDA conducts a preliminary review to determine whether the application is sufficiently complete to be accepted for filing. If it is not, the FDA may refuse to file the application and request additional information, in which case the application must be resubmitted with the supplemental information, and review of the application is delayed. Upon accepting the BLA for filing, the FDA will conduct an in-depth review the BLA and may hold a public hearing where an independent advisory committee of expert advisors considers key questions regarding the product candidate. This advisory committee makes a recommendation to the FDA, which is not binding on the FDA, but is generally followed.

The FDA is authorized to designate certain products for expedited review if they are intended to address an unmet medical need in the treatment of a serious or life-threatening disease or condition. In particular, the FDA may designate a product for Fast Track review if it is intended, whether alone or in combination with one or more other drugs, for the treatment of a serious or life-threatening disease or condition, and it demonstrates the potential to address unmet medical needs for such a disease or condition. For Fast Track designated products, sponsors may have a higher number of interactions with the FDA and the FDA may initiate review of sections of a Fast Track product's New Drug Application ("NDA") or BLA before the application is complete. The FDA has granted two Fast Track designations to zanidatamab for the first-line treatment of patients with HER2-overexpressing GEA in combination with standard of care chemotherapy and for refractory BTC.

The FDA also may designate a product as a Breakthrough Therapy if it is intended, alone or in combination with one or more other products, to treat a serious or life-threatening disease or condition, and preliminary clinical evidence indicates that the product may demonstrate substantial improvement over existing therapies on one or more clinically important endpoints, such as substantial treatment effects observed early in clinical development. For products that have been designated as a Breakthrough Therapy, interaction and communication between the FDA and the sponsor of the trial can help to identify the most efficient path for clinical development while minimizing the number of patients placed in ineffective control regimens. Products designated as a Breakthrough Therapy by the FDA can also be eligible for accelerated approval. The FDA has granted Breakthrough Therapy designation for zanidatamab in HER2 gene-amplified BTC patients who have received prior systemic chemotherapy.

Under the Pediatric Research Equity Act, certain applications for approval must include an assessment, generally based on clinical study data, of the safety and effectiveness of the subject drug in relevant pediatric populations. The FDA may waive or defer the requirement for a pediatric assessment, either at the company's request or by the FDA's initiative. The FDA may determine that a Risk Evaluation and Mitigation Strategy ("REMS") is necessary to ensure that the benefits of a new product outweigh its risks. A REMS may include various elements, ranging from a medication guide or patient package insert to limitations on who may prescribe or dispense the drug or other elements to assure safe use, depending on what the FDA considers necessary for the safe use of the drug.

Before approving a BLA, the FDA will inspect the facilities at which the product is manufactured. The FDA will not approve the product unless it determines that the manufacturing processes and facilities are in compliance with cGMP requirements and adequate to assure consistent production of the product within required specifications. Additionally, before approving a BLA, the FDA will typically inspect one or more clinical sites to assure that the clinical trials were conducted in compliance with IND study requirements and cGCP requirements.

Notwithstanding the submission of relevant data and information, the FDA may ultimately decide that the BLA does not satisfy its regulatory criteria for approval and deny approval. Data obtained from clinical trials are not always conclusive and the FDA may interpret data differently than the applicant interprets the same data. If the FDA decides not to approve the BLA in its present form, the FDA will issue a complete response letter that usually describes all of the specific deficiencies in the BLA identified by the FDA. The deficiencies identified may be minor (for example, requiring labeling changes) or major (for example, requiring additional clinical trials). Additionally, the complete response letter may include recommended actions that the applicant might take to place the application in a condition for approval. If a complete response letter is issued, the applicant may either resubmit the BLA, addressing all of the deficiencies identified in the letter, or withdraw the application.

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. Further, the FDA may require that certain contraindications, warnings or precautions be included in the product labeling. The FDA may impose restrictions and conditions on product distribution, prescribing, or dispensing in the form of a REMS, or otherwise limit the scope of any approval. In addition, the FDA may require post-marketing clinical trials, sometimes referred to as Phase 4 clinical

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trials, designed to further assess a biological product's safety and effectiveness, and testing and surveillance programs to monitor the safety of approved products that have been commercialized.

Orphan Drug Designation

The Orphan Drug Act established incentives for the development of drugs intended to treat rare diseases or conditions, which generally are diseases or conditions affecting less than 200,000 individuals in the United States at the time of the request for orphan designation. If a sponsor demonstrates that a drug is intended to treat a rare disease or condition and meets other applicable requirements, the FDA grants Orphan Drug Designation to the product for that use. The FDA has granted zanidatamab Orphan Drug Designation for the treatment of BTC and GEA.

The benefits of Orphan Drug Designation include tax credits for clinical testing expenses and exemption from user fees. A drug candidate that is approved for the orphan drug designated use typically is granted seven years of orphan drug exclusivity. During that period, the FDA generally may not approve any other application for the same product for the same indication, although there are exceptions, most notably when the later product is shown to be clinically superior to the product with exclusivity. However, the FDA Reauthorization Act, which was enacted in 2017, requires, among other things, that certain orphan drugs for cancer be tested for children. The government has also increased focus on the potential misuse of the orphan drug approval process to increase the price of orphan drugs.

Post-Approval Requirements

Even if regulatory approval is granted, a marketed product is subject to continuing comprehensive requirements under federal, state and foreign laws and regulations, including requirements and restrictions regarding adverse event reporting, recordkeeping, marketing, and compliance with cGMP. Adverse events reported after approval of a drug can result in additional restrictions on the use of a marketed product or requirements for additional post-marketing studies or clinical trials.

Maintaining substantial compliance with applicable federal, state and local statutes and regulations requires the expenditure of substantial time and financial resources. Rigorous and extensive FDA regulation of biological products continues after approval, particularly with respect to cGMP requirements. Biological product manufacturers and other entities involved in the manufacture and distribution of approved biological products 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 requirements and other laws. We will rely, and expect to continue to rely, on third parties for the production of clinical and commercial quantities of any products that we may commercialize. Manufacturers of our products are required to comply with applicable requirements in the cGMP regulations, including quality control and quality assurance and maintenance of records and documentation. Other post-approval requirements applicable to biological products include record-keeping requirements, reporting of adverse effects and reporting updated safety and efficacy information. Discovery of previously unknown problems or the failure to comply with the applicable regulatory requirements relating to the manufacture or promotion of an approved product may result in restrictions on the marketing of a product or withdrawal of the product from the market as well as significant administrative, civil or criminal sanctions.

Biosimilars and Exclusivity

The 2010 Patient Protection and Affordable Care Act (“PPACA”) includes a subtitle called the Biologics Price Competition and Innovation Act of 2009 (“BPCIA”), which created an abbreviated approval pathway for biological products that are biosimilar to or interchangeable with an FDA-licensed reference biological product.

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

Canadian Review and Approval Process

In Canada, our biologic product candidates and our research and development activities are primarily regulated by the *Food and Drugs Act* and the rules and regulations thereunder, which are enforced by Health Canada. Health Canada regulates, among other things, the research, development, testing, manufacture, packaging, storage, recordkeeping, labeling, advertising,



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promotion, distribution, post-approval monitoring, marketing and import and export of pharmaceutical products. Drug approval laws require licensing of manufacturing facilities, carefully controlled research and testing of products, and government review and approval of experimental results prior to giving approval to sell drug products, including biologic drug products. Regulators also typically require that rigorous and specific standards such as cGMP, GLP and cGCP are followed in the manufacture, testing and clinical development, respectively, of any drug product. The processes for obtaining regulatory approvals in Canada, along with subsequent compliance with applicable statutes and regulations, require the expenditure of substantial time and financial resources.

The principal steps required for drug approval in Canada are as follows:

Preclinical Toxicology Studies and Clinical Trials

Non-clinical studies are conducted *in vitro* and in animals to evaluate pharmacokinetics, metabolism and possible toxic effects to provide evidence of the safety of the drug candidate prior to its administration to humans in clinical studies and throughout development. Such studies are conducted in accordance with applicable laws and GLP.

In Canada, the process of conducting clinical trials with a new drug cannot begin until a Clinical Trial Application (“CTA”) is submitted and the required number of days has lapsed without objection from Health Canada. Biological drugs carry additional risks, as compared to traditional small-molecule drugs, associated with complexity and variability in manufacturing that can contribute to increased lot-to-lot variation of the final product, and with the potential for adventitious agents. Therefore, the content requirements for the quality information for biological drugs to be used in clinical trials are different from those for standard small-molecule pharmaceutical drugs (for example, the inclusion of information on manufacturing facilities is required for biological drugs). In addition, it is necessary to have more stringent controls on the release of biologic drug lots used in authorized clinical trials.

Similar regulations apply in Canada regarding clinical trials as in the United States. In Canada, Research Ethics Boards (“REBs”), instead of IRBs, are used to review and approve clinical trial plans. Human clinical trials are typically conducted in three sequential phases, as discussed above in the context of government regulation in the United States.

The manufacture of investigational drugs for the conduct of human clinical trials is subject to cGMP requirements. Investigational drugs and active pharmaceutical ingredients imported into Canada are also subject to regulation by Health Canada relating to their labeling and distribution. Progress reports detailing the results of the clinical trials must generally be submitted at least annually to Health Canada and/or the applicable REBs, and more frequently if serious adverse events occur.

New Drug Submission

Upon successful completion of Phase 3 clinical trials, the company sponsoring a new drug then assembles all the preclinical and clinical data and other testing relating to the product’s pharmacology, chemistry, manufacture, and controls, and submits it to Health Canada as part of a New Drug Submission (“NDS”). The NDS is then reviewed by Health Canada for approval to market the drug.

The testing and approval process for an NDS requires substantial time, effort and financial resources, and may take several years to complete. Biologic drugs, such as our candidates, differ from standard small-molecule drugs in that applicants must include more detailed chemistry and manufacturing information. This is necessary to help ensure the purity and quality of the product, for example to help ensure that it is not contaminated by an undesired microorganism. Data obtained from preclinical and clinical testing are not always conclusive and may be susceptible to varying interpretations, which could delay, limit or prevent regulatory approval. Health Canada may not grant approval of an NDS on a timely basis, or at all.

Even if Health Canada approves a product candidate, it may limit the approved indications for use of the product candidate, require that contraindications, warnings or precautions be included in the product labeling, require that post-approval studies be conducted to further assess a drug’s safety after approval, require testing and surveillance programs to monitor the product after commercialization, or impose other conditions, including distribution restrictions or other risk management mechanisms.

Biologic products in particular are monitored post-approval by being placed on a lot-release schedule tailored to their potential risk, manufacturing, testing and inspection history to date. With higher-risk biologics, each lot is tested before being released for sale in Canada. Moderate-risk biologics are periodically tested at the discretion of Health Canada while manufacturers of low-risk biologics usually only need to contact Health Canada regarding lots being sold or for providing certification of complete and satisfactory testing. Products are carefully scrutinized before they are placed in any level of the lot-release process, and the testing regime for a biologic may be altered at any time. In July 2021, the Minister of Health in Canada

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published a proposal to amend the Food and Drug Regulations as they relate to the regulation of biologic products. The stated aim is to modernize the biologics regulatory regime by repealing outdated requirements and replacing them with those that reflect current safety practices. In particular, the Minister of Health indicated that amendments would repeal and/or replace several outdated requirements for biologic drugs, including relating to: biological starting and auxiliary materials, contamination or cross-contamination, storage and transport, outdated individual standards for biologic drugs, lot release, labelling, and on-site evaluation of manufacturing facilities. The comment period for the proposal ended October 28, 2021, and to date no further details have been provided including the specific new wording contemplated.

Health Canada may prevent or limit further marketing of a product based on the results of post-marketing studies or surveillance programs. After approval, some types of changes to the approved product, such as adding new indications, manufacturing changes, and additional labeling claims, are subject to further testing requirements, notification, and regulatory authority review and approval. Further, should new safety information arise, additional testing, product labeling or regulatory notification may be required.

Canadian Biosimilars and Exclusivity

The term biosimilar is used by Health Canada to describe a biologic drug that enters the market subsequent to a version previously authorized in Canada and with demonstrated similarity to a reference biologic drug. Accordingly, a biosimilar (previously known in Canada as a subsequent entry biologic or SEB) will in all instances be a subsequent entrant onto the Canadian market.

Based on Health Canada guidance documents, a biosimilar can rely in part on prior information regarding safety and efficacy that is deemed relevant due to the demonstration of similarity to the reference biologic drug and which influences the amount and type of original data required. Generic drugs are chemically derived products that are pharmaceutically equivalent to innovative drugs, whereas biosimilars are products of a biologic nature that are similar to innovative biologics. According to Health Canada, it is not currently possible to demonstrate that two biologic drugs are pharmaceutically equivalent, and therefore the regulatory approval process for generics and biosimilars is different: biosimilars are approved using the standard NDS pathway with some allowances made for reduced safety and efficacy information set out in guidance documents, while generic drugs are approved using an abbreviated new drug submission pathway set out in guidance and law. In part because it continues to be set out only in guidance and not law, the pathway for receiving biosimilar approval is somewhat in flux and subject to some uncertainty.

As discussed above, all biosimilars enter the market subsequent to a biologic drug product previously approved in Canada and to which the biosimilar is considered similar. As such, biosimilars are subject to existing laws and regulations outlined in the *Patented Medicines (Notice of Compliance) Regulations* and the *Food and Drug Regulations*, and related guidance documents.

Similar to the Hatch-Waxman Amendments in the United States, Canada has the *Patented Medicines (Notice of Compliance) Regulations*, which require a company that files a drug submission that references a patented product to address any relevant patents listed on the Patent Register prior to being able to receive approval from Health Canada. The Canadian regime is similar to the U.S. regime, but a number of distinctions do exist.

Like the United States, Canada also has data protection in addition to patent protection, but again differences exist between the two jurisdictions. For example, Canada's data protection applies to "innovative drugs" (i.e., a drug that contains a medicinal ingredient not previously approved in a drug by the Minister of Health and that is not a variation of a previously approved medicinal ingredient such as a salt, ester, enantiomer, solvate or polymorph) and, where it exists, lasts for eight years in most (but not all) circumstances. In general biologics can be considered innovative drugs but biosimilars are not.

Additional Regulation

In addition to the foregoing, provincial, state and federal U.S. and Canadian laws regarding environmental protection and hazardous substances affect our business. These and other laws govern our use, handling and disposal of various biological, chemical and radioactive substances used in, and wastes generated by, our operations. If our operations result in contamination of the environment or expose individuals to hazardous substances, we could be liable for damages and governmental fines. We believe that we are in material compliance with applicable environmental laws and that continued compliance therewith will not have a material adverse effect on our business. We cannot predict, however, how changes in these laws may affect our future operations.

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Government Regulation Outside of the United States and Canada

In addition to regulations in the United States, we will be subject to a variety of regulations in other jurisdictions governing, among other things, clinical studies and any commercial sales and distribution of our products.

Whether or not we obtain FDA approval for a product, we must obtain the requisite approvals from regulatory authorities in foreign countries prior to the commencement of clinical studies or marketing of the product in those countries. Certain countries outside of the United States have a similar process that requires the submission of a clinical study application much like the IND prior to the commencement of human clinical studies. In the European Union (“EU”), for example, a CTA must be submitted to each country’s national health authority and an independent ethics committee, much like the FDA and the IRB, respectively. Once the CTA is approved in accordance with a country’s requirements, clinical study development may proceed.

The requirements and process governing the conduct of clinical studies, product licensing, coverage, pricing and reimbursement vary from country to country. In all cases, the clinical studies are conducted in accordance with cGCP and the applicable regulatory requirements and the ethical principles that have their origin in the Declaration of Helsinki.

Pharmaceutical Coverage, Pricing and Reimbursement

Significant uncertainty exists as to the coverage and reimbursement status of any product candidates for which we may obtain regulatory approval. In the United States and markets in other countries, sales of any products for which we receive regulatory approval for commercial sale will depend, in part, on pricing and the availability of coverage and adequate reimbursement from third-party payors. These third-party payors may deny coverage or reimbursement for a product or therapy in whole or in part if they determine that the product or therapy was not medically appropriate or necessary. Third-party payors may attempt to control costs by limiting coverage to specific drug products on an approved list, or formulary, which might not include all of the FDA-approved drug products for a particular indication, requiring pre-approval of coverage for new or innovative drug therapies before they will reimburse healthcare providers who use such therapies, and by limiting the amount of reimbursement for particular procedures or drug treatments. Additionally, coverage and reimbursement for drug products can differ significantly from payor to payor. The Medicare and Medicaid programs are often used as models by private payors and other governmental payors to develop their coverage and reimbursement policies for drugs and biologics. However, one third-party payor’s decision to cover a particular drug product does not ensure that other payors will also provide coverage for the product, or will provide coverage at an adequate reimbursement rate.

The cost of pharmaceuticals continues to generate substantial governmental and third-party payor interest. We expect that the pharmaceutical industry will experience pricing pressures due to the trend toward managed healthcare, the increasing influence of managed care organizations and additional legislative proposals. Third-party payors are increasingly challenging the price and examining the medical necessity and cost-effectiveness of medical products and services, in addition to their safety and efficacy. We may need to conduct expensive pharmacoeconomic studies in order to demonstrate the medical necessity and cost-effectiveness of our products to obtain third-party payor coverage, in addition to the costs required to obtain the FDA approvals. Our product candidates may not be considered medically necessary or cost effective. A payor’s decision to provide coverage for a drug product does not imply that an adequate reimbursement rate will be approved. Adequate third-party reimbursement may not be available to enable us to maintain price levels sufficient to realize an appropriate return on our investment in product development.

While we cannot predict whether any proposed cost-containment measures will be adopted or otherwise implemented in the future, these requirements or any announcement or adoption of such proposals could have a material adverse effect on our ability to obtain adequate prices for our product candidates and to operate profitably.

In international markets, pricing, reimbursement and healthcare payment systems vary significantly by country, and many countries have instituted price ceilings on specific products and therapies. There can be no assurance that our products will be considered medically reasonable and necessary for a specific indication, that our products will be considered cost effective by third-party payors, that coverage or an adequate level of reimbursement will be available or that third-party payors’ reimbursement policies will not adversely affect our ability to sell our products profitably.

Healthcare Reform

The United States and some other jurisdictions are considering or have enacted a number of legislative and regulatory proposals to change the healthcare system in ways that could affect our ability to sell our future products profitably. Among policy makers and payors in the United States and elsewhere, there is significant interest in promoting changes in healthcare systems with the stated goals of containing healthcare costs, improving quality or expanding access. In the United States, the



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pharmaceutical industry has been a particular focus of these efforts and has been significantly affected by major legislative initiatives.

We expect that the PPACA, as well as reform measures that may be adopted in the future, may result in more rigorous coverage criteria and lower reimbursement, and in additional downward pressure on the price that we receive for any approved product. Any reduction in reimbursement from Medicare or other government-funded programs may result in a similar reduction in payments from private payors. The implementation of cost containment measures or other healthcare reforms may prevent us from being able to generate revenue, attain profitability or commercialize our drugs, once regulatory approval is obtained.

Other Healthcare Laws and Compliance Requirements

In the United States, the research, manufacturing, distribution, sale and promotion of drug products are subject to regulation by various federal, state and local authorities in addition to the FDA, including the Centers for Medicare & Medicaid Services, other divisions of the U.S. Department of Health and Human Services (e.g., the Office of Inspector General), the U.S. Department of Justice, state attorneys general, and other state and local government agencies.

If our operations are found to be in violation of any of the U.S. federal and state laws described above or any other governmental regulations that apply to us, we may be subject to penalties, including criminal and significant civil monetary penalties, damages, fines, disgorgement, imprisonment, exclusion from participation in government healthcare programs, injunctions, recall or seizure of products, total or partial suspension of production, denial or withdrawal of pre-marketing product approvals, private *qui tam* actions brought by individual whistleblowers in the name of the government or refusal to allow us to enter into supply contracts, including government contracts, and the curtailment or restructuring of our operations, any of which could adversely affect our ability to operate our business and our results of operations. We may also be subject to additional reporting requirements and oversight if we become subject to a corporate integrity agreement or similar agreement with a governmental entity to resolve allegations that we have violated these laws. To the extent that any of our product candidates, once approved, are sold in a foreign country, we may be subject to similar foreign laws and regulations, which may include, for instance, applicable post-approval requirements, including safety surveillance, anti-fraud and abuse laws, and implementation of corporate compliance programs and reporting of payments or transfers of value to healthcare professionals.

Sales and Marketing

As a clinical-stage biopharmaceutical company, we do not currently possess the commercial infrastructure required to launch and market our product candidates. For zanidatamab and ZW49, we have entered into development and commercialization agreements with BeiGene whereby BeiGene is responsible for certain clinical development activities and all commercial activities in Asia (excluding Japan but including the People's Republic of China, South Korea and other countries), Australia and New Zealand. To date, we have not entered into any other agreements granting commercialization rights to zanidatamab, ZW49 or any of our other product candidates. To access the sales, marketing and distribution capacity required to market our drug candidates, we plan to selectively establish additional partnerships with biotechnology and pharmaceutical companies having established commercial capabilities in relevant indications. The timing and nature of such agreements will be determined by market size and complexity, access to pre-commercial and commercial infrastructure and our resource availability for developing a commercial organization. For product candidates targeting patient populations that can be serviced by a small, specialized commercial effort, we may seek out co-development and co-promotion agreements granting commercialization rights to an established commercial partner in some jurisdictions while allowing us to build these capabilities in other jurisdictions.

Human Capital Resources

As of December 31, 2021, we had 458 employees, including 455 full-time employees, 317 of whom were primarily engaged in research and development activities and 128 of whom hold an M.D. or Ph.D. degree. 238 of our full-time employees were based in Canada and 217 in the United States. As part of our renewed focus on achieving our key strategic priorities, on January 19, 2022, we announced our intention to restructure our workforce with a target of reducing our employee headcount by at least 25% across the organization by the end of 2022.

We consider our employees to be an essential driver of our business and key to our future prospects. We monitor our compensation programs closely and provide what we consider to be a competitive mix of compensation and benefits for all our employees, including participation in our equity programs. None of our employees are represented by a labor organization or covered by a collective bargaining arrangement.

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Corporate Structure

We were incorporated on September 8, 2003 under the Canada Business Corporations Act (“CBCA”) under the name “Zymeworks Inc.” On October 22, 2003, we were registered as an extra-provincial company under the Company Act (British Columbia), the predecessor to the Business Corporations Act (British Columbia) (“BCBCA”). On May 2, 2017, we continued the Company to British Columbia under the BCBCA. We have one wholly owned subsidiary located in Seattle, Washington named Zymeworks Biopharmaceuticals Inc. Our principal office is located at 114 East 4th Avenue, Suite 800, Vancouver, British Columbia, Canada, V5T 1G4, and our telephone number is (604) 678-1388.

Available Information

This Annual Report on Form 10-K, our quarterly reports on Form 10-Q, our current reports on Form 8-K, and any amendments to these reports are filed, or will be filed, as appropriate, with the SEC and the Canadian Securities Administrators (“CSA”). These reports are available free of charge on our website, www.zymeworks.com, as soon as reasonably practicable after we electronically file such reports with or furnish such reports to the SEC and the Canadian regulatory authorities. Information contained on, or accessible through, our website is not a part of this Annual Report on Form 10-K, and the inclusion of our website address in this document is an inactive textual reference.

Additionally, our filings with the SEC may be accessed through the SEC’s website at www.sec.gov and our filings with the CSA may be accessed through the CSA’s System for Electronic Document Analysis and Retrieval (“SEDAR”) at www.sedar.com.

Item 1A. Risk Factors

You should carefully consider the following risk factors, in addition to the other information contained in this Annual Report on Form 10-K, including our consolidated financial statements and related notes. If any of the events described in the following risk factors occurs, our business, operating results and financial condition could be seriously harmed. This Annual Report on Form 10-K also contains forward-looking statements that involve risks and uncertainties. Our actual results could differ materially from those anticipated in the forward-looking statements as a result of factors that are described below and elsewhere in this Annual Report on Form 10-K. See “Cautionary Note Regarding Forward-Looking Statements.” The risks below are not the only risks facing our company. Risks and uncertainties not currently known to us or that we currently deem to be immaterial also may materially adversely affect our business, financial condition, results of operations, and/or prospects. Our Risk Factors are not guarantees that no such conditions exist as of the date of this report and should not be interpreted as an affirmative statement that such risks or conditions have not materialized, in whole or in part.

Summary of Risk Factors

Below is a summary of the principal factors that make an investment in our common shares speculative or risky. This summary does not address all of the risks that we face. Additional discussion of the risks summarized in this risk factor summary, and other risks that we face, can be found below under the heading “Risk Factors” and should be carefully considered, together with other information in this Form 10-K and our other filings with the SEC, before making an investment decision regarding our common shares.

- We have a limited number of product candidates, all which are still in clinical development. If we do not obtain regulatory approval of one or more of our product candidates, or experience significant delays in doing so, our business will be materially adversely affected.
- Clinical trials are expensive, time consuming, difficult to design and implement, and involve uncertain outcomes. Furthermore, the results of previous preclinical studies and clinical trials may not be predictive of future results, and the results of our current and planned clinical trials may not satisfy the requirements of the FDA or comparable regulatory authorities outside the United States.
- Our business has been and may continue to be adversely affected by the COVID-19 pandemic.
- Our product candidates may have undesirable side effects that may delay or prevent marketing approval or, if approval is received, require them to be taken off the market, require them to include safety warnings or otherwise limit their sales; no regulatory agency has made any determination that any of our product candidates are safe or effective for use by the general public for any indication.
- We face significant competition, and if our competitors develop and market products that are more effective, safer or less expensive than our product candidates, our commercial opportunities will be negatively impacted.
- If any of our product candidates receive regulatory approval, the approved products may not achieve broad market acceptance among physicians, patients, the medical community and third-party payors, in which case revenue generated from their sales would be limited.
- Reimbursement decisions by third-party payors may have an adverse effect on pricing and market acceptance. If there is not sufficient reimbursement for our products, it is less likely that our products will be widely used.
- We may not be successful in our efforts to use our therapeutic platforms to build a pipeline of product candidates.
- If any product liability lawsuits are successfully brought against us or any of our strategic partners, we may incur substantial liabilities and may be required to limit commercialization of our product candidates.
- Security breaches and incidents, loss of data and other disruptions could compromise sensitive information related to our business or protected health information or prevent us from accessing critical information and expose us to liability, which could adversely affect our business and our reputation.
- Current and future legislation may increase the difficulty and cost for us to commercialize any products that we or our strategic partners develop and affect the prices we may obtain.
- We have incurred significant losses since inception and anticipate that we will continue to incur losses for the foreseeable future. We have no products approved for commercial sale, and to date we have not generated any revenue or profit from product sales. We may never achieve or sustain profitability.

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- We will require substantial additional funding, which may not be available to us on acceptable terms, or at all, and, if not available, may require us to delay, scale back, or cease our product development programs or operations.
- Our existing strategic partnerships are important to our business, and future strategic partnerships will likely also be important to us. If we are unable to maintain our strategic partnerships, or if these strategic partnerships are not successful, our business could be adversely affected.
- We rely on third-party manufacturers to produce our product candidates and on other third parties to provide supplies and store, monitor and transport bulk drug substance and drug product. We and our third-party partners may encounter difficulties with respect to these activities that could delay or impair our ability to initiate or complete our clinical trials or commercialize approved products.
- We rely on third parties to monitor, support, conduct and oversee clinical trials of the product candidates that we are developing and, in some cases, to maintain regulatory files for those product candidates. We may not be able to obtain regulatory approval for our product candidates or commercialize any products that may result from our development efforts if we are not able to maintain or secure agreements with such third parties on acceptable terms, if these third parties do not perform their services as required, or if these third parties fail to timely transfer any regulatory information held by them to us.
- We rely on third parties for various operational and administrative aspects of our business, including for certain cloud-based software platforms, which impact our financial, operational and research activities. If any of these third parties fail to provide timely, accurate and ongoing service or if the cloud-based platforms suffer outages that we are unable to mitigate, our business may be adversely affected.
- Our commercial success depends significantly on our ability to operate without infringing the patents and other proprietary rights of third parties.
- If we are unable to obtain, maintain and enforce patent and trade secret protection for our product candidates and related technology, our business could be materially harmed.
- We may become involved in lawsuits to protect or enforce our patents and trade secrets, which could be expensive, time consuming and unsuccessful.
- If we are unable to protect the confidentiality of our proprietary information, the value of our technology and products could be adversely affected.
- Our share price is likely to be volatile and the market price of our common shares may drop below the price paid by shareholders.
- We are governed by the corporate laws of Canada, which in some cases have a different effect on shareholders than the corporate laws of the United States.
- U.S. civil liabilities may not be enforceable against us, our directors, our officers or certain experts named in our Annual Report on Form 10-K.
- Our principal shareholders, in aggregate, could exert substantial control over us which could delay or prevent a change in corporate control or result in the entrenchment of management or the board of directors.
- Provisions in our corporate charter documents and Canadian law could make an acquisition of us, which may be beneficial to our shareholders, more difficult and may prevent attempts by our shareholders to replace or remove our current management and/or limit the market price of our common shares.

Risk Factors

Risks Related to Our Business and the Development and Commercialization of Our Product Candidates

We have a limited number of product candidates, all which are still in clinical development. If we do not obtain regulatory approval of one or more of our product candidates, or experience significant delays in doing so, our business will be materially adversely affected.

We currently have no products approved for sale or marketing in any country, and may never be able to obtain regulatory approval for any of our product candidates. As a result, we are not currently permitted to market any of our product candidates in the United States or in any other country until we obtain regulatory approval from the FDA or comparable regulatory authorities outside the United States. Our product candidates are in clinical development and we have not submitted an

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application, or received marketing approval, for any of our product candidates. Obtaining regulatory approval of our product candidates will depend on many factors, including:

- completing clinical trials that demonstrate the efficacy and safety of our product candidates;
- preparation and submission to the appropriate regulatory authorities of an application for marketing approval that includes substantial evidence of safety, purity and potency from results of nonclinical testing and clinical trials;
- establishing and maintaining adequate commercial manufacturing arrangements or establishing our own commercial manufacturing capabilities or reliable arrangements with third-party contract manufacturers;
- potential pre-approval audits of nonclinical sites, clinical trial sites, and third-party manufacturing sites that generated the data and product in support of the marketing application; and
- launching commercial sales, marketing and distribution operations.

Many of these factors are wholly or partially beyond our control, including clinical advancement, the regulatory submission process and changes in the competitive landscape. If we do not achieve one or more of these factors in a timely manner, we could experience significant delays or an inability to develop our product candidates at all.

Clinical trials are expensive, time consuming, difficult to design and implement, and involve uncertain outcomes. Furthermore, the results of previous preclinical studies and clinical trials may not be predictive of future results, and the results of our current and planned clinical trials may not satisfy the requirements of the FDA or comparable regulatory authorities outside the United States.

We have not previously submitted a BLA to the FDA or similar marketing applications to foreign health authorities. A BLA must include extensive preclinical and clinical data and supporting information to establish the product candidate's safety, purity and efficacy for each desired indication. The BLA must also include significant information regarding the manufacturing controls for the product. The novel nature of our product candidates may introduce uncertain, complex, expensive and lengthy challenges that could impact regulatory approval. Even if we eventually complete clinical testing and receive approval of any regulatory filing for our product candidates, the FDA or foreign health authorities may approve our product candidates for a more limited indication or a narrower patient population than we originally requested.

Positive or timely results from preclinical or early-stage trials do not ensure positive or timely results in late-stage clinical trials or product approval by the FDA or comparable regulatory authorities outside the United States. We will be required to demonstrate with substantial evidence through well-controlled clinical trials that our product candidates are safe and effective for use in a diverse population before we can seek regulatory approvals for their commercial sale. Our clinical trials may produce negative or inconclusive results, and we or any of our current and future strategic partners may decide, or regulators may require us, to conduct additional clinical or preclinical testing. Success in preclinical studies or early-stage clinical trials does not mean that future clinical trials or registration clinical trials will be successful because product candidates in later-stage clinical trials may fail to demonstrate sufficient safety and efficacy to the satisfaction of the FDA and comparable regulatory authorities outside the United States, despite having progressed through preclinical studies and initial clinical trials. Product candidates that have shown promising results in early clinical trials may suffer significant setbacks in subsequent clinical trials or registration clinical trials. For example, a number of companies in the pharmaceutical industry have suffered significant setbacks in late-stage clinical trials, even after obtaining promising results in earlier-stage clinical trials. Similarly, interim results of a clinical trial do not necessarily predict final results.

There is a high failure rate for biopharmaceutical products proceeding through clinical trials. A number of companies in the pharmaceutical and biotechnology industries have suffered significant setbacks in later stage clinical trials even after achieving promising results in earlier stage clinical trials. Data obtained from preclinical and clinical activities are subject to varying interpretations, which may delay, limit or prevent regulatory approval. In addition, regulatory delays or rejections may be encountered as a result of many factors, including changes in regulatory policy during the period of product development.

Applications for our product candidates could fail to receive regulatory approval for many reasons, including but not limited to the following:

- The FDA or foreign health authorities may disagree with the design, implementation or data analyses of our clinical trials;
- The FDA or foreign health authorities may determine that our product candidate(s) do not have adequate risk-benefit ratio or have undesirable or unintended side effects, toxicities or other characteristics that preclude our obtaining marketing approval or prevent or limit commercial use;

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- The population studied in the clinical program may not be sufficiently broad or representative to assure efficacy and safety in the full population for which we seek approval;
- The FDA or foreign health authorities may disagree with our interpretation of data from preclinical studies or clinical trials;
- The data collected from clinical trials of our product candidates may not be sufficient to support the submission of a BLA or other submission or to obtain regulatory approval in the United States or elsewhere;
- The FDA or foreign health authorities may fail to approve the manufacturing processes, test procedures and specifications or facilities of third-party manufacturers with which we contract for clinical and commercial supplies; and
- The approval policies or regulations of the FDA or foreign health authorities may significantly change in a manner rendering our clinical data insufficient for approval.

Additionally, we have conducted, and may in the future conduct, clinical trials outside the United States. Although the FDA may accept data from clinical trials conducted outside the United States, acceptance of these data is subject to certain conditions imposed by the FDA and its determination that the trials also complied with all applicable U.S. laws and regulations. If the FDA does not accept the data from any clinical trials we conduct outside the United States, it would likely result in the need for additional trials, which would be costly and time-consuming and delay or halt our development of any future product candidates.

If clinical trials for our product candidates are prolonged, delayed or stopped, we may be unable to obtain regulatory approval and commercialize our product candidates on a timely basis, or at all, which would require us to incur additional costs and delay our receipt of any product revenue.

We are currently evaluating zanidatamab in Phase 1, 2, and registration-enabling clinical trials and ZW49 in a Phase 1 clinical trial in patients with recurrent or metastatic HER2-expressing solid tumors. We may experience delays in our ongoing or future preclinical studies or clinical trials, and we do not know whether future preclinical studies or clinical trials will begin on time, need to be redesigned, enroll an adequate number of patients on time or be completed on schedule, if at all. Clinical testing is expensive and can take many years to complete, and its outcome is inherently uncertain. Failure can occur at any time during clinical development, and, because our product candidates are in an early stage of development, there is a high risk of failure and we may never succeed in developing marketable products. The results of preclinical studies and early clinical trials of our product candidates may not be predictive of the results of later-stage clinical trials, particularly because early trials have smaller numbers of subjects tested. In addition, it is not uncommon for product candidates to exhibit unforeseen safety or efficacy issues, such as immunogenicity, when tested in humans despite promising results in preclinical animal models.

Any clinical trials that we may conduct may not demonstrate the safety and efficacy profiles necessary to obtain regulatory approval to market our product candidates. As we continue developing our product candidates, serious adverse events, undesirable side effects, or unexpected characteristics may emerge, causing us to abandon these product candidates or limit their development to more narrow uses or subpopulations in which the risk-benefit ratio is more acceptable.

Patients treated with our product candidates may experience side effects or adverse events that are unrelated to our product candidate but may still impact the success of our clinical trials. The inclusion of patients with significant co-morbidities in our clinical trials may result in deaths or other adverse medical events due to an underlying condition or other therapies or medications that such patients may be using. Any of these events could prevent us from obtaining regulatory approval or achieving or maintaining market acceptance and impair our ability to commercialize our product candidates. In some instances, there can be significant variability in safety and efficacy results between different clinical trials of the same product candidate due to a variety of factors, including, but not limited to, changes in trial procedures set forth in protocols, differences in the size and type of the patient populations, changes in and adherence to the clinical trial protocols and the rate of dropout among clinical trial participants.

The commencement or completion of these planned clinical trials could be substantially delayed or prevented by many factors, including:

- further discussions with the FDA or other regulatory agencies regarding the scope or design of our clinical trials;
- the limited number of, and competition for, suitable sites to conduct our clinical trials, many of which may already be engaged in other clinical trial programs, including some that may be for the same indication as our product candidates;
- any delay or failure to obtain approval or agreement to commence a clinical trial in any of the countries where enrollment is planned;

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- inability to obtain sufficient funds required for a clinical trial;
- clinical holds on, or other regulatory objections to, a new or ongoing clinical trial;
- delay or failure to manufacture sufficient supplies of the product candidate for our clinical trials;
- delay or failure to reach agreement on acceptable clinical trial agreement terms or clinical trial protocols with prospective sites or CROs, the terms of which can be subject to extensive negotiation and may vary significantly among different sites or CROs;
- delay or failure to obtain IRB approval to conduct a clinical trial at a prospective site;
- slower than expected rates of patient recruitment and enrollment;
- failure of patients to complete the clinical trial;
- the inability to enroll a sufficient number of patients in studies to ensure adequate statistical power to detect statistically significant treatment effects;
- unforeseen safety issues, including severe or unexpected drug-related adverse effects experienced by patients, including possible deaths;
- lack of efficacy during clinical trials;
- termination of our clinical trials by one or more clinical trial sites;
- inability or unwillingness of patients or clinical investigators to follow our clinical trial protocols;
- inability to monitor patients adequately during or after treatment by us or our CROs;
- our CROs or clinical study sites failing to comply with the trial protocol or regulatory requirements or meet their contractual obligations to us in a timely manner, or at all, deviating from the protocol or dropping out of a study;
- the inability to address any noncompliance with regulatory requirements or safety concerns that arise during the course of a clinical trial;
- third-party contractors becoming debarred or suspended or otherwise penalized by the FDA or foreign health authorities for violations of applicable regulatory requirements;
- delays in the testing, validation, manufacturing and delivery of our product candidates to the clinical trial sites, including due to a facility manufacturing any of our product candidates or any of their components being ordered by the FDA or foreign health authorities to temporarily or permanently shut down due to violations of cGMP regulations or other applicable requirements, or cross-contaminations of product candidates in the manufacturing process;
- the need to repeat or terminate clinical trials as a result of inconclusive or negative results or unforeseen complications in testing;
- our clinical trials may be suspended or terminated upon a breach or pursuant to the terms of any agreement with, or for any other reason by, current or future strategic partners that have responsibility for the clinical development of any of our product candidates; and
- receiving untimely or unfavorable feedback from applicable regulatory authorities regarding the trial or requests from regulatory authorities to modify the design of a trial.

We could also experience delays in physicians enrolling patients in clinical trials of our product candidates in lieu of prescribing existing treatments or other clinical trials. Furthermore, a clinical trial may be suspended or terminated by us, the IRBs for the institutions in which such trials are being conducted, the Data Monitoring Committee for such trial, or by the FDA or foreign health authorities due to a number of factors, including failure to conduct the clinical trial in accordance with regulatory requirements or our clinical protocols, inspection of the clinical trial operations or trial site by the FDA or foreign health authorities resulting in the imposition of a clinical hold, unforeseen safety issues or adverse side effects, failure to demonstrate a benefit from using a product candidate, changes in governmental regulations or administrative actions or lack of adequate funding to continue the clinical trial. If we experience termination of, or delays in the completion of, any clinical trial of our product candidates, the commercial prospects for our product candidates will be harmed, and our ability to generate product revenue will be delayed. In addition, any delays in completing our clinical trials will increase our costs, slow down our product development and approval process and jeopardize our ability to commence product sales and generate revenue.

Securing regulatory approval also requires the submission of information about the manufacturing processes and inspection of manufacturing facilities by the relevant regulatory authority. The FDA or foreign health authorities may fail to approve our manufacturing processes or facilities, whether run by us or our CMOs. In addition, if we make manufacturing changes to our



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product candidates in the future, we may need to conduct additional preclinical and/or clinical studies to bridge our modified product candidates to earlier versions.

Changes in regulatory requirements, policies and guidelines may also occur and we may need to significantly amend clinical trial protocols to reflect these changes with appropriate regulatory authorities. These changes may require us to renegotiate terms with CROs or resubmit clinical trial protocols to IRBs for re-examination, which may impact the costs, timing or successful completion of a clinical trial. Our clinical trials may be suspended or terminated at any time by the FDA, other regulatory authorities, the IRB overseeing the clinical trial at issue, any of our clinical trial sites with respect to that site, or us.

Any failure or significant delay in commencing or completing clinical trials for our product candidates would adversely affect our ability to obtain regulatory approval, and our commercial prospects and ability to generate product revenue will be diminished.

In addition, even if the trials are successfully completed, clinical data are often susceptible to varying interpretations and analyses, and we cannot guarantee that the FDA or foreign health authorities will interpret the results as we do, and more trials could be required before we submit our product candidates for approval. We cannot guarantee that the FDA or foreign health authorities will view any of our product candidates as having adequate safety and efficacy profiles even if favorable results are observed in these clinical trials, and we may receive unexpected or unfavorable feedback from the FDA or foreign health authorities regarding satisfaction of safety, purity and potency (including clinical efficacy), amongst other factors. To the extent that the results of the trials are not satisfactory to the FDA or foreign health authorities for support of a marketing application, approval of our product candidates may be significantly delayed, or we may be required to expend significant additional resources, which may not be available to us, to conduct additional trials in support of potential approval of our product candidates.

If we, or any of our partners, are unable to enroll patients in clinical trials, we will be unable to complete these trials on a timely basis or at all.

Patient enrollment, a significant factor in the timing of clinical trials, is affected by many factors including the size and nature of the patient population, the proximity of subjects to clinical sites, the eligibility criteria for the trial, the design of the clinical trial, ability to obtain and maintain patient consents, risk that enrolled subjects will drop out before completion, competing clinical trials and clinicians' and patients' perceptions as to the potential advantages of the drug being studied in relation to other available therapies, including any new drugs that may be approved for the indications we are investigating. In particular, we are developing certain of our product candidates for the treatment of rare diseases, which have limited pools of patients from which to draw for clinical testing. If we, or any of our strategic partners that perform clinical tests for our product candidates, are unable to enroll a sufficient number of patients to complete clinical testing, we will be unable to gain marketing approval for such product candidates and our business will be harmed.

In addition, the U.S. federal Right to Try Act, among other things, provides a federal framework for patients to access certain investigational new drug products that have completed a Phase 1 clinical trial. Under certain circumstances, eligible patients can seek treatment without enrolling in clinical trials and without obtaining FDA approval under the FDA expanded access program. While there is no obligation to make product candidates available to eligible patients as a result of the Right to Try Act, new and emerging legislation regarding expanded access to unapproved drugs could negatively impact enrollment in our clinical trials and our business in the future.

The design or our execution of clinical trials may not support regulatory approval.

The design or execution of a clinical trial can determine whether its results will support regulatory approval, and flaws in the design or execution of a clinical trial may not become apparent until the clinical trial is well advanced. In some instances, there can be significant variability in safety or efficacy results between different trials of the same product candidate due to numerous factors, including changes in trial protocols, differences in size and type of the patient populations, adherence to the dosing regimen and other trial protocols and the rate of dropout among clinical trial participants. We do not know whether any Phase 2, Phase 3 or other clinical trials we or any of our strategic partners may conduct will demonstrate consistent or adequate efficacy and safety to obtain regulatory approval to market our product candidates.

Further, the FDA and comparable foreign regulatory authorities have substantial discretion in the approval process and in determining when or whether regulatory approval will be obtained for any of our product candidates. Our product candidates may not be approved even if they achieve their primary endpoints in any Phase 3 clinical trials or registration trials. The FDA or other non-U.S. regulatory authorities may disagree with our trial design and our interpretation of data from preclinical studies and clinical trials. In addition, any of these regulatory authorities may change requirements for the approval of a product candidate even after reviewing and providing comments or advice on a protocol for a pivotal Phase 3 clinical trial that has the potential to result in FDA or other agencies' approval. In addition, any of these regulatory authorities may also approve a product candidate for fewer or more limited indications than we request or may grant approval contingent on the performance

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of costly post-marketing clinical trials. The FDA or other non-U.S. regulatory authorities may not approve the labeling claims that we believe would be necessary or desirable for the successful commercialization of our product candidates.

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

From time to time, we may publish interim, preliminary or topline data from clinical trials. Interim data from clinical trials that we may complete are subject to the risk that one or more of the clinical outcomes may materially change as patient enrollment continues and more patient data become available. Preliminary or topline data also remain subject to audit and verification procedures that may result in the final data being materially different from the preliminary or topline data previously published. As a result, interim, preliminary and topline data should be viewed with caution until the final data are available. Adverse differences between interim, preliminary or topline data and final data could significantly harm our reputation and business prospects. Moreover, preliminary, interim and topline data are subject to the risk that one or more of the clinical outcomes may materially change as more patient data become available when patients mature on study, patient enrollment continues or as other ongoing or future clinical trials with a product candidate further develop. Past results of clinical trials may not be predictive of future results.

In addition, the information we choose to publicly disclose regarding a particular study or clinical trial is based on what is typically more extensive information, and you or others may not agree with what we determine is the material or otherwise appropriate information to include in our disclosure. Any information we determine not to disclose may ultimately be deemed significant with respect to future decisions, conclusions, views, activities or otherwise regarding a particular product candidate or our business. Similarly, even if we are able to complete our planned and ongoing preclinical studies and clinical trials of our product candidates according to our current development timeline, the positive results from such preclinical studies and clinical trials of our product candidates may not be replicated in subsequent preclinical studies or clinical trial results.

Many companies in the pharmaceutical and biotechnology industries have suffered significant setbacks in late-stage clinical trials after achieving positive results in early-stage development and we cannot be certain that we will not face similar setbacks. These setbacks have been caused by, among other things, preclinical and other nonclinical findings made while clinical trials were underway or safety or efficacy observations made in preclinical studies and clinical trials, including previously unreported adverse events. Moreover, preclinical, nonclinical and clinical data are often susceptible to varying interpretations and analyses and many companies that believed their product candidates performed satisfactorily in preclinical studies and clinical trials nonetheless failed to obtain FDA or other regulatory approval.

Our business has been and may continue to be adversely affected by the COVID-19 pandemic.

The COVID-19 pandemic has had a broad adverse impact on the global economy across many industries and has resulted in significant governmental measures being implemented to control the spread of the virus, including quarantines, travel restrictions and business shutdowns, as well as significant volatility in global financial markets. As a result of COVID-19, in March 2020, we transitioned our workforce to a remote working arrangement to protect the health and safety of our employees. In June 2020, we implemented a program to facilitate the phased return of employees to our lab and office facilities pursuant to enhanced health and safety protocols consistent with guidelines issued by local health authorities. Our preclinical research activities were supplemented by support from external CROs to complement the temporarily reduced capacity at our lab facilities. Certain clinical trial activities, including patient enrollment and site activations, were delayed or otherwise impacted by COVID-19.

The extent to which COVID-19 may cause more significant disruptions to our business and greater impacts to our operations will depend on future developments, which are highly uncertain and cannot be predicted, such as the location, duration and severity of outbreaks (including future potential waves or cycles), travel restrictions and social distancing, business closures or disruptions and the effectiveness of actions taken to contain and treat the disease and to address its impact, including on financial markets. A lack of coordinated response on risk mitigation and global vaccination deployment with respect to the COVID-19 pandemic could result in significant increases to the duration and severity of the pandemic and could have a corresponding negative impact on our business. Insufficient vaccine availability, reduced effectiveness of vaccines over time or against new variants, or resistance to vaccination by certain persons may result in increasing infection and hospitalization rates, which have been and could be further complicated by the emergence of more virulent or infectious variants of the virus.

If the COVID-19 pandemic worsens or continues for a prolonged period of time, particularly in regions where we or our strategic partners and suppliers do business, we could experience disruptions that could significantly impact our current and planned clinical trials, preclinical research and other business activities, including:

- disruption to and delays in preclinical research activities due to extended closure or reduced capacity of lab facilities;

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- further delays or difficulties in enrolling patients in our ongoing and planned clinical trials;
- patients discontinuing their treatment or follow-up visits;
- further delays or difficulties in clinical site initiation, including limitations on access to sites, limitations to site initiation activities that can be carried out remotely, and limitations on the number of clinical site staff on site from time to time;
- interruption of key clinical trial activities, such as clinical trial site monitoring, due to limitations on travel imposed or recommended by federal or state governments, employers and others;
- shortages, disruptions in supply, logistics or other activities related to the procurement of materials and other supplies, which could have a negative impact on our ability to conduct preclinical research, initiate or complete our clinical trials or commercialize our product candidates;
- diversion of healthcare resources away from the conduct of clinical trials, including the diversion of hospitals serving as our clinical trial sites and hospital staff supporting the conduct of clinical trials;
- interruption of key business activities due to illness and/or quarantine of key individuals and delays associated with recruiting, hiring and training new temporary or permanent replacements for such key individuals, both internally and at our third-party service providers and strategic partners;
- limitations in resources that would otherwise be focused on the conduct of our business or our current or planned clinical trials or preclinical research, including because of sickness, the desire to avoid contact with large groups of people, restrictions on travel, or prolonged stay-at-home or similar working arrangements;
- delays in receiving approvals from regulatory authorities to initiate our planned clinical trials;
- changes in regulations as part of a response to the COVID-19 pandemic which may require us to change the ways in which our clinical trials are conducted and incur unexpected costs, or require us to discontinue clinical trials altogether;
- delays in necessary interactions with regulators (including the FDA), ethics committees and other important agencies and contractors due to limitations in employee resources or furlough of government or contractor personnel;
- disruptions to our strategic partners' operations, which could delay the development of our product candidates in certain geographical regions and thereby affect the timing of development and commercial milestone payments and royalties on potential future product sales we may receive; and
- limitations on our ability to recruit any necessary preclinical research, clinical, regulatory and other professional staff on the timeframe required to support our research and development programs.

In addition, COVID-19 could result in the continued significant disruption of global financial markets, reducing our ability to access capital, which could negatively affect our liquidity. COVID-19 has resulted in heightened financial market volatility that may continue, which could adversely impact the value of our common shares.

The Fast Track and Breakthrough Therapy designations we have received for zanidatamab may not result in faster development, regulatory review or approval process.

The FDA has granted Fast Track designations to zanidatamab for the first-line treatment of patients with HER2-overexpressing GEA in combination with standard of care chemotherapy and for refractory BTC. These Fast Track designations do not ensure that we will experience a faster development, regulatory review or approval process compared to conventional FDA procedures or that we will ultimately obtain regulatory approval. Additionally, the FDA may withdraw Fast Track designation if it believes that the designation is no longer supported by data from our clinical development program. The FDA also granted Breakthrough Therapy designation for zanidatamab in patients with previously-treated HER2 gene-amplified BTC. While we anticipate submitting a Biologics License Application (“BLA”) to the FDA in 2023 for zanidatamab in patients with previously-treated HER2 gene-amplified BTC, the receipt of a Breakthrough Therapy designation for a product candidate may not ultimately result in a faster development process or review, and it does not in any way assure approval of a product candidate by the FDA. In addition, designation as a Breakthrough Therapy is within the discretion of the FDA and the FDA may decide to rescind a Breakthrough Therapy designation if it believes that a designated product candidate no longer meets the conditions for qualification of this program.

Development of product candidates in combination with other therapies could expose us to additional risks.

Even if any of our product candidates were to receive marketing approval or be commercialized for use in combination with other existing therapies, we would continue to be subject to the risks that the FDA, EMA or other comparable foreign regulatory authorities could revoke approval of the therapy used in combination with any of our product candidates, or safety, efficacy, manufacturing or supply issues could arise with these existing therapies. In addition, it is possible that existing therapies with which our product candidates are approved for use could themselves fall out of favor or be relegated to later lines of treatment. This could result in the need to identify other combination therapies for our product candidates or our own

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products being removed from the market or being less successful commercially. We may also evaluate our product candidates in combination with one or more other cancer therapies that have not yet been approved for marketing by the FDA, EMA or comparable foreign regulatory authorities. We will not be able to market and sell any product candidate in combination with any such unapproved cancer therapies that do not ultimately obtain marketing approval. If the FDA, EMA or other comparable foreign regulatory authorities do not approve or revoke their approval of these other therapies, or if safety, efficacy, commercial adoption, manufacturing or supply issues arise with the therapies we choose to evaluate in combination with any other product candidate, we may be unable to obtain approval of or successfully market any one or all of the product candidates we develop.

Additionally, if the third-party providers of therapies or therapies in development used in combination with our product candidates are unable to produce sufficient quantities for clinical trials or for commercialization of our product candidates, or if the cost of combination therapies are prohibitive, our development and commercialization efforts would be impaired, which would have an adverse effect on our business, financial condition, results of operations and growth prospects.

Disruptions at the FDA and other government agencies caused by funding shortages or global health concerns could hinder their ability to hire, retain or deploy key leadership and other personnel, or otherwise prevent new or modified product candidates from being developed, or approved or commercialized in a timely manner or at all, which could negatively impact our business.

The ability of the FDA to review and clear or approve new product candidates can be affected by a variety of factors, including government budget and funding levels, statutory, regulatory, and policy changes, the FDA's ability to hire and retain key personnel and accept the payment of user fees, and other events that may otherwise affect the FDA's ability to perform routine functions. In addition, government funding of other government agencies 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 product candidates to be reviewed and/or approved by necessary government agencies, which would adversely affect our business. For example, over the last several years, the U.S. government has shut down several times and certain regulatory agencies, such as the FDA, have had to furlough critical FDA employees and stop critical activities. In response to the COVID-19 pandemic and travel restrictions, the FDA has issued industry guidance regarding plans to employ remote interactive evaluations and risk management methods, among other considerations, to meet user fee commitments and goal dates as well as plans toward resuming standard operational levels. Additional policies or changes to current policies may be implemented in the future. If global health concerns continue to prevent the FDA or other regulatory authorities from conducting their regular inspections, reviews, or other regulatory activities, or if the FDA and other agencies experience other delays, backlogs or disruptions, it could significantly impact the ability of the FDA or other regulatory authorities to timely review and process our regulatory submissions, which could have a material adverse effect on our business.

Successful development of our current and future product candidates is uncertain and we may discontinue or reprioritize the development of any of our product candidates at any time, at our discretion.

Before obtaining regulatory approval for the commercial distribution of our product candidates, we must conduct, at our own expense, extensive preclinical tests and clinical trials to demonstrate the safety and efficacy of our product candidates in humans. Preclinical and clinical testing is expensive, difficult to design and implement, can take many years to complete and is uncertain as to outcome. Additionally, the results from nonclinical testing or early clinical trials of a product candidate may not predict the results that will be obtained in subsequent human clinical trials of that product candidate. There is a high failure rate for drugs proceeding through clinical studies. A number of companies in the pharmaceutical and biotechnology industries have suffered significant setbacks in clinical development even after achieving promising results in earlier studies, and any such setbacks in any future clinical development could have a material adverse effect on our business and operating results. Alternatively, management may elect to discontinue development of certain product candidates to accommodate a shift in corporate strategy, despite positive clinical results. Based on our operating results and business strategy, among other factors, we may discontinue the development of any of our product candidates under development or reprioritize our focus on other product candidates at any time and at our discretion.

Additionally, because we have limited financial and managerial resources, we focus on research programs, therapeutic platforms and product candidates that we identify for specific indications. As a result, we may forgo or delay pursuit of opportunities with other therapeutic platforms or product candidates or for other indications that later prove to have greater commercial potential. If we do not accurately evaluate the commercial potential or target market for a particular product candidate, we may relinquish valuable rights to that product candidate through collaboration, licensing or other royalty arrangements in cases in which it would have been more advantageous for us to retain sole development and commercialization rights.

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Our product candidates may have undesirable side effects that may delay or prevent marketing approval or, if approval is received, require them to be taken off the market, require them to include safety warnings or otherwise limit their sales; no regulatory agency has made any determination that any of our product candidates are safe or effective for use by the general public for any indication.

All of our product candidates are still in preclinical or clinical development. Consequently, all of our product candidates are required to undergo ongoing safety testing in humans as part of clinical trials. Unforeseen side effects from any of our product candidates could arise either during clinical development or, if approved by regulatory authorities, after the approved product has been marketed. Zanidatamab and ZW49 continue to be evaluated in clinical trials, and the results of these and future clinical trials may show that zanidatamab, ZW49 or our other product candidates cause undesirable or unacceptable side effects, which could interrupt, delay or halt clinical trials, and result in delay of, or failure to obtain, marketing approval from the FDA and other regulatory authorities, or result in marketing approval from the FDA and other regulatory authorities with restrictive label warnings, limited patient populations or potential product liability claims. Even if we believe that our clinical trials and preclinical studies demonstrate the safety and efficacy of our product candidates, only the FDA and other comparable regulatory agencies may ultimately make such determination. No regulatory agency has made any such determination that any of our product candidates are safe or effective for use by the general public for any indication.

If any of our product candidates receive marketing approval and we or others later identify undesirable or unacceptable side effects caused by such products:

- regulatory authorities may require us to take our approved product off the market;
- regulatory authorities may require the addition of labeling statements, specific warnings, a contraindication or field alerts to physicians and pharmacies, or impose a risk evaluation and mitigation strategy that includes restrictions and conditions on product distribution, prescribing and/or dispensing;
- we may be required to change the way the product is administered, conduct additional clinical trials or change the labeling of the product;
- we may be subject to limitations on how we may promote the product;
- sales of the product may decrease significantly;
- we may be subject to litigation or product liability claims; and
- our reputation may suffer.

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

We face significant competition, and if our competitors develop and market products that are more effective, safer or less expensive than our product candidates, our commercial opportunities will be negatively impacted.

The life sciences industry is highly competitive and subject to rapid and significant technological change. We are currently developing biotherapeutics that will compete with other drugs and therapies that currently exist or are being developed. Products we may develop in the future are also likely to face competition from other drugs and therapies, some of which we may not currently be aware. We have competitors both in the United States and internationally, including major multinational pharmaceutical companies, established biotechnology companies, specialty pharmaceutical companies, universities and other research institutions. Many of our competitors have significantly greater financial, manufacturing, marketing, drug development, technical and human resources than we do. Large pharmaceutical companies, in particular, have extensive experience in clinical testing, obtaining regulatory approvals, recruiting patients and in manufacturing pharmaceutical products. These companies also have significantly greater research and marketing capabilities than we do and may also have products that have been approved or are in late stages of development and collaborative arrangements in our target markets with leading companies and research institutions. Established pharmaceutical companies may also invest heavily to accelerate discovery and development of novel compounds or to in-license novel compounds that could make the product candidates that we develop obsolete. As a result of all of these factors, our competitors may succeed in obtaining patent protection or FDA approval or discovering, developing and commercializing products in our field before we do.

Specifically, there are a large number of companies developing or marketing treatments for cancer and autoimmune disorders, including many major pharmaceutical and biotechnology companies. These treatments consist both of small-molecule drug

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products, as well as biologics that work by using next-generation antibody therapeutic platforms to address specific cancer targets. These companies include MacroGenics, Inc., AstraZeneca PLC/Daiichi Sankyo, Roche AG, Seagen and others.

Our commercial opportunity could be reduced or eliminated if our competitors develop and commercialize products that are safer, more effective, more convenient or less expensive than any products that we may develop. Our competitors also may obtain FDA or other regulatory approval for their products more rapidly than we may obtain approval for our product candidates, which could result in our competitors establishing a strong market position before we are able to enter the market.

Smaller and other early-stage companies may also prove to be significant competitors, particularly through collaborative arrangements with large and established companies. These third parties compete with us in recruiting and retaining qualified scientific and management personnel, establishing clinical trial sites and patient registration for clinical trials, as well as in acquiring technologies complementary to, or necessary for, our programs. In addition, the biopharmaceutical industry is characterized by rapid technological change. If we fail to stay at the forefront of technological change, we may be unable to compete effectively. Technological advances or products developed by our competitors may render our technologies or product candidates obsolete, less competitive or not economical.

In addition, we expect to compete with biosimilar versions of already approved products like trastuzumab or pertuzumab, and even if our product candidates achieve marketing approval, they may be challenged to achieve a price premium over competitive biosimilar products and will compete for market share with them.

The Biologics Price Competition and Innovation Act of 2009, which is included in the Patient Protection and Affordable Care Act (the “PPACA”), authorized the FDA to approve similar versions of innovative biologics, commonly known as biosimilars. Under the PPACA, a manufacturer may submit an application for licensure of a biologic product that is “biosimilar to” or “interchangeable with” a previously approved biologic product or “reference product.” Manufacturers may not submit an application for a biosimilar to the FDA until four years following approval of the reference product, and the FDA may not approve a biosimilar product until 12 years from the date on which the reference product was approved. Even if our product candidates, if approved, are deemed to be reference products eligible for exclusivity, another company could market a competing version of that product if the FDA approves a full BLA for such product containing the sponsor’s own preclinical data and data from adequate and well-controlled clinical trials to demonstrate the safety, purity and potency of their product. Additionally, from time to time, there are proposals to repeal or modify the PPACA, including proposals that could significantly shorten the exclusivity period for biologics.

If any of our product candidates receive regulatory approval, the approved products may not achieve broad market acceptance among physicians, patients, the medical community and third-party payors, in which case revenue generated from their sales would be limited.

The commercial success of our product candidates will depend upon their acceptance among physicians, patients and the medical community. The degree of market acceptance of our product candidates will depend on a number of factors, including:

- limitations or warnings contained in the approved labeling for a product candidate;
- changes in the standard of care for the targeted indications for any of our product candidates;
- limitations in the approved clinical indications for our product candidates;
- demonstrated clinical safety and efficacy compared to other products;
- sales, marketing and distribution support;
- availability of coverage and extent of reimbursement from managed care plans and other third-party payors;
- timing of market introduction and perceived effectiveness of competitive products;
- availability of alternative therapies at similar or lower cost, including generic, biosimilar and over-the-counter products;
- the extent to which the product candidate is approved for inclusion on formularies of hospitals and managed care organizations;
- whether the product is designated under physician treatment guidelines as a first-line therapy or as a second- or third-line therapy for particular diseases;
- whether the product can be used effectively with other therapies to achieve higher response rates;

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- adverse publicity about our product candidates or favorable publicity about competitive products;
- convenience and ease of administration of our products; and
- potential product liability claims.

If any of our product candidates are approved, but do not achieve an adequate level of acceptance by physicians, patients and the medical community, we may not generate sufficient revenue from these products, and we may not become or remain profitable. In addition, efforts to educate the medical community and third-party payors on the benefits of our product candidates may require significant resources and may never be successful.

We may be unable to obtain orphan drug exclusivity in specific indications for zanidatamab or in future product candidates that we may develop. If our competitors are able to obtain orphan product exclusivity for their products in specific indications, we may not be able to have competing products approved in those indications by the applicable regulatory authority for a significant period of time.

The FDA has granted Orphan Drug Designation to zanidatamab for the treatment of BTC and GEA, the European Medicines Agency (“EMA”) has granted Orphan Drug Designation to zanidatamab for the treatment of gastric cancer and BTC, and we may seek Orphan Drug Designation for additional indications in the future. Orphan Drug Designation neither shortens the development time or regulatory review time of a drug nor gives the drug any advantage in the regulatory review or approval process.

Generally, if a product candidate with an Orphan Drug Designation subsequently receives the first marketing approval for the indication for which it has such designation, the product is entitled to a period of marketing exclusivity, which precludes the EMA or the FDA from approving another marketing application for the same drug for the same indication for that time period. The applicable period is seven years in the United States and ten years in Europe. The European exclusivity period can be reduced to six years if a product no longer meets the criteria for Orphan Drug Designation or if the product is sufficiently profitable so that market exclusivity is no longer justified. Orphan drug exclusivity may be lost if the FDA or EMA determines that the request for designation was materially defective or if the manufacturer is unable to assure sufficient quantity of the product to meet the needs of patients with the rare disease or condition. The loss of Orphan Drug Designation could have a negative effect on our ability to successfully commercialize our product candidates, earn revenues and achieve profitability.

Even if we obtain orphan drug exclusivity for zanidatamab, or for any other product candidates that receive an Orphan Drug Designation in the future, that exclusivity may not effectively protect the product from competition because different drugs with different active moieties can be approved for the same condition. Further, in the United States, even after an orphan drug is approved, the FDA can subsequently approve the same drug for the same condition submitted by a competitor if the FDA concludes that the later drug is clinically superior in that it is shown to be safer, more effective or makes a major contribution to patient care.

Even if we obtain FDA approval of any of our product candidates, we may never obtain approval or commercialize such products outside of the United States, which would limit our ability to realize their full market potential.

In order to market any products outside of the United States, we must establish and comply with numerous and varying regulatory requirements of other countries regarding safety and efficacy. Clinical trials conducted in one country may not be accepted by regulatory authorities in other countries, and regulatory approval in one country does not mean that regulatory approval will be obtained in any other country. Approval procedures vary among countries and can involve additional product testing and validation and additional administrative review periods. Seeking foreign regulatory approvals could result in significant delays, difficulties and costs for us and may require additional preclinical studies or clinical trials, which would be costly and time consuming. Regulatory requirements can vary widely from country to country and region to region and could delay or prevent the introduction of our products in those countries. Satisfying these and other regulatory requirements is costly, time consuming, uncertain and subject to unanticipated delays. In addition, our failure to obtain regulatory approval in any country may delay or have negative effects on the process for regulatory approval in other countries. We do not have any product candidates approved for sale in any jurisdiction, including international markets, and we do not have experience in obtaining regulatory approval in international markets. If we fail to comply with regulatory requirements in international markets or to obtain and maintain required approvals, our target market will be reduced and our ability to realize the full market potential of our products will be harmed.

Our ability to eventually generate significant revenues from product sales will depend on a number of factors, including:

- Successful completion of preclinical studies;

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- Submission of INDs or other regulatory applications for our planned clinical trials or future clinical trials and authorizations from regulators to initiate clinical studies;
- Successful enrollment in, and completion of, clinical trials;
- Achieving favorable results from clinical trials;
- Receipt of marketing approvals from applicable regulatory authorities;
- Establishing and maintaining sufficient manufacturing capabilities, whether internally or with third parties, for clinical and commercial supply;
- Obtaining pricing, reimbursement, and hospital formulary access;
- Establishing sales, marketing and distribution capabilities and launching commercial sales of our products, if and when approved, whether alone or in combination with other products;
- Sufficiency of our financial and other resources to complete the necessary preclinical studies and clinical trials and commercialization activities;
- Effectively competing with other therapies;
- Developing and implementing successful marketing and reimbursement strategies;
- Obtaining and maintaining patent, trade secret and other intellectual property protection and regulatory exclusivity for our product candidates; and
- Maintaining a continued acceptable safety profile of any product following approval, if any.

If we do not achieve one or more of these requirements in a timely manner, we could experience significant delays or an inability to successfully commercialize our product candidates, which would materially harm our business.

We cannot be certain that our clinical trials will be initiated and completed on time, if at all, or whether our planned clinical strategy will be acceptable to the FDA or foreign health authorities. In addition, the COVID-19 pandemic is still evolving, and it is impossible to predict the impact this pandemic may have on the development of our product candidates, our preclinical studies and clinical trials, and our business. To become and remain profitable, we must develop, obtain approval for and eventually commercialize products, if approved, that generate significant revenue. In addition, it is not uncommon for product candidates to exhibit unforeseen safety issues or inadequate efficacy when tested in humans despite promising results in preclinical animal models or earlier trials, and we may ultimately be unable to demonstrate adequate safety and efficacy of our product candidates to obtain marketing approval. Even if we obtain approval and begin commercializing one or more of our product candidates, we may never generate revenue that is significant or large enough to achieve profitability.

Even if we succeed in commercializing one or more of our product candidates, we will continue to incur substantial research and development, manufacturing and other expenditures to develop and market additional product candidates. Our failure to become or remain profitable would decrease the value of the company and could impair our ability to raise capital, maintain our research and development efforts, expand our business or continue our operations.

Reimbursement decisions by third-party payors may have an adverse effect on pricing and market acceptance. If there is not sufficient reimbursement for our products, it is less likely that our products will be widely used.

The regulations that govern marketing approvals, pricing, coverage and reimbursement for new drugs vary widely from country to country. Many countries require approval of the sale price of a drug before it can be marketed. The pricing review period begins after marketing or product licensing approval is granted in most cases. In some foreign markets, prescription pharmaceutical pricing remains subject to continuing governmental control even after initial approval is granted. As a result, we might obtain regulatory approval for a product in a particular country, but then be subject to price regulations that delay our commercial launch of the product and negatively impact the revenues we are able to generate from the sale of the product in that country.

Our ability to commercialize any products successfully also will depend in part on the extent to which coverage and adequate reimbursement for these products and related treatments will be available from government health administration authorities, private health insurers and other third-party payors. In many jurisdictions, a product candidate must be approved for reimbursement before it can be approved for sale in that jurisdiction. Obtaining coverage and reimbursement approval of a product from a government or other third-party payor is a time-consuming and costly process that could require us to provide to the payor supporting scientific, clinical and cost-effectiveness data for the use of our products. If we are not currently capturing the scientific and clinical data that will be required for reimbursement approval, we may be required to conduct additional trials, which may delay or suspend reimbursement approval. Additionally, in the United States, no uniform policy of coverage and

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reimbursement for products exists among third-party payors. Therefore, coverage and reimbursement for products can differ significantly from payor to payor. As a result, the coverage determination process is often a time-consuming and costly process that will require us to provide scientific and clinical support for the use of a product candidate that receives regulatory approval to each payor separately, with no assurance that coverage and adequate reimbursement will be obtained.

Even if our product candidates are approved for sale by the appropriate regulatory authorities, market acceptance and sales of these products will depend on reimbursement policies and may be affected by future healthcare reform measures. Government authorities and third-party payors, such as private health insurers and health maintenance organizations, decide which drugs they will reimburse and establish payment levels. We cannot be certain that reimbursement will be available for any products that we develop. If reimbursement is not available or is available on a limited basis, we may not be able to successfully commercialize any of our approved products.

In the United States, the Medicare Prescription Drug, Improvement, and Modernization Act of 2003, also called the Medicare Modernization Act (“MMA”), changed the way Medicare covers and pays for pharmaceutical products. The legislation established Medicare Part D, which expanded Medicare coverage for outpatient prescription drug purchases by the elderly but provided authority for limiting the number of drugs that will be covered in any therapeutic class. The MMA also introduced a new reimbursement methodology based on average sales prices for physician-administered drugs. We expect to experience pricing pressures in connection with the sale of any products that we develop, due to the trend toward managed healthcare, the increasing influence of health maintenance organizations and additional legislative proposals. Congress is currently considering legislation that, if passed, could have significant impact on prices of prescription drugs covered by Medicare, including limitations on drug price increases and allowing Medicare to negotiate drug pricing for certain drugs. The implementation of cost containment measures or other healthcare reforms may prevent us from being able to generate revenue, attain profitability, or commercialize our product candidates if approved.

There may be significant delays in obtaining coverage and reimbursement for newly approved drugs, and coverage may be more limited than the purposes for which the drug is approved by the FDA, EMA or other regulatory authorities. Moreover, eligibility for coverage and reimbursement does not imply that a drug will be paid for in all cases or at a rate that covers our costs, including research, development, manufacture, sale and distribution expenses. Interim reimbursement levels for new drugs, if applicable, may also be insufficient to cover our and any collaborator’s costs and may not be made permanent. Reimbursement rates may vary according to the use of the drug and the clinical setting in which it is used, may be based on reimbursement levels already set for lower cost drugs and may be incorporated into existing payments for other services. Net prices for drugs may be reduced by mandatory discounts or rebates required by government healthcare programs or private payors and by any future relaxation of laws that currently restrict imports of drugs from countries where they may be sold at lower prices than in the United States. Our or any collaborator’s inability to promptly obtain coverage and profitable payment rates from both government-funded and private payors for any approved products that we or our strategic partners develop could have a material adverse effect on our operating results, our ability to raise capital needed to commercialize product candidates and our overall financial condition.

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

We intend to initially focus our independent product candidate development on treatments for oncology. Our projections of addressable patient populations that have the potential to benefit from treatment with our product candidates are based on estimates. If our projections are inaccurate, the market opportunities for any of our product candidates could be significantly diminished and have an adverse material impact on our business.

We may not be successful in our efforts to use our therapeutic platforms to build a pipeline of product candidates.

We intend to use our therapeutic platforms to build a pipeline of product candidates and progress these product candidates through clinical development for the treatment of a variety of diseases. Although our research and development efforts to date have resulted in a pipeline of product candidates directed at various cancers, we may not be able to develop product candidates that are safe and effective. In addition, although we expect that our therapeutic platforms will allow us to develop further product candidates, they may not prove to be successful at doing so. Even if we are successful in continuing to build our pipeline, the potential product candidates that we identify may not be suitable for clinical development, including as a result of being shown to have harmful side effects or other characteristics that indicate that they are unlikely to be products that will receive marketing approval and achieve market acceptance. If we do not continue to successfully develop and begin to commercialize product candidates, we will face difficulty in obtaining product revenue in future periods, which could result in significant harm to our financial position and adversely affect our share price.

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Even if we receive regulatory approval to commercialize any of the product candidates that we develop, we will be subject to ongoing regulatory obligations and continued regulatory review, which may result in significant additional expense.

Any regulatory approvals that we receive for our product candidates may be subject to limitations on the approved indicated uses for which the product may be marketed or subject to certain conditions of approval, and may contain requirements for potentially costly post-approval trials, including Phase 4 clinical trials, and surveillance to monitor the safety and efficacy of the marketed product.

For any approved product, we will be subject to ongoing regulatory obligations and extensive oversight by regulatory authorities, including with respect to manufacturing processes, labeling, packaging, distribution, adverse event reporting, storage, advertising, promotion and recordkeeping for the product. These requirements include submissions of safety and other post-approval information and reports, as well as continued compliance with cGMP and cGCP, for any clinical trials that we or our strategic partners conduct after approval. Later discovery of previously unknown problems with a product, including adverse events of unanticipated severity or frequency, or with third-party manufacturers or manufacturing processes, or failure to comply with regulatory requirements, may result in, among other things:

- restrictions on the marketing or manufacturing of the product;
- withdrawal of the product from the market or voluntary or mandatory product recalls;
- fines, warning letters or holds on clinical trials;
- refusal by the FDA, EMA or another applicable regulatory authority to approve pending applications or supplements to approved applications filed by us or our strategic partners, or suspension or revocation of product license approvals;
- product seizure or detention, or refusal to permit the import or export of products; and
- injunctions or the imposition of civil or criminal penalties.

Occurrence of any of the foregoing could have a material and adverse effect on our business and results of operations. Further, the FDA's or other ex-U.S. regulators' policies may change and additional government regulations may be enacted that could prevent, limit or delay regulatory approval of our product candidates. If we are slow or unable to adapt to changes in existing requirements or the adoption of new requirements or policies, or if we are not able to maintain regulatory compliance, we may lose any marketing approval that we may have obtained, which would adversely affect our business, prospects and ability to achieve or sustain profitability.

The FDA strictly regulates manufacturers' promotional claims of drug products. In particular, a drug product may not be promoted by manufacturers for uses that are not approved by the FDA, as reflected in the FDA-approved labeling, although healthcare professionals are permitted to use drug products for off-label uses. The FDA, the Department of Justice, the Inspector General of the Department of Health and Human Services, among other government agencies, actively enforce the laws and regulations prohibiting manufacturers' promotion of off-label uses, and a company that is found to have improperly promoted off-label uses may be subject to significant liability, including large civil and criminal fines, penalties, and enforcement actions. The FDA has also imposed consent decrees or permanent injunctions under which specified promotional conduct is changed or curtailed for companies that engaged in such prohibited activities. If we cannot successfully manage the promotion of our approved product candidates, we could become subject to significant liability, which would materially adversely affect our business and financial condition.

If any product liability lawsuits are successfully brought against us or any of our strategic partners, we may incur substantial liabilities and may be required to limit commercialization of our product candidates.

We face an inherent risk of product liability lawsuits related to the testing of our product candidates in seriously ill patients, and will face an even greater risk if product candidates are approved by regulatory authorities and introduced commercially. Product liability claims may be brought against us or our strategic partners by participants enrolled in our clinical trials, patients, health care providers or others using, administering or selling any of our future approved products. If we cannot successfully defend ourselves against any such claims, we may incur substantial liabilities. Regardless of their merit or eventual outcome, liability claims may result in:

- decreased demand for any future approved products;
- injury to our reputation;
- withdrawal of clinical trial participants;
- termination of clinical trial sites or entire trial programs;

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- increased regulatory scrutiny;
- significant litigation costs;
- substantial monetary awards to, or costly settlement with, patients or other claimants;
- product recalls or a change in the indications for which they may be used;
- loss of revenue;
- diversion of management and scientific resources from our business operations; and
- the inability to commercialize our product candidates.

We may need to have in place increased product liability coverage when we begin the commercialization of our product candidates. Insurance coverage is becoming increasingly expensive. As a result, we may be unable to maintain or obtain sufficient insurance at a reasonable cost to protect us against losses that could have a material adverse effect on our business. A successful product liability claim or series of claims brought against us, particularly if judgments exceed any insurance coverage we may have, could decrease our cash resources and adversely affect our business, financial condition and results of operation.

Patients with cancer and other diseases targeted by our product candidates are often already in severe and advanced stages of disease and have both known and unknown significant pre-existing and potentially life-threatening health risks. During the course of treatment, patients may suffer adverse events, including death, for reasons that may be related to our product candidates. Such events could subject us to costly litigation, require us to pay substantial amounts of money to injured patients, delay, negatively impact or end our opportunity to receive or maintain regulatory approval to market our product candidates, or require us to suspend or abandon our commercialization efforts. Even in a circumstance in which we do not believe that an adverse event is related to our product candidates, the investigation into the circumstance may be time-consuming or inconclusive. These investigations may interrupt our sales efforts, delay our regulatory approval process in other countries, or impact and limit the type of regulatory approvals our product candidates receive or maintain. As a result of these factors, a product liability claim, even if successfully defended, could have a material adverse effect on our business, financial condition or results of operations.

If we or any of our third-party manufacturers encounter manufacturing difficulties, our ability to provide supply of our product candidates for clinical trials or our products for patients, if approved, could be delayed or prevented.

The manufacture of biological drug products is complex and requires significant expertise and capital investment, including the development of advanced manufacturing techniques, process and quality controls. Manufacturers of biologic products often encounter difficulties in production and sourcing, particularly in scaling up or out, validating the production process and assuring high reliability of the manufacturing processes (including the absence of contamination), in light of variations and supply constraints of key components. These problems include logistics and shipping, difficulties with production costs and yields, quality control, including consistency, stability, purity and efficacy of the product, product testing, operator error and availability of qualified personnel, as well as compliance with applicable federal, state and foreign regulations. If contaminants are discovered in our supply of our product candidates or in the manufacturing facilities, such manufacturing facilities may need to be closed for an extended period of time to investigate and remedy the contamination. We cannot assure you that any stability, purity, and efficacy failures, deficiencies, or other issues relating to the manufacture of our product candidates will not occur in the future. Our research and development activities also involve the controlled use of potentially hazardous substances, including chemical and biological materials, by our third-party manufacturers. While we currently outsource all manufacturing to third parties, we and our manufacturers are subject to federal, state and local laws and regulations governing the use, manufacture, storage, handling and disposal of medical and hazardous materials. Although we believe that our manufacturers' procedures for using, handling, storing and disposing of these materials comply with legally prescribed standards, we cannot completely eliminate the risk of contamination or injury, and any related liability, resulting from medical or hazardous materials.

Material modifications in methods of product candidate manufacturing or formulation may result in additional costs or delay.

As product candidates are developed through preclinical to late-stage clinical trials towards approval and commercialization, it is common that various aspects of the development program, such as manufacturing methods and formulation, are altered along the way in an effort to optimize processes and results. Such changes carry the risk that they will not achieve these intended objectives. Any of these changes could cause our product candidates to perform differently and affect the results of planned

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clinical trials or other future clinical trials conducted with the altered materials. This could delay completion of clinical trials, require the conduct of bridging clinical trials or the repetition of one or more clinical trials, increase clinical trial costs, delay approval of our product candidates and jeopardize our ability, or our strategic partners' ability, to commence product sales and generate revenue.

Strategic transactions could disrupt our business, cause dilution to our shareholders and otherwise harm our business.

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

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

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

Many governments impose strict price controls, which may adversely affect our future profitability.

In many countries, particularly in those in the European Union ("EU"), prescription drug pricing and reimbursement is subject to governmental control. In those countries that impose price controls, pricing negotiations with governmental authorities can take considerable time after the receipt of marketing approval for a product. To obtain reimbursement or pricing approval in some countries, we or our strategic partners may be required to conduct a clinical trial that compares the cost-effectiveness of our product candidates to other available therapies.

Some countries require approval of the sale price of a drug before it can be marketed. In many countries, the pricing review period begins after marketing or product licensing approval is granted. In some markets, prescription pharmaceutical pricing remains subject to continuing governmental control even after initial approval is granted. As a result, we or our strategic partners might obtain marketing approval for a product candidate in a particular country, but then be subject to price regulations that delay commercial launch of the product candidate, possibly for lengthy time periods, and negatively impact the revenue that is generated from the sale of the product in that country. If reimbursement of such product candidates is unavailable or limited in scope or amount, if pricing is set at unsatisfactory levels, or if there is competition from lower priced cross-border sales, our profitability will be negatively affected.

Security breaches and incidents, loss of data and other disruptions could compromise sensitive information related to our business or protected health information or prevent us from accessing critical information and expose us to liability, which could adversely affect our business and our reputation.

In the ordinary course of our business, we and our CROs and other service providers collect, store and otherwise process petabytes of sensitive data, including legally protected health information, personal information, intellectual property and proprietary business information owned or controlled by ourselves or our strategic partners. We manage and maintain our applications and data by utilizing a combination of on-site systems, managed data center systems and cloud-based data center

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systems. These applications and data encompass a wide variety of business-critical information, including research and development information, commercial information and business and financial information. We face four primary risks relative to protecting this critical information: loss of access risk, inappropriate disclosure risk, inappropriate modification risk and the risk of being unable to adequately monitor our controls over the first three risks.

Although we take measures designed to protect sensitive information from unauthorized access or disclosure, our information technology and infrastructure and those of our CROs and our other third-party service providers may utilize may be vulnerable to attacks by hackers or viruses or breached, interrupted or compromised due to inadvertent or intentional actions by our employees, contractors, business partners, and/or other third parties, or from cyber-attacks by malicious third parties (including supply chain cyber attacks or the deployment of harmful malware, ransomware, denial-of-service attacks, social engineering and other means to affect service reliability and threaten the confidentiality, integrity and availability of information). Any such breach, incident, or interruption could compromise systems and networks used in our business and lead to the loss, destruction, alteration, prevention of access to, disclosure, or dissemination of, or damage or unauthorized access to, our data (including trade secrets or other confidential information, intellectual property, proprietary business information, and personal information) or data that is processed or maintained on our behalf, or other assets, which could result in financial, legal, business and reputational harm to us. Any such event could result in legal claims, demands and litigation or governmental investigations or other proceedings, liability under laws that protect the privacy of personal information, such as the Health Insurance Portability and Accountability Act of 1996 (“HIPAA”), and regulatory penalties and other liabilities. Although we have implemented security measures and a formal enterprise security program designed to prevent unauthorized access to sensitive data, there is no guarantee that we or our third-party service providers can protect our systems or networks or other systems or networks used in our business from security breaches, incidents, or compromises. Any loss, destruction, alteration, prevention of access to, disclosure, or dissemination of, or damage or unauthorized access to, our data or other data that is processed or maintained on our behalf could also disrupt our operations (including our ability to conduct our analyses, pay providers, conduct research and development activities, collect, process and prepare company financial information, provide information about any future products, and manage the administrative aspects of our business) and damage our reputation, any of which could adversely affect our business.

HIPAA, as amended by the Health Information Technology for Economic and Clinical Health Act (“HITECH”), and its implementing regulations, impose certain requirements relating to the privacy, security, transmission and breach reporting of individually identifiable health information upon entities subject to the law, such as health plans, healthcare clearinghouses and healthcare providers and their respective business associates and subcontractors that perform services for them that involve individually identifiable health information. Mandatory penalties for HIPAA violations can be significant, and criminal and monetary penalties, as well as injunctive relief, may be imposed for HIPAA violations. Although most drug manufacturers are not directly subject to HIPAA, prosecutors are increasingly using HIPAA-related theories of liability against drug manufacturers and their agents and we also could be subject to criminal penalties if we knowingly obtain individually identifiable health information from a HIPAA-covered entity in a manner that is not authorized or permitted by HIPAA.

Furthermore, in the event of a breach as defined by HIPAA, HIPAA regulations impose specific reporting requirements to regulators, individuals impacted by the breach and, in some cases, the media. Issuing such notifications can be costly, time and resource intensive, and can generate significant negative publicity. Breaches of HIPAA may also constitute contractual violations that could lead to contractual damages or terminations. In addition to HIPAA, other applicable data privacy and security obligations, including U.S. state data breach notification laws, may require us to notify relevant stakeholders of any security breaches or incidents that result in the unauthorized disclosure, or dissemination of, personal information. Such disclosures are costly, and the disclosures or the failure to comply with such requirements, could lead to adverse impacts.

Furthermore, the loss of clinical trial data from completed or future clinical trials could result in delays in our regulatory approval efforts and significantly increase our costs to recover or reproduce the data. Likewise, we rely on other third parties for the manufacture of our product candidates and to conduct clinical trials, and similar events relating to their computer systems could also have a material adverse effect on our business.

In addition, as a result of the COVID-19 pandemic, we may face increased cybersecurity risks due to our reliance on internet technology and the number of our employees who are working remotely, which may create additional opportunities for cybercriminals to exploit vulnerabilities.

We are subject to stringent and changing obligations related to privacy and security. Our actual or perceived failure to comply with such obligations could lead to regulatory investigations or actions, litigation, fines and penalties, disruptions of our business operations, reputational harm and other adverse business consequences.

In addition, U.S. states have enacted and are considering enacting laws relating to the protection of personal information (including health and other data of patients, research subjects, and other individuals), which may be more rigorous than, or impose additional requirements beyond those required by, HIPAA. For example, the California Consumer Privacy Act

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(“CCPA”), which became effective on January 1, 2020, gives California consumers expanded rights to access and delete their personal information, opt out of certain personal information sharing and receive detailed information about how their personal information is used. The CCPA allows for statutory fines for noncompliance (up to \$7,500 per violation) as well as a limited private right of action for data breaches, which may increase the volume of data breach litigation. In addition, the California Privacy Rights Act of 2020 (“CPRA”), effective January 1, 2023, will expand the CCPA by, among other things, giving California residents the ability to limit use of certain sensitive personal information, establishing restrictions on personal information retention, expanding the types of data breaches subject to the CCPA’s private right of action, and establishing a new California Privacy Protection Agency to implement and enforce the new law. While limited CCPA exemptions may apply to portions of our business, the recency of the CCPA’s implementing regulations and the California Attorney General’s enforcement activity means obligations under the CCPA, as modified by the CPRA, could evolve in the future, which may increase our compliance costs and potential liability. Many similar privacy and security laws have been proposed at the federal level and in other states, certain of which have been enacted, including such laws in Colorado and Virginia. These or other proposed or enacted laws relating to privacy and security could similarly increase our compliance obligations and costs in the future.

We may also become subject to laws and regulations in non-U.S. countries covering privacy and security and the protection of health-related and other personal information. In particular, the European Economic Area (“EEA”) has adopted privacy and security protection laws and regulations that impose significant compliance obligations. Laws and regulations in these jurisdictions apply broadly to the collection, use, storage, disclosure, processing and security of information that identifies or may be used to identify an individual, such as names, contact information, and sensitive personal information such as health data. These laws and regulations are subject to frequent revisions and differing interpretations, and have generally become more stringent over time.

The General Data Protection Regulation 2016/679 (“GDPR”) applies to the processing of personal information and imposes many requirements for controllers and processors of personal information, including, for example, higher standards for obtaining consent from individuals to process their personal information, more robust disclosures to individuals and a strengthened individual data rights regime, shortened timelines for data breach notifications, limitations on retention and secondary use of information, increased requirements pertaining to health data and pseudonymized (i.e., key-coded) data and additional obligations when contracting third-party processors in connection with the processing of the personal information. The GDPR allows EEA countries to make additional laws and regulations further limiting the processing of genetic, biometric or health data. Failure to comply with the requirements of the GDPR and the applicable national privacy and security laws of EEA countries may result in fines of up to €20,000,000 or up to 4% of the total worldwide annual turnover of the preceding financial year, whichever is higher, and other administrative penalties; we may also be liable should any individual who has suffered financial or non-financial damage arising from our infringement of the GDPR exercise their right to receive compensation against us. Furthermore, adverse publicity relating to our failure to comply with the GDPR could cause a loss of goodwill, which could have an adverse effect on our reputation, brand, business and financial condition. Additionally, the United Kingdom (“UK”) has implemented legislation similar to the GDPR, referred to as the UK GDPR, which provides for fines of up to the greater of £17.5 million or 4% of global turnover.

Certain jurisdictions, including the EEA, have enacted data localization laws and cross-border personal information transfer laws. For example, absent appropriate safeguards or other circumstances, the GDPR generally restricts the transfer of personal information to countries outside the EEA, such as the United States, which the European Commission does not consider to provide an adequate level of personal information protection. On July 16, 2020, the Court of Justice of the European Union (“CJEU”) invalidated the European Union-U.S. Privacy Shield (“Privacy Shield”) as a data transfer mechanism for transferring personal information from the EEA to the United States. While the standard contractual clauses (“SCCs”) remain a valid mechanism to transfer personal information to third countries outside the EEA, the CJEU’s ruling has also imposed enhanced due diligence obligations on data exporters and importers to ensure that the laws of the country to which the personal information is transferred offer a level of data protection that is essentially equivalent to the EEA. Although we do not transfer personal data from the EEA to the United States via the Privacy Shield, the CJEU’s decision means that the status of transfers of personal information from the EEA and other regions, including the UK, to the United States is subject to significant regulatory uncertainty. To the extent we transfer personal information from other jurisdictions to the United States, we may not be able to implement or maintain an appropriate data transfer mechanism to continue such international transfers of data. Additionally, the CJEU’s invalidation of the Privacy Shield, the revised SCCs, regulatory guidance and opinions, and other developments relating to cross-border data transfer may require us to implement additional contractual and technical safeguards for any personal information transferred out of the EEA, UK, or other regions, which may increase compliance costs, lead to increased regulatory scrutiny or liability, and may require additional contractual negotiations, which may adversely impact our business, financial condition, and operating results.

Separate from, and in addition to, requirements under the GDPR and UK GDPR, certification requirements for the hosting of health data will vary by jurisdiction. To the extent we operate in various EEA countries or the UK, there might be other national healthcare regulations or regulatory requirements with which we will be required to comply. For example, France requires hosts of health data to obtain a prior certification with the competent certification body.

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The interpretation and application of consumer, health-related and privacy and security laws in the United States, the EEA, and elsewhere are often uncertain, contradictory and in flux. Any failure or perceived failure to comply with federal, state or foreign laws or regulations, contractual or other legal obligations related to privacy or security may result in claims, warnings, communications, requests or investigations from individuals, supervisory authorities or other legal or regulatory authorities in relation to our processing of personal information, and regulatory investigations or other proceedings. It is possible that these laws may be interpreted and applied in a manner that is inconsistent with our practices. If so, this could result in government-imposed fines or orders requiring that we change our practices, which could adversely affect our business. In addition, these privacy regulations vary between states, may differ from country to country, and may vary based on whether testing is performed in the United States or in the local country. Complying with these various laws could cause us to incur substantial costs or require us to change our business practices and compliance procedures in a manner adverse to our business.

Current and future legislation may increase the difficulty and cost for us to commercialize any products that we or our strategic partners develop and affect the prices we may obtain.

The United States and some foreign jurisdictions are considering or have enacted a number of legislative and regulatory proposals to change healthcare systems in ways that could affect our ability to sell any of our product candidates profitably, if such product candidates are approved for sale. Among policy makers and payors in the United States and elsewhere, there is significant interest in promoting changes in healthcare systems with the stated goals of containing healthcare costs, improving quality and expanding access. In the United States, the pharmaceutical industry has been a particular focus of these efforts and has been significantly affected by major legislative initiatives.

In March 2010, the PPACA became law in the United States. The PPACA may affect the operational results of companies in the pharmaceutical industry, including us, by imposing on them additional costs. For example, effective January 1, 2010, PPACA increased the minimum Medicaid drug rebates for pharmaceutical companies and imposed an annual fee on certain branded prescription drugs and biologics. Since the enactment of PPACA, there have been executive, judicial and Congressional challenges to certain aspects of the PPACA, including judicial challenges in the Fifth Circuit Court and the United States Supreme Court. In June 2021, the United States Supreme Court held that Texas and other challengers had no legal standing to challenge the PPACA, dismissing the case without specifically ruling on the constitutionality of the PPACA. Accordingly, the PPACA remains in effect in its current form. It is unclear how this Supreme Court decision, future litigation, or healthcare measures promulgated by the Biden administration will impact our business, financial condition and results of operations. Complying with any new legislation or changes in healthcare regulation could be time-intensive and expensive, resulting in a material adverse effect on our business.

Other legislative changes have been proposed and adopted since the PPACA was enacted. For example, the Bipartisan Budget Act of 2018, among other things, amended the PPACA, effective January 1, 2019, to close the coverage gap in most Medicare drug plans. The Budget Control Act of 2011, which calls for aggregate reductions to Medicare payments to providers of up to 2% per fiscal year, began in 2013 and, due to subsequent legislative amendments to the statute, will remain in effect through 2031, with the exception of a temporary suspension implemented under various COVID-19 relief legislation from May 1, 2020 through March 31, 2022, unless additional Congressional action is taken. Under current legislation, the actual reduction in Medicare payments will vary from 1% in 2022 to up to 3% in the final fiscal year of this sequester. The American Taxpayer Relief Act of 2012, among other things, further reduced Medicare payments to several providers, including hospitals and cancer treatment centers, and increased the statute of limitations period for the government to recover overpayments to providers from three to five years. These laws may result in additional reductions in Medicare and other healthcare funding, which could have a material adverse effect on potential customers for our product candidates, if approved, and, accordingly, our future financial operations. We are unable to predict the future course of federal or state health care legislation or foreign regulations relating to the marketing, pricing and reimbursement of pharmaceutical products.

There have been several recent U.S. Congressional inquiries, presidential executive orders, and proposed federal and state legislation designed to, among other things, bring more transparency to drug pricing, reduce the cost of prescription drugs under Medicare, review the relationship between pricing and manufacturer patient programs, and reform government program reimbursement methodologies for drugs. For example, in 2020, the U.S. Department of Health and Human Services (“HHS”) and CMS issued various rules pertaining to price reductions from pharmaceutical manufacturers to plan sponsors under Part D, changes to the Stark Law and the safe harbor regulation under the Anti-Kickback Statute, and manufacturer price reporting requirements under the Medicaid Drug Rebate Program, among others. Multiple lawsuits have been brought against the HHS challenging various aspects of the rules implemented during the Trump administration. As a result, the Biden administration and HHS have delayed the implementation or published rules rescinding some of these Trump-era policies.

Under the American Rescue Plan Act of 2021, effective January 1, 2024, the statutory cap on Medicaid Drug Rebate Program rebates that manufacturers pay to state Medicaid programs will be eliminated. Elimination of this cap may require pharmaceutical manufacturers to pay more in rebates than it receives on the sale of products, which could have a material

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impact on our business. Additionally, in July 2021, the Biden administration released an executive order, “Promoting Competition in the American Economy,” with multiple provisions aimed at prescription drugs. In response to Biden’s executive order, on September 9, 2021, HHS released a Comprehensive Plan for Addressing High Drug Prices that outlines principles for drug pricing reform and sets out a variety of potential legislative policies that Congress could pursue as well as potential administrative actions HHS can take to advance these principles. No legislation or administrative actions have been finalized to implement these principles. Further, Congress is considering legislation that, if passed, could have significant impact on prices of prescription drugs covered by Medicare, including limitations on drug price increases and allowing Medicare to negotiate pricing for certain drugs. The implementation of cost containment measures or other healthcare reforms may prevent us from being able to generate revenue, attain profitability, or commercialize our product candidates if approved. Complying with any new legislation and regulatory changes could be time-intensive and expensive, resulting in a material adverse effect on our business.

Further, many states have proposed or enacted legislation that seeks to indirectly or directly regulate pharmaceutical drug pricing, such as by requiring biopharmaceutical manufacturers to publicly report proprietary pricing information or to place a maximum price ceiling on pharmaceutical products purchased by state agencies. For example, a number of states are considering or have recently enacted state drug price transparency and reporting laws that could substantially increase our compliance burdens and expose us to greater liability under such state laws once we begin commercialization after obtaining regulatory approval for any of our products candidates. We cannot be sure to what extent these and future legislative and regulatory efforts, whether FDA regulations, guidance or interpretations will be changed, or what the impact of such changes on the marketing approvals of our product candidates, if any, may be. In addition, increased scrutiny by Congress of the FDA’s approval process may significantly delay or prevent marketing approval, as well as subject us to more stringent product labeling and post-marketing testing and other requirements. These measures could reduce the ultimate demand for our products, once approved, or put pressure on our product pricing. We expect that additional state and federal healthcare reform measures will be adopted in the future, any of which could limit the amounts that federal and state governments will pay for healthcare products and services, which could affect the prices we may obtain for any of our product candidates for which we may obtain regulatory approval or the frequency with which any such product candidate, if approved, is prescribed or used.

In the EU similar political, economic and regulatory developments may affect our ability to profitably commercialize any future products. In addition to continuing pressure on prices and cost containment measures, legislative developments at the EU or member state level may result in significant additional requirements or obstacles that may increase our operating costs. In international markets, reimbursement and healthcare payment systems vary significantly by country, and many countries have instituted price ceilings on specific products and therapies. Our future products, if any, might not be considered medically reasonable and necessary for a specific indication or cost-effective by third-party payors, an adequate level of reimbursement might not be available for such products, and third-party payors’ reimbursement policies might adversely affect our or our strategic partners’ ability to sell any future products profitably.

Legislative and regulatory proposals have been made to expand post-approval requirements and restrict sales and promotional activities for pharmaceutical products. We cannot be sure whether additional legislative changes will be enacted, or whether the FDA regulations, guidance or interpretations will be changed, or what the impact of such changes on the marketing approvals of our product candidates, if any, may be. In addition, increased scrutiny by the U.S. Congress of the FDA’s approval process may significantly delay or prevent marketing approval, as well as subject us to more stringent product labeling and post-approval testing and other requirements.

We cannot predict the likelihood, nature or extent of government regulation that may arise from future legislation or administrative action, either in the United States or elsewhere. If we or our strategic partners are slow or unable to adapt to changes in existing requirements or the adoption of new requirements or policies, or if we or our strategic partners are not able to maintain regulatory compliance, our product candidates may lose any marketing approval that may have been obtained and we may not achieve or sustain profitability, which would adversely affect our business.

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

Our business is subject to risks associated with conducting business internationally. Some of our suppliers and collaborative and clinical trial relationships are located outside the United States. Accordingly, our future results could be harmed by a variety of factors, including:

- economic instability or weakness, including inflation, reduced growth, diminished credit availability, weakened consumer confidence or increased unemployment;
- sociopolitical instability in particular foreign economies and markets;
- differing regulatory requirements for drug approvals in foreign countries;
- potentially reduced protection for intellectual property rights;

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- difficulties in compliance with non-U.S. laws and regulations;
- changes in non-U.S. regulations and customs, tariffs and trade barriers, including any changes that China may impose as a result of political tensions between Canada and China or the United States and China;
- regulatory changes and economic conditions following the United Kingdom's withdrawal from the EU and uncertainty related to the terms of the withdrawal;
- changes in non-U.S. currency exchange rates and currency controls;
- trade protection measures, import or export licensing requirements or other restrictive actions by U.S. or non-U.S. governments;
- differing reimbursement regimes, including price controls;
- negative consequences from changes in tax laws;
- workforce uncertainty in countries where labor unrest is more common than in the United States;
- production shortages resulting from any events affecting raw material supply or manufacturing capabilities outside the United States;
- business interruptions resulting from geopolitical actions, including war and terrorism, or natural disasters including earthquakes, typhoons, floods and fires; and
- supply and other disruptions resulting from the impact of public health epidemics, including the COVID-19 pandemic, on our strategic partners, third-party manufacturers, suppliers and other third parties upon which we rely.

Our business and current and future relationships with customers and third-party payors in the United States and elsewhere will be subject, directly or indirectly, to applicable federal and state anti-kickback, fraud and abuse, false claims, transparency, health information privacy and security, and other healthcare laws and regulations, which could expose us to criminal sanctions, civil penalties, contractual damages, reputational harm, administrative burdens, and diminished profits and future earnings.

Healthcare providers, physicians and third-party payors in the United States and elsewhere play a primary role in the recommendation and prescription of any product candidates for which we obtain marketing approval.

Our current and future arrangements with healthcare professionals, principal investigators, consultants, customers, and third-party payors and other entities may expose us to broadly applicable fraud and abuse and other healthcare laws and regulations, including the federal AKS and the federal False Claims Act, that may constrain the business or financial arrangements and relationships through which we conduct clinical research on product candidates and market, sell and distribute any products for which we obtain marketing approval. In addition, we may be subject to transparency laws and patient privacy regulation by the federal government and by the U.S. states and foreign jurisdictions in which we conduct our business. The applicable federal, state and foreign healthcare laws and regulations that may affect our ability to operate include the following:

- the federal AKS, which prohibits, among other things, persons from knowingly and willfully soliciting, offering, receiving or providing remuneration (including any kickback, bribe or rebate), directly or indirectly, in cash or in kind, to induce or reward either the referral of an individual for, or the purchase, order or recommendation of, any good or service for which payment may be made under federal and state healthcare programs such as Medicare and Medicaid;
- federal civil and criminal false claims laws and civil monetary penalty laws, including the federal False Claims Act, impose criminal or civil penalties, as applicable, against individuals or entities for knowingly presenting, or causing to be presented, to the federal government (including the Medicare and Medicaid programs) or other third-party payor claims for payment that are false or fraudulent or making a false statement to avoid, decrease or conceal an obligation to pay money to the federal government;
- HIPAA established the federal offense of health care fraud, which among other things, imposes criminal liability for knowingly and willfully executing, or attempting to execute, a scheme to defraud any healthcare benefit program or to obtain, by means of false or fraudulent pretenses, representations, or promises, any of the money or property owned by, or under the custody or control of, any healthcare benefit program, regardless of the payor (e.g. public or private) and knowingly and willfully falsifying, concealing or covering up by any trick or device a material fact or making any materially false statements in connection with the delivery of or payment for healthcare benefits, items or services relating to healthcare matters;

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- HIPAA, as amended by HITECH, and its implementing regulations, which imposes certain obligations, including mandatory contractual terms, with respect to safeguarding the privacy, security and transmission of individually identifiable health information without the appropriate authorization by entities subject to the law, such as health plans, healthcare clearinghouses and healthcare providers and their respective business associates and their covered subcontractors;
- the federal Open Payments program under the Physician Payments Sunshine Act, created under Section 6002 of the PPACA and its implementing regulations, requires applicable group purchasing organizations and manufacturers of drugs, devices, biologics and medical supplies for which payment is available under Medicare, Medicaid or the Children's Health Insurance Program (with certain exceptions) to report annually to HHS information related to "payments or other transfers of value" made in the previous year to covered recipients, including physicians (defined to include doctors, dentists, optometrists, podiatrists and chiropractors, other health care professionals (such as nurse practitioners and physician assistants) and teaching hospitals, and information regarding ownership and investment interests held by physicians (as defined above) or their immediate family members; and
- analogous and similar state and foreign laws and regulations, including: state anti-kickback and false claims laws that may apply to our business practices (including research, distribution, sales and marketing arrangements and claims involving healthcare items or services reimbursed by state governmental and non-governmental third-party payors, including private insurers); state laws that require pharmaceutical companies to comply with the pharmaceutical industry's voluntary compliance guidelines and the applicable compliance guidance promulgated by the federal government; state laws that require drug manufacturers to track gifts and other remuneration and items of value provided to healthcare professionals and entities and file reports relating to pricing and marketing information; and state and foreign laws that govern the privacy and security of health information in specified circumstances, many of which differ from each other in significant ways and often are not preempted by HIPAA, thus complicating compliance efforts.

Because of the breadth of these laws and the narrowness of any available statutory exceptions and safe harbors, it is possible that some of our current and future business activities could be subject to challenge under one or more of such laws.

Efforts to ensure that our business arrangements with third parties will comply with applicable healthcare laws and regulations may involve substantial costs. It is possible that governmental authorities will conclude that our business practices may not comply with current or future statutes, regulations or case law involving applicable fraud and abuse or other healthcare laws and regulations.

Any failure or perceived failure by us to comply with such laws, regulations, or case law may result in governmental investigations or enforcement actions, litigation, claims and other proceedings, harm our reputation, and could result in significant liability.

Additionally, if our operations are found to be in violation of any of these laws or any other governmental regulations that may apply to us, we may be subject to significant civil, criminal and administrative penalties, including damages, fines, imprisonment, exclusion from participation in government healthcare programs, such as Medicare and Medicaid, additional reporting requirements and oversight if we become subject to a corporate integrity agreement or similar agreement to resolve allegations of noncompliance with these laws and the curtailment or restructuring of our operations, which could have a material adverse effect on our business.

If any of the physicians or other providers or entities with whom we expect to do business, including our strategic partners, is found not to be in compliance with applicable laws, it may be subject to criminal, civil or administrative sanctions, including exclusions from participation in government healthcare programs, which could also materially affect our business.

We are subject to U.S. and certain foreign export and import controls, sanctions, embargoes, anti-corruption laws, and anti-money laundering laws and regulations. Compliance with these legal standards could impair our ability to compete in domestic and international markets. We can face criminal liability and other serious consequences for violations that can harm our business.

We are subject to export control and import laws and regulations, including the U.S. Export Administration Regulations, U.S. Customs regulations, various economic and trade sanctions regulations administered by the U.S. Treasury Department's Office of Foreign Assets Controls, the U.S. Foreign Corrupt Practices Act of 1977, as amended, the U.S. domestic bribery statute contained in 18 U.S.C. § 201, the U.S. Travel Act, the USA PATRIOT Act, the United Kingdom Bribery Act 2010, the Proceeds of Crime Act 2002, and other state and national anti-bribery and anti-money laundering laws in the countries in which we conduct activities.

Anti-corruption laws are interpreted broadly and prohibit companies and their employees, agents, contractors, and other partners from authorizing, promising, offering, or providing, directly or indirectly, improper payments or anything else of value to recipients in the public or private sector. We currently engage third parties for clinical trials outside of the United States and we may in the future engage third parties to sell our products outside of the United States once we enter a commercialization phase, or to obtain necessary permits, licenses, patent registrations, and other regulatory approvals. We may have direct or indirect interactions with officials and employees of government agencies or government-affiliated hospitals, universities, and other organizations. We can be held liable for the corrupt or other illegal activities of our employees, agents,

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contractors, and other partners, even if we do not explicitly authorize or have actual knowledge of such activities. Any violation of the laws and regulations described above may result in substantial civil and criminal fines and penalties, imprisonment, the loss of export or import privileges, debarment, tax reassessments, breach of contract and fraud litigation, reputational harm, and other consequences.

Risks Related to Our Financial Position and Need for Additional Capital

We have incurred significant losses since inception and anticipate that we will continue to incur losses for the foreseeable future. We have no products approved for commercial sale, and to date we have not generated any revenue or profit from product sales. We may never achieve or sustain profitability.

We are a clinical-stage biopharmaceutical company. We have incurred significant losses since our inception. Our net loss for the years ended December 31, 2021, 2020 and 2019 was \$211.8 million, \$180.6 million and \$145.4 million, respectively. As of December 31, 2021, our accumulated deficit was \$683.1 million. We expect to continue to incur losses for the foreseeable future, and we expect these losses to increase as we continue our research and development of, and seek regulatory approvals for, our product candidates, prepare for and begin to commercialize any approved product candidates and add infrastructure, which may include personnel, to support our product development efforts. The net losses and negative cash flows incurred to date, together with expected future losses, have had, and likely will continue to have, an adverse effect on our shareholders' deficit and working capital. The amount of future net losses will depend, in part, on the rate of future growth of our expenses and our ability to generate revenue.

Because of the numerous risks and uncertainties associated with pharmaceutical product development, we are unable to accurately predict the timing or amount of increased expenses or when, or if, we will be able to achieve profitability.

To become and remain profitable, we must succeed in developing and commercializing product candidates with significant market potential. This will require us to be successful in a range of challenging activities for which we are only in the preliminary stages, including developing product candidates, obtaining regulatory approval for such product candidates, and manufacturing, marketing and selling those product candidates for which we may obtain regulatory approval. We may never succeed in these activities and may never generate revenue from product sales that is significant enough to achieve profitability. Even if we achieve profitability in the future, we may not be able to sustain profitability in subsequent periods. Our failure to become or remain profitable would depress our market value and could impair our ability to raise capital, expand our business, develop other product candidates, or continue our operations. A decline in the value of our company could also cause our shareholders to lose all or part of their investment.

Biopharmaceutical product development is a highly speculative undertaking and involves a substantial degree of uncertainty. We have never generated any revenue from product sales and may never be profitable.

We have devoted substantially all of our financial resources and efforts to developing our proprietary therapeutic platforms, identifying potential product candidates and conducting preclinical studies and clinical trials. We and our partners are still developing our product candidates, and we have not completed development of any products. Our revenue to date has been primarily revenue from the license of our proprietary therapeutic platforms for the development of product candidates by others or revenue from our strategic partners. Our ability to generate revenue and achieve profitability depends in large part on our ability, alone or with our strategic partners, to achieve milestones and to successfully complete the development of, obtain the necessary regulatory approvals for, and commercialize, product candidates. We do not anticipate generating revenue from sales of products in the near term.

We will require substantial additional funding, which may not be available to us on acceptable terms, or at all, and, if not available, may require us to delay, scale back, or cease our product development programs or operations.

We are currently advancing two of our product candidates through clinical development as well as other potential product candidates through discovery and preclinical development. Developing pharmaceutical products, including conducting preclinical studies and clinical trials, is expensive. In order to obtain regulatory approval, we will be required to conduct clinical trials for each indication for each of our product candidates. We will continue to require additional funding to complete the development and commercialization of our product candidates and to continue to advance the development of our other product candidates, and such funding may not be available on acceptable terms or at all. If sufficient funds on acceptable terms are not available when needed, or at all, we could be forced to significantly reduce operating expenses and delay, scale back or eliminate one or more of our development programs or our business operations. In January 2022, we began implementing a Company-wide reduction in workforce to help achieve a more cost-efficient organization, which we believe will enhance our ability to execute on our key priorities. We anticipate that the reduction in workforce will impact at least 25% of our employees;

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however, we are still assessing the full scope and scale of this plan and the reductions may ultimately be more or less than we currently anticipate.

Our future funding requirements will depend on many factors, including:

- the number and characteristics of other product candidates that we pursue;
- the scope, progress, timing, cost and results of research, preclinical development, and clinical trials;
- the costs, timing and outcome of seeking and obtaining FDA and non-U.S. regulatory approvals;
- the costs associated with manufacturing our product candidates and establishing sales, marketing and distribution capabilities;
- our ability to maintain, expand and defend the scope of our intellectual property portfolio, including the amount and timing of any payments we may be required to make in connection with the licensing, filing, defense and enforcement of any patents or other intellectual property rights;
- our ability to successfully implement the reduction in workforce and achieve the anticipated cost reductions;
- our ability to hire when needed additional management, scientific and medical personnel;
- the effect of competing products that may limit market penetration of our product candidates;
- our need to implement additional internal systems and infrastructure, including financial and reporting systems; and
- the economic and other terms, timing of and success of our existing strategic partnerships, and any collaboration, asset monetization, licensing, or other arrangements into which we may enter in the future, including the timing of receipt of any milestone or royalty payments under these agreements.

Until we can generate a sufficient amount of product revenue to finance our cash requirements, which we may never do, we expect to finance future cash needs primarily through a combination of public and private equity offerings, debt financings, asset monetization, strategic partnerships and grant funding.

Raising additional capital may cause dilution to our shareholders, restrict our operations or require us to relinquish substantial rights.

To the extent that we raise additional capital through the sale of equity or convertible debt securities, our shareholders' ownership interest will be diluted, and the terms of these new securities may include liquidation or other preferences that adversely affect our shareholders' rights as common shareholders. Debt financing, if available at all, may involve agreements that include covenants limiting or restricting our ability to take specific actions such as incurring additional debt, making capital expenditures, or declaring dividends. If we raise additional funds through partnerships, collaborations, strategic alliances, or licensing arrangements with third parties, we may have to relinquish valuable rights to our technologies, product candidates, or future revenue streams, or grant licenses on terms that are not favorable to us. We cannot assure that we will be able to obtain additional funding if and when necessary. If we are unable to obtain adequate financing on a timely basis, we could be required to delay, scale back or eliminate one or more of our development programs or grant rights to develop and market product candidates that we would otherwise prefer to develop and market ourselves.

Risks Related to Our Dependence on Third Parties

Our existing strategic partnerships are important to our business, and future strategic partnerships will likely also be important to us. If we are unable to maintain our strategic partnerships, or if these strategic partnerships are not successful, our business could be adversely affected.

We have limited capabilities for drug development and commercialization of our product candidates, if approved. Accordingly, we have entered into strategic partnerships with other companies that we believe can provide such capabilities, including our collaboration and license agreements with Merck, BMS, GSK, Daiichi Sankyo, Janssen, LEO, BeiGene and Iconic. These relationships also have provided us with non-dilutive funding for our wholly owned pipeline and therapeutic platforms and we expect to receive additional funding under these strategic partnerships in the future. Our existing strategic partnerships, and any future strategic partnerships we enter into, may pose a number of risks, including the following:

- strategic partners have significant discretion in determining the efforts and resources that they will apply to these partnerships;
- strategic partners may not perform their obligations as expected;

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- strategic partners may not pursue development and commercialization of any product candidates that achieve regulatory approval or may elect not to continue or renew development or commercialization programs based on clinical trial results, changes in the partners' strategic focus or available funding, or external factors, such as an acquisition, that divert resources or create competing priorities;
- strategic partners may delay clinical trials, provide insufficient funding for a clinical trial program, stop a clinical trial or abandon a product candidate, repeat or conduct new clinical trials or require a new formulation of a product candidate for clinical testing;
- strategic partners could independently develop, or develop with third parties, products that compete directly or indirectly with our product candidates if the strategic partners believe that competitive products are more likely to be successfully developed or can be commercialized under terms that are more economically attractive than our product candidates;
- product candidates discovered in collaboration with us may be viewed by our strategic partners as competitive with their own product candidates or products, which may cause strategic partners to cease to devote resources to the commercialization of our product candidates;
- a strategic partner with marketing and distribution rights to one or more of our product candidates that achieve regulatory approval may not commit sufficient resources to the marketing and distribution of such product candidates;
- disagreements with strategic partners, including disagreements over proprietary rights, contract interpretation or the preferred course of development, might cause delays or termination of the research, development or commercialization of product candidates, might lead to additional responsibilities for us with respect to product candidates, or might result in litigation or arbitration, any of which would be time-consuming and expensive;
- strategic partners may not properly maintain or defend our intellectual property rights or may use our proprietary information in such a way as to invite litigation that could jeopardize or invalidate our intellectual property or proprietary information or expose us to potential litigation;
- strategic partners may infringe the intellectual property rights of third parties, which may expose us to litigation and potential liability;
- strategic partnerships may be terminated for the convenience of the partner and, if terminated, we could be required to raise additional capital to pursue further development or commercialization of the applicable product candidates. For example, each of our collaboration and license agreements with Merck, Lilly, BMS, GSK, Daiichi Sankyo, Janssen, LEO, BeiGene and Iconic may be terminated for convenience upon the completion of a specified notice period;
- we may elect to enter into additional licensing or collaboration agreements to partner our product candidates in territories we currently retain, and in the event we grant exclusive rights to such partners, we would be precluded from potential commercialization of our product candidates within the territories in which we have a partner; and
- strategic partners may not have the ability or the development capabilities to perform their obligations as expected, including as a result of the impact of the COVID-19 pandemic on our strategic partners' operations or business.

If our strategic partnerships do not result in the successful development and commercialization of product candidates or if one of our partners terminates its agreement with us, we may not receive any future research funding or milestone or royalty payments under the collaboration. If we do not receive the funding we expect under our strategic partnership agreements, our development of our therapeutic platforms and product candidates could be delayed and we may need additional resources to develop product candidates and our therapeutic platforms.

We face significant competition in seeking new strategic partners.

For some of our product candidates, we may in the future determine to collaborate with additional pharmaceutical and biotechnology companies for development and potential commercialization of therapeutic products. Our ability to reach a definitive agreement for a collaboration will depend, among other things, upon our assessment of the strategic partner's resources and expertise, the terms and conditions of the proposed collaboration and the proposed strategic partner's evaluation of a number of factors. These factors may include the design or results of clinical trials, the likelihood of approval by the FDA or similar regulatory authorities outside the United States, the potential market for the subject product candidate, the costs and complexities of manufacturing and delivering such product candidate to patients, the potential of competing products, the existence of uncertainty with respect to our ownership of technology, which can exist if there is a challenge to such ownership without regard to the merits of the challenge, and industry and market conditions generally. The strategic partner may also consider alternative product candidates or technologies for similar indications that may be available to collaborate on and whether such a collaboration could be more attractive than the one with us for our product candidate.

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Strategic partnerships are complex and time-consuming to negotiate and document. In addition, there have been a significant number of recent business combinations among large pharmaceutical companies that have resulted in a reduced number of potential future strategic partners. If we are unable to reach agreements with suitable strategic partners on a timely basis, on acceptable terms, or at all, we may have to curtail the development of a product candidate, reduce or delay one or more of our other development programs, delay potential commercialization or reduce the scope of any sales or marketing activities, or increase our expenditures and undertake development or commercialization activities at our own expense. If we elect to fund and undertake development or commercialization activities on our own, we may need to obtain additional expertise and additional capital, which may not be available to us on acceptable terms or at all. If we fail to enter into strategic partnerships and do not have sufficient funds or expertise to undertake the necessary development and commercialization activities, we may not be able to further develop our product candidates or bring them to market or continue to develop our therapeutic platforms and our business may be materially and adversely affected.

We rely on third-party manufacturers to produce our product candidates and on other third parties to provide supplies and store, monitor and transport bulk drug substance and drug product. We and our third-party partners may encounter difficulties with respect to these activities that could delay or impair our ability to initiate or complete our clinical trials or commercialize approved products.

We do not currently own or operate any manufacturing facilities. We rely on our strategic partners to manufacture product candidates licensed to them or work with multiple third-party contract manufacturers to produce sufficient quantities of materials required for the manufacture of our product candidates for preclinical testing and clinical trials, in compliance with applicable regulatory and quality standards, and intend to do so for the commercial manufacture of our products. If we are unable to arrange for such third-party manufacturing sources, or fail to do so on commercially reasonable terms, we may not be able to successfully produce sufficient supply of product candidate or we may be delayed in doing so. Such failure or substantial delay could materially harm our business.

The manufacture of biopharmaceutical products is complex and requires significant expertise and capital investment, including the development of advanced manufacturing techniques and process controls. The process of manufacturing our product candidates is susceptible to product loss due to contamination, equipment failure or improper installation or operation of equipment, vendor or operator error, contamination and inconsistency in yields, variability in product characteristics and difficulties in scaling the production process. Even minor deviations from normal manufacturing processes could result in reduced production yields, product defects and other supply disruptions. If microbial, viral or other contaminations are discovered in our product candidates or in the third-party manufacturing facilities in which our product candidates are made, such manufacturing facilities may need to be closed for an extended period of time to investigate and remedy the contamination. All of our engineered antibodies are manufactured by utilizing cells that are stored in a cell bank. We have one master cell bank and one working cell bank utilized for each antibody manufactured in accordance with cGMP. While we believe we would have adequate back up at a secondary storage location, should any cell bank be lost in a catastrophic event, it is possible that we could lose part of a cell bank and have our manufacturing potentially impacted by the need to replace the cell bank. Any adverse developments affecting manufacturing operations for our product candidates, if any are approved, may result in shipment delays, inventory shortages, lot failures, product withdrawals or recalls, or other interruptions in the supply of our products. We may also have to take inventory write-offs and incur other charges and expenses for products that fail to meet specifications, undertake costly remediation efforts or seek more costly manufacturing alternatives.

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

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In addition to third-party manufacturers, we rely on other third parties to store, monitor and transport bulk drug substance and drug product. If we are unable to arrange for such third-party sources, or fail to do so on commercially reasonable terms, we may not be able to successfully supply sufficient product candidate or we may be delayed in doing so. Such failure or substantial delay could materially harm our business.

In addition, disruptions to ports and other shipping infrastructure, due in part to the impact of the ongoing COVID-19 pandemic, may result in shortages or delays impacting the availability of materials and other supplies, which could negatively impact our manufacturers, suppliers and other third parties on whom we rely. While we have not yet suffered any direct, material negative impacts from these ongoing supply chain disruptions, we cannot be certain that we will not be impacted, which could increase our costs or negatively impact our development timelines.

We rely on third parties to monitor, support, conduct and oversee clinical trials of the product candidates that we are developing and, in some cases, to maintain regulatory files for those product candidates. We may not be able to obtain regulatory approval for our product candidates or commercialize any products that may result from our development efforts if we are not able to maintain or secure agreements with such third parties on acceptable terms, if these third parties do not perform their services as required, or if these third parties fail to timely transfer any regulatory information held by them to us.

We rely on entities outside of our control, which may include academic institutions, CROs, hospitals, clinics and other third-party strategic partners, to monitor, support, conduct and oversee preclinical studies and clinical trials of our current and future product candidates. We also rely on third parties to perform clinical trials on our current and future product candidates when they reach that stage. As a result, we have less control over the timing and cost of these studies and the ability to recruit trial subjects than if we conducted these trials with our own personnel.

If we are unable to maintain or enter into agreements with these third parties on acceptable terms, or if any such engagement is terminated prematurely, we may be unable to enroll patients on a timely basis or otherwise conduct our trials in the manner we anticipate. In addition, there is no guarantee that these third parties will devote adequate time and resources to our studies or perform as required by our contract or in accordance with regulatory requirements, including maintenance of clinical trial information regarding our product candidates. If these third parties fail to meet expected deadlines, fail to transfer to us any regulatory information in a timely manner, fail to adhere to protocols or fail to act in accordance with regulatory requirements or our agreements with them, or if they otherwise perform in a substandard manner or in a way that compromises the quality or accuracy of their activities or the data they obtain, then clinical trials of our product candidates may be extended or delayed with additional costs incurred, or our data may be rejected by the FDA, EMA or other regulatory agencies.

Ultimately, we are responsible for ensuring that each of our clinical trials is conducted in accordance with the applicable protocol, legal, regulatory and scientific standards, and our reliance on third parties does not relieve us of our regulatory responsibilities.

We and our CROs are required to comply with cGCP regulations and guidelines enforced by the FDA, the competent authorities of the member states of the EU and comparable foreign regulatory authorities for products in clinical development. Regulatory authorities enforce these cGCP regulations through periodic inspections of clinical trial sponsors, principal investigators and clinical trial sites. If we or any of our CROs fail to comply with applicable cGCP regulations, the clinical data generated in our clinical trials may be deemed unreliable and our submission of marketing applications may be delayed or the FDA may require us to perform additional clinical trials before approving our marketing applications. Upon inspection, the FDA could determine that any of our clinical trials fail or have failed to comply with applicable cGCP regulations. In addition, our clinical trials must be conducted with product produced under the cGMP regulations enforced by the FDA, and our clinical trials may require a large number of test subjects. Our failure to comply with these regulations may require us to repeat clinical trials, which would delay the regulatory approval process and increase our costs. Moreover, our business may be implicated if any of our CROs violates federal or state fraud and abuse or false claims laws and regulations or healthcare privacy and security laws.

If any of our clinical trial sites terminate for any reason, we may experience the loss of follow-up information on patients enrolled in our ongoing clinical trials unless we are able to transfer the care of those patients to another qualified clinical trial site. Further, if our relationship with any of our CROs is terminated, we may be unable to enter into arrangements with alternative CROs on commercially reasonable terms, or at all.

Switching or adding CROs or other suppliers can involve substantial cost and require extensive management time and focus. In addition, there is a natural transition period when a new CRO or supplier commences work. As a result, delays may occur,

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which can materially impact our ability to meet our desired clinical development timelines. If we are required to seek alternative supply arrangements, the resulting delays and potential inability to find a suitable replacement could materially and adversely impact our business.

We rely on third parties for various operational and administrative aspects of our business, including for certain cloud-based software platforms, which impact our financial, operational and research activities. If any of these third parties fail to provide timely, accurate and ongoing service or if the cloud-based platforms suffer outages that we are unable to mitigate, our business may be adversely affected.

We currently rely upon third-party consultants and contractors to provide certain operational and administrative services, including external financial, legal, clinical and research consultation. The failure of any of these third parties to provide accurate and timely service may adversely impact our business operations. In addition, if such third-party service providers were to cease operations, temporarily or permanently, face financial distress or other business disruption, or increase their fees, or if our relationships with these providers deteriorate, we could suffer increased costs until an equivalent provider could be found, if at all, or we could develop internal capabilities, if ever.

In addition, if we are unsuccessful in choosing or finding high-quality partners, if we fail to negotiate cost-effective relationships with them, or if we ineffectively manage these relationships, it could have an adverse impact on our business and financial performance.

Further, our operations depend on the continuing and efficient operation of our information technology and communications systems and infrastructure, and specifically on “cloud-based” platforms. These platforms are vulnerable to damage or interruption from earthquakes, vandalism, sabotage, terrorist attacks, floods, fires, power outages, telecommunications failures, and computer viruses or other deliberate attempts to harm the systems. The occurrence of a natural or intentional disaster, any decision to close a facility we are using without adequate notice, or particularly an unanticipated problem at our cloud-based virtual server facility, could result in harmful interruptions in our service, resulting in adverse effects to our business.

Risks Related to Our Intellectual Property

Our commercial success depends significantly on our ability to operate without infringing the patents and other proprietary rights of third parties.

Our success will depend in part on our ability to operate without infringing the proprietary rights of third parties. Other entities may have or obtain patents or proprietary rights that could limit our ability to make, use, sell, offer for sale or import our future approved products or impair our competitive position. For example, certain patents and patent applications held by third parties cover Fab and Fc region engineering methods for bispecific antibodies, and antibodies having mutations in Fab heavy and light chain regions and Fc regions to generate correctly paired bispecific antibodies. If our products or our strategic partners’ products incorporate any Fab or Fc region mutations covered by any claims of these patents or patents that may issue from these applications, and if licenses for them are not available on commercially reasonable terms or at all, and we are unable to invalidate or render unenforceable those patents, our business could be materially harmed.

We are also aware of third-party patents and patent applications containing claims directed to compositions and methods for treating various forms of cancer with antibodies targeting HER2, alone or in combination with other anti-cancer agents, which patents and applications could potentially be construed to cover our product candidates and the use thereof to treat cancer. If our products or our strategic partners’ products were found to infringe any such patents, and if licenses for them are not available on commercially reasonable terms, or at all, and we were unable to invalidate or render unenforceable those patents, our business could be materially harmed. These patents may not expire before we receive marketing authorization for our product candidates, and could delay the commercial launch of one or more future products. There is also no assurance that there are not third-party patents or patent applications of which we are aware, but which we do not believe are relevant to our business, which may, nonetheless, ultimately be found to limit our ability to make, use, sell, offer for sale or import our future approved products or impair our competitive position.

Patents that we may ultimately be found to infringe could be issued to third parties. Third parties may have or obtain valid and enforceable patents or proprietary rights that could block us from developing product candidates using our technology. Our failure to obtain a license to any patent covering any technology that we require may materially harm our business, financial condition and results of operations. Moreover, our failure to maintain a license to any patent covering any technology that we require may also materially harm our business, financial condition and results of operations. Furthermore, we would be exposed to a threat of litigation.

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In the pharmaceutical industry, significant litigation and other proceedings regarding patents, patent applications, trademarks and other intellectual property rights are commonplace. Any such lawsuits and proceedings could be costly and could affect our results of operations and divert the attention of our management and scientific personnel. Some of our competitors may be able to sustain the cost of such litigation and proceedings more effectively than we can because of their substantially greater resources. There is a risk that a court would decide that we or our strategic partners are infringing a third party's patents and would order us or our strategic partners to stop the activities or stop the manufacture, use, or sale of any product covered by the patents. In that event, we or our strategic partners may not have a viable alternative to the technology protected by the patent and may need to halt work on the affected product candidate or cease commercialization of an approved product. In addition, there is a risk that a court would order us or our strategic partners to pay third-party damages or some other monetary award, depending upon the jurisdiction. An adverse outcome in any litigation or other proceeding could subject us to significant liabilities to third parties, potentially including treble damages and attorneys' fees if we are found to have willfully infringed, and we may be required to cease using the technology that is at issue or to license the technology from third parties. We may not be able to obtain any required licenses on commercially acceptable terms or at all. Any of these outcomes could have a material adverse effect on our business.

If we are unable to obtain, maintain and enforce patent and trade secret protection for our product candidates and related technology, our business could be materially harmed.

Our strategy depends on our ability to identify and seek patent protection for our discoveries. This process is expensive and time consuming, and we may not be able to file and prosecute all necessary or desirable patent applications at a reasonable cost or in a timely manner or in all jurisdictions where protection may be commercially advantageous. It is also possible that we will fail to identify patentable aspects of our research and development output before it is too late to obtain patent protection. Moreover, in some circumstances, we may not have the right to control the preparation, filing and prosecution of patent applications, or to maintain the patents, covering technology that we have licensed from third parties. Therefore, our owned or in-licensed patents and patent applications may not be prosecuted and enforced in a manner consistent with the best interests of our business. Our patent applications cannot be enforced against third parties practicing the technology claimed in such applications unless, and until, patents issue from such applications, and then only to the extent the issued claims cover the technology. The patent applications that we own or in-license may fail to result in issued patents with claims that cover our current and future product candidates in the United States or in other countries.

Moreover, the patent position of biopharmaceutical companies generally is highly uncertain, involves complex legal and factual questions and has been the subject of much litigation. The issuance of a patent does not ensure that it is valid or enforceable. Third parties may challenge the validity, enforceability or scope of our issued patents, and such patents may be narrowed, invalidated, circumvented, or deemed unenforceable. In addition, changes in law may introduce uncertainty in the enforceability or scope of patents owned by biotechnology companies. If our patents are narrowed, invalidated or held unenforceable, third parties may be able to commercialize our technology or products and compete directly with us without payment to us. There is no assurance that all potentially relevant prior art relating to our patents and patent applications has been found, and such prior art could potentially invalidate one or more of our patents or prevent a patent from issuing from one or more of our pending patent applications. There is also no assurance that there is not prior art of which we are aware, but which we do not believe affects the validity or enforceability of a claim in our patents and patent applications, which may, nonetheless, ultimately be found to affect the validity or enforceability of a claim.

Furthermore, even if our patents are unchallenged, they may not adequately protect our intellectual property, provide exclusivity for our product candidates, prevent others from designing around our claims or provide us with a competitive advantage. The legal systems of certain countries do not favor the aggressive enforcement of patents, and the laws of other countries may not allow us to protect our inventions with patents to the same extent as the laws of the United States. Because patent applications in the United States and many other jurisdictions are typically not published until 18 months after filing, or in some cases not at all, and because publications of discoveries in scientific literature lag behind actual discoveries, we cannot be certain that we were the first to make the inventions claimed in our issued patents or pending patent applications, or that we were the first to file for protection of the inventions set forth in our patents or patent applications. As a result, we may not be able to obtain or maintain protection for certain inventions. Therefore, the issuance, validity, enforceability, scope and commercial value of our patents in the United States and in other countries cannot be predicted with certainty and, as a result, any patents that we own or license may not provide sufficient protection against competitors. We may not be able to obtain or maintain patent protection from our pending patent applications, from those we may file in the future, or from those we may license from third parties. Moreover, even if we are able to obtain patent protection, such patent protection may be of insufficient scope to achieve our business objectives. In addition, the issuance of a patent does not give us the right to practice the patented invention. Third parties may have blocking patents that could prevent us from marketing our own patented product and practicing our own patented technology.

Our patents covering one or more of our products or product candidates could be found invalid or unenforceable if challenged.

Any of our intellectual property rights could be challenged or invalidated despite measures we take to obtain patent and other intellectual property protection with respect to our product candidates and proprietary technology. For example, if we were to initiate legal proceedings against a third party to enforce a patent covering one of our product candidates, the defendant could counterclaim that our patent is invalid and/or unenforceable. In patent litigation in the United States and in some other jurisdictions, defendant counterclaims alleging invalidity and/or unenforceability are commonplace. Grounds for a validity challenge could be an alleged failure to meet any of several statutory requirements, for example, lack of novelty, obviousness or non-enablement. Grounds for an unenforceability assertion could be an allegation that someone connected with prosecution of the patent withheld material information from the U.S. Patent and Trademark Office (“USPTO”) or the applicable foreign counterpart, or made a misleading statement, during prosecution. A litigant or the USPTO itself could challenge our patents on this basis even if we believe that we have conducted our patent prosecution in accordance with the duty of candor and in good faith. The outcome following such a challenge is unpredictable.

With respect to challenges to the validity of our patents, for example, there might be invalidating prior art, of which we and the patent examiner were unaware during prosecution. If a defendant were to prevail on a legal assertion of invalidity and/or unenforceability, we would lose at least part, and perhaps all, of the patent protection on a product candidate. Even if a defendant does not prevail on a legal assertion of invalidity and/or unenforceability, our patent claims may be construed in a manner that would limit our ability to enforce such claims against the defendant and others. The cost of defending such a challenge, and any resulting loss of patent protection, could have a material adverse impact on one or more of our product candidates and our business.

Enforcing our intellectual property rights against third parties may also cause such third parties to file other counterclaims against us, which could be costly to defend and could require us to pay substantial damages, cease the use, manufacture, or sale of certain products or enter into a license agreement and pay royalties (which may not be possible on commercially reasonable terms or at all). Any efforts to enforce our intellectual property rights are also likely to be costly and may divert the efforts of our scientific and management personnel.

Our intellectual property rights will not necessarily provide us with competitive advantages.

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

- others may be able to make compounds that are similar to our product candidates but that are not covered by the claims of the patents that we or our strategic partners own or have exclusively licensed;
- others may independently develop similar or alternative technologies without infringing our intellectual property rights;
- issued patents that we own or have exclusively licensed may not provide us with any competitive advantages, or may be held invalid or unenforceable, as a result of legal challenges by our competitors;
- we may obtain patents for certain compounds many years before we obtain marketing approval for products containing such compounds, and because patents have a limited life, which may begin to run prior to the commercial sale of the related product, the commercial value of our patents may be limited;
- our competitors might conduct research and development activities in countries where we do not have patent rights and then use the information learned from such activities to develop competitive products for sale in our major commercial markets;
- we may fail to develop additional proprietary technologies that are patentable;
- the laws of certain countries may not protect our intellectual property rights to the same extent as the laws of the United States, or we may fail to apply for or obtain adequate intellectual property protection in all the jurisdictions in which we operate; and
- the patents of others may have an adverse effect on our business, for example by preventing us from marketing one or more of our product candidates for one or more indications.

Any of the aforementioned threats to our competitive advantage could have a material adverse effect on our business.

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We may become involved in lawsuits to protect or enforce our patents and trade secrets, which could be expensive, time consuming and unsuccessful.

Third parties may seek to market biosimilar versions of any approved products. Alternatively, third parties may seek approval to market their own products similar to or otherwise competitive with our product candidates. In these circumstances, we may need to defend or assert our patents, including by filing lawsuits alleging patent infringement. The outcome following legal assertions of invalidity and unenforceability is unpredictable. In any of these types of proceedings, a court or agency with jurisdiction may find our patents invalid or unenforceable. Even if we have valid and enforceable patents, these patents still may not provide protection against competing products or processes sufficient to achieve our business objectives.

Even after they have issued, our patents and any patents that we license may be challenged, narrowed, invalidated or circumvented. If our patents are invalidated or otherwise limited or will expire prior to the commercialization of our product candidates, other companies may be better able to develop products that compete with ours, which could adversely affect our competitive business position, business prospects and financial condition. In addition, if the breadth or strength of protection provided by our patents and patent applications is threatened, it could dissuade companies from collaborating with us to license, develop or commercialize current or future product candidates.

The following are examples of litigation and other adversarial proceedings or disputes that we could become a party to involving our patents or patents licensed to us:

- we or our strategic partners may initiate litigation or other proceedings against third parties to enforce our patent or trade secret rights;
- third parties may initiate litigation or other proceedings seeking to invalidate patents owned by or licensed to us or to obtain a declaratory judgment that their product or technology does not infringe our patents or patents licensed to us;
- third parties may initiate opposition or reexamination proceedings challenging the validity or scope of our patent rights, requiring us or our strategic partners and/or licensors to participate in such proceedings to defend the validity and scope of our patents;
- there may be a challenge or dispute regarding inventorship or ownership of patents or trade secrets currently identified as being solely or co-owned by us or by a licensor who has granted a license to us;
- the USPTO may initiate an interference between patents or patent applications owned by or licensed to us and those of our competitors, requiring us or our strategic partners and/or licensors to participate in an interference proceeding to determine the priority of invention, which could jeopardize our patent rights; or
- third parties may seek approval to market biosimilar versions of our future approved products prior to expiration of relevant patents owned by or licensed to us, requiring us to defend our patents, including by filing lawsuits alleging patent infringement.

These lawsuits and proceedings would be costly and could affect our results of operations and divert the attention of our managerial and scientific personnel. Adversaries in these proceedings may have the ability to dedicate substantially greater resources to prosecuting these legal actions than we or our licensors can. There is a risk that a court or administrative body would decide that our patents are invalid, unenforceable or not infringed or trade secrets not misappropriated by a third party's activities, or that the scope of certain issued claims must be further limited. An adverse outcome in a litigation or proceeding involving our own patents or trade secrets could limit our ability to assert our patents or trade secrets against these or other competitors, affect our ability to receive royalties or other licensing consideration from our licensees, and may curtail or preclude our ability to exclude third parties from making, using and selling similar or competitive products. Any of these occurrences could adversely affect our competitive business position, business prospects and financial condition.

We may not be able to prevent, alone or with our licensors or licensees, infringement or misappropriation of our intellectual property rights, particularly in countries where the laws may not protect those rights as fully as in the United States. Any litigation or other proceedings to enforce our intellectual property rights may fail, and even if successful, may result in substantial costs and distract our management and other employees.

Furthermore, because of the substantial amount of discovery required in connection with intellectual property litigation, there is a risk that some of our confidential information could be compromised by disclosure during this type of litigation. There could also be public announcements of the results of hearings, motions or other interim proceedings or developments. If securities analysts or investors perceive these results to be negative, it could have an adverse effect on the price of our common shares.

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The degree of future protection for our proprietary rights is uncertain because legal means afford only limited protection and may not adequately protect our rights or permit us to gain or keep our competitive advantage. For example:

- others may be able to develop a platform that is similar to, or better than, ours in a way that is not covered by the claims of our patents;
- others may be able to make compounds that are similar to our product candidates but that are not covered by the claims of our patents;
- we might not have been the first to make the inventions covered by patents or pending patent applications;
- we might not have been the first to file patent applications for these inventions;
- any patents that we obtain may not provide us with any competitive advantages or may ultimately be found invalid or unenforceable; or
- we may not develop additional proprietary technologies that are patentable or that afford meaningful trade secret protection.

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

Patents have a limited lifespan. In the United States, if all maintenance fees are timely paid, the expiration of a patent is generally 20 years from its earliest U.S. non-provisional filing date. Various extensions may be available, but the life of a patent, and the protection it affords, is limited. Even if patents covering our product candidates are obtained, once the patent life has expired, we may be open to competition from competitive products, including biosimilars. Given the amount of time required for the development, testing and regulatory review of new product candidates, patents protecting such candidates might expire before or shortly after such candidates are commercialized. As a result, our owned and licensed patent portfolio may not provide us with sufficient rights to exclude others from commercializing products similar or identical to ours.

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

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

If we are unable to protect the confidentiality of our proprietary information, the value of our technology and products could be adversely affected.

In addition to patent protection, we also rely on other proprietary rights, including protection of trade secrets, and other proprietary information. For example, we treat our confidential and proprietary computational technologies, including unpatented know-how and other proprietary information, as trade secrets. We enter into confidentiality agreements with our employees, consultants, strategic partners and others upon the commencement of their relationships with us. These agreements provide that all confidential information developed by the individual or made known to the individual by us during the course of the individual's relationship with us be kept confidential and not disclosed to third parties. Our agreements with employees and our personnel policies also provide that any inventions conceived by the individual in the course of rendering services to us shall be our exclusive property. However, we may not obtain these agreements in all circumstances, and individuals with whom we have these agreements may not comply with their terms. We cannot guarantee that we have entered into such agreements with each party that has or may have had access to, or houses or hosts, our trade secrets or proprietary information or that has been involved in the development of intellectual property. Further, despite such agreements, such inventions or confidential information may become disclosed or assigned to third parties. Monitoring unauthorized uses and disclosures is difficult and we

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do not know whether the steps we have taken to protect our proprietary technologies will be effective. In the event of unauthorized use or disclosure of our trade secrets or proprietary information, these agreements, even if obtained, may not provide meaningful protection, particularly for our trade secrets or other confidential information. To the extent that our employees, consultants or contractors use technology or know-how owned by third parties in their work for us, disputes may arise between us and those third parties as to the rights in such technology or know-how or in related inventions. To the extent that an individual who is not obligated to assign rights in intellectual property to us is rightfully an inventor of intellectual property, we may need to obtain an assignment or a license to that intellectual property from that individual, or a third party or from that individual's assignee. Such assignment or license may not be available on commercially reasonable terms or at all.

We also seek to preserve the integrity and confidentiality of our data and trade secrets by maintaining physical security of our premises and physical and electronic security of our information technology systems and cloud storage sources, but such security measures may be breached, including through cyber-hacking or cyberattacks, and we may not have adequate remedies for any breach.

Enforcing a claim that a party illegally disclosed or misappropriated a trade secret is difficult, expensive and time-consuming and the outcome is unpredictable. In addition, some courts inside and outside the United States are less willing or unwilling to protect trade secrets. The disclosure of our trade secrets would impair our competitive position and may materially harm our business, financial condition and results of operations. Costly and time-consuming litigation could be necessary to enforce and determine the scope of our proprietary rights, and failure to maintain trade secret protection could adversely affect our competitive business position. In addition, if any of our trade secrets were to be lawfully obtained or independently developed by a competitor, we would have no right to prevent such third party, or those to whom they communicate such technology or information, from using that technology or information to compete with us. If any of our trade secrets were to be disclosed to or independently developed by a competitor, or if we otherwise lose protection for our trade secrets or proprietary know-how, the value of this information may be greatly reduced and our business and competitive position could be harmed. Adequate remedies may not exist in the event of unauthorized use or disclosure of our proprietary information.

As is common in the biotechnology and pharmaceutical industries, we employ individuals who were previously or concurrently employed at research institutions and/or other biotechnology or pharmaceutical companies, including our competitors or potential competitors. We may be subject to claims that these employees, or we, have inadvertently or otherwise used or disclosed trade secrets or other proprietary information of their former employers, or that patents and applications we have filed to protect inventions of these employees, even those related to one or more of our product candidates, are rightfully owned by their former or concurrent employer. Litigation may be necessary to defend against these claims. Such trade secrets or other proprietary information could be awarded to a third party, and we could be required to obtain a license from such third party to commercialize our technology or products. Such license may not be available on commercially reasonable terms or at all. Even if we are successful in defending against these claims, litigation could result in substantial costs and be a distraction to management.

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

Periodic maintenance fees, renewal fees, annuity fees and various other governmental fees on patents or applications will be due to the USPTO and various foreign patent offices at various points over the lifetime of our patents or applications. We have systems in place to remind us to pay these fees, and we rely on our outside patent annuity service to pay these fees when due. Additionally, the USPTO and various foreign patent offices require compliance with a number of procedural, documentary, fee payment and other similar provisions during the patent application process. We employ reputable law firms and other professionals to help us comply, and in many cases an inadvertent lapse can be cured by payment of a late fee or by other means in accordance with rules applicable to the particular jurisdiction. However, there are situations in which noncompliance can result in abandonment or lapse of the patent or patent application, resulting in partial or complete loss of patent rights in the relevant jurisdiction. If such an event were to occur, it could have a material adverse effect on our business.

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

Although we are not currently experiencing any claims challenging the inventorship or ownership of our patents, we may in the future be subject to claims that former employees, strategic partners or other third parties have an interest in our patents or other intellectual property as an inventor or co-inventor. While it is our policy to require our employees and contractors who may be involved in the conception or development of intellectual property to execute agreements assigning such intellectual property to us, we may be unsuccessful in executing such an agreement with each party who, in fact, conceives or develops intellectual

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property that we regard as our own. For example, the assignment of intellectual property rights may not be self-executing or the assignment agreements may be breached, or we may have inventorship disputes arise from conflicting obligations of consultants or others who are involved in developing our product candidates. Litigation may be necessary to defend against these and other claims challenging inventorship. If we fail in defending any such claims, in addition to paying monetary damages, we may lose valuable intellectual property rights, such as exclusive ownership of, or right to use, valuable intellectual property. Even if we are successful in defending against such claims, litigation could result in substantial costs and be a distraction to management and other employees.

Patent protection and patent prosecution for some of our product candidates may be dependent on, and the ability to assert patents and defend them against claims of invalidity may be maintained by, third parties.

There may be times in the future when certain patents that relate to our product candidates or any approved products are controlled by our licensees or licensors. Although we may, under such arrangements, have rights to consult with our strategic partners on actions taken as well as back-up rights of prosecution and enforcement, we have in the past and may in the future relinquish rights to prosecute and maintain patents and patent applications within our portfolio as well as the ability to assert such patents against infringers.

If any current or future licensee or licensor with rights to prosecute, assert or defend patents related to our product candidates fails to appropriately prosecute and maintain patent protection for patents covering any of our product candidates, or if patents covering any of our product candidates are asserted against infringers or defended against claims of invalidity or unenforceability in a manner that adversely affects such coverage, our ability to develop and commercialize any such product candidate may be adversely affected and we may not be able to prevent competitors from making, using and selling competing products.

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

The patent positions of pharmaceutical and biotechnology companies can be highly uncertain and involve complex legal and factual questions for which important legal principles remain unresolved. Changes in either the patent laws or in the interpretations of patent laws in the United States and other countries may diminish the value of our intellectual property. We cannot predict the breadth of claims that may be allowed or found to be enforceable in our patents, in our strategic partners' patents or in third-party patents. Recent U.S. Supreme Court rulings have either narrowed the scope of patent protection available in certain circumstances or weakened the rights of patent owners in certain situations. In addition to increasing uncertainty with regard to our ability to obtain patents in the future, this has created uncertainty with respect to the validity, scope and value of patents, once obtained.

For our U.S. patent applications containing a priority claim after March 16, 2013, there is a greater level of uncertainty in the patent law. In September 2011, the Leahy-Smith America Invents Act, also known as the America Invents Act ("AIA"), was signed into law. The AIA includes a number of significant changes to U.S. patent law, including provisions that affect the way patent applications will be prosecuted and may also affect patent litigation.

The AIA and its implementation could increase the uncertainties and costs surrounding the prosecution of our patent applications and the enforcement or defense of our issued patents, all of which could have an adverse effect on our business. An important change introduced by the AIA is that, as of March 16, 2013, the United States transitioned to a "first-to-file" system for deciding which party should be granted a patent when two or more patent applications are filed by different parties disclosing or claiming the same invention. A third party that has filed, or files a patent application in the USPTO after March 16, 2013, but before us, could be awarded a patent covering a given invention, even if we had made the invention before it was made by the third party. This requires us to be cognizant of the time from invention to filing of a patent application.

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

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Depending on decisions by the U.S. Congress, the U.S. federal courts, the USPTO or similar authorities in foreign jurisdictions, the laws and regulations governing patents could change in unpredictable ways that may weaken our and our licensors' ability to obtain new patents or to enforce existing patents we and our licensors or partners may obtain in the future.

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

Filing, prosecuting and defending patents on product candidates in all countries throughout the world would be prohibitively expensive, and our intellectual property rights in some countries outside the United States can be less extensive than those in the United States. In addition, the laws of some countries do not protect intellectual property rights to the same extent as laws in the United States. Consequently, we may not be able to prevent third parties from practicing our inventions in all countries outside the United States, or from selling or importing products made using our inventions in and into the United States or other jurisdictions. Competitors may use our technologies in jurisdictions where we have not obtained patent protection to develop their own products and further, may export otherwise infringing products to territories where we have patent protection, but enforcement is not as strong as that in the United States. These products may compete with our current or future products, if any, and our patents or other intellectual property rights may not be effective or sufficient to prevent them from competing. Recent U.S. Supreme Court cases have narrowed the scope of what is considered patentable subject matter, for example, in the areas of software and diagnostic methods involving the association between treatment outcome and biomarkers. This could impact our ability to patent certain aspects of our technology in the United States.

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

Additionally, the requirements for patentability may differ in certain countries. For example, China has a heightened requirement for patentability, and specifically requires a detailed description of medical uses of a claimed drug. In India, unlike the United States, there is no link between regulatory approval of a drug and its patent status. In addition to India, certain countries in Europe and developing countries, including China, have compulsory licensing laws under which a patent owner may be compelled to grant licenses to third parties. In those countries, we and our licensors may have limited remedies if patents are infringed or if we or our licensors are compelled to grant a license to a third party, which could materially diminish the value of those patents. This could limit our potential revenue opportunities. Accordingly, our efforts to enforce intellectual property rights around the world may be inadequate to obtain a significant commercial advantage from the intellectual property that we own or license.

We use open source software in connection with our internal research and development programs, which could negatively affect our ability to develop products and subject us to litigation or other actions.

We use open source software in connection with our internal research and development programs. The terms of many open source licenses have not been interpreted by U.S. courts or courts outside of the U.S., and there is a risk that these licenses could be construed in a way that could impose unanticipated conditions or restrictions on our ability to use this software. As a result, we could be subject to lawsuits by parties claiming ownership of what we believe to be open source software, or claiming that software we developed using such open source software is a derivative work of open source software and demanding the release of portions of our source code, or otherwise seeking to enforce the terms of the applicable open source license. Litigation could be costly for us to defend, have a negative effect on our financial condition and results of operations or require us to devote additional research and development resources to change our platform and offerings.

If we were to combine our proprietary software with open source software in a certain manner, we could, under certain open source licenses, be required to release the source code of our proprietary software to the public. While we monitor our use of open source software and try to ensure that none is used in a manner that would require us to disclose our proprietary source code or that would otherwise breach the terms of an open source agreement, such use could inadvertently occur, or could be claimed to have occurred, in part because open source license terms are often ambiguous. If we inappropriately use open source

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software, or if the license terms for open source software that we use change, we may be required to re-engineer our platform, incur additional costs, discontinue the use of some or all of our platform or take other remedial actions.

In addition to risks related to license requirements, usage of open source software can lead to greater risks than use of third-party commercial software, because open source licensors generally do not provide warranties or assurance of title or controls on origin of the software. In addition, many of the risks associated with usage of open source software, such as the lack of warranties or assurances of title, cannot be eliminated, and could, if not properly addressed, negatively affect our business. We have established processes to help alleviate these risks, including a review process for the use of open source software, but we cannot be sure that all of our use of open source software is in a manner that is consistent with our current policies and procedures, or will not subject us to liability. Any of these risks could be difficult to eliminate or manage and, if not addressed, could have an adverse effect on our business, financial condition and results of operations.

We will need to obtain FDA approval for any proposed product candidate names, and any failure or delay associated with such approval may adversely affect our business.

Any proprietary name or trademark we intend to use for our product candidates will require approval from the FDA regardless of whether we have secured a formal trademark registration from the USPTO. The FDA typically conducts a review of proposed product candidate names, including an evaluation of the potential for confusion with other product names. The FDA may also object to a product name if it believes the name inappropriately implies certain medical claims or contributes to an overstatement of efficacy. If the FDA objects to any product candidate names we propose, we may be required to adopt an alternative name for our product candidates. If we adopt an alternative name, we would lose the benefit of any existing trademark applications for such product candidate and may be required to expend significant additional resources in an effort to identify a suitable product name that would qualify under applicable trademark laws, not infringe the existing rights of third parties and be acceptable to the FDA. We may be unable to build a successful brand identity for a new trademark in a timely manner or at all, which would limit our ability to commercialize our product candidates.

Risks Related to Additional Legal and Compliance Matters

Our employees may engage in misconduct or other improper activities, including noncompliance with regulatory standards and requirements, insider trading, and noncompliance with our policies and procedures.

We are exposed to the risk of employee fraud or other misconduct. Misconduct by employees could include intentional failures to comply with FDA regulations, to provide accurate information to the FDA, to comply with federal and state health care fraud and abuse laws and regulations, to report financial information or data accurately or to disclose unauthorized activities to us. In particular, sales, marketing and business arrangements in the health care industry are subject to extensive laws and regulations intended to prevent fraud, misconduct, kickbacks, self-dealing and other abusive practices. These laws and regulations may restrict or prohibit a wide range of pricing, discounting, marketing and promotion, sales commission, customer incentive programs and other business arrangements. Employee misconduct could also involve the improper use of information obtained in the course of clinical trials, which could result in regulatory sanctions and serious harm to our reputation. We have adopted a Code of Conduct and Business Ethics, but it is not always possible to identify and deter employee misconduct, and the precautions we take to detect and prevent this activity may not be effective in controlling unknown or unmanaged risks or losses or in protecting us from governmental investigations or other actions or lawsuits stemming from a failure to comply with these 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, including the imposition of significant fines or other sanctions. In addition, employees may become subject of allegations of gender discrimination and other misconduct that are not in compliance with our policies and procedures, which, regardless of the ultimate outcome, may result in adverse publicity that could materially harm our brand, reputation and business.

If we or our contractors or agents market products in a manner that violates healthcare fraud and abuse laws, or if we violate government price reporting laws and transparency laws, we may be subject to civil or criminal penalties.

In addition to FDA restrictions on the marketing of pharmaceutical products, federal and state healthcare laws restrict certain business practices in the biopharmaceutical industry. Although we currently do not have any products on the market, we may be subject, and if our product candidates are approved and we begin commercialization will be subject, to additional healthcare laws and regulations enforced by the federal government and by authorities in the states and foreign jurisdictions in which we conduct our business. These state and federal healthcare laws, commonly referred to as “fraud and abuse” laws, have been applied in recent years to restrict certain marketing practices in the pharmaceutical industry, and include anti-kickback, false claims, data privacy and security and transparency statutes and regulations.

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Federal false claims laws prohibit, among other things, any person from knowingly presenting, or causing to be presented, a false claim for payment to the federal government or knowingly making, or causing to be made, a false statement to get a false claim paid. The federal healthcare program anti-kickback statute prohibits, among other things, knowingly and willfully offering, paying, soliciting or receiving remuneration to induce, or in return for, purchasing, leasing, ordering or arranging for the purchase, lease or order of any healthcare item or service reimbursable under Medicare, Medicaid or other federally financed healthcare programs. Most states also have statutes or regulations similar to the federal anti-kickback law and federal false claims laws, which may apply to items such as pharmaceutical products and services reimbursed by private insurers. Administrative, civil and criminal sanctions may be imposed under these federal and state laws.

The federal civil monetary penalties statute imposes penalties against any person or entity who, among other things, is determined to have presented or caused to be presented a claim to a federal health program that the person knows or should know is for an item or service that was not provided as claimed or is false or fraudulent.

HIPAA created new federal criminal statutes that prohibit knowingly and willfully executing, or attempting to execute, a scheme to defraud or obtain, by means of false or fraudulent pretenses, representations, or promises, any of the money or property owned by, or under the custody or control of, any healthcare benefit program, including private third-party payors, and knowingly and willfully falsifying, concealing or covering up a material fact or making any materially false, fictitious or fraudulent statement in connection with the delivery of, or payment for, healthcare benefits, items or services.

In addition, we may be subject to data privacy and security regulation by both the federal government and the states in which we conduct our business. HIPAA, as amended by HITECH, and its implementing regulations, imposes certain requirements relating to the privacy, security and transmission of individually identifiable health information. Among other things, HITECH makes HIPAA's security standards directly applicable to business associates—Independent contractors or agents of covered entities that receive or obtain protected health information in connection with providing a service on behalf of a covered entity. HITECH also created four new tiers of civil monetary penalties, and newly empowered state attorneys general with the authority to enforce HIPAA. In January 2013, the Office for Civil Rights of the U.S. Department of Health and Human Services issued the Final Omnibus Rule under HIPAA pursuant to HITECH that makes significant changes to the privacy, security and breach notification requirements and penalties. The Final Omnibus Rule generally took effect in September 2013 and enhances certain privacy and security protections, and strengthens the government's ability to enforce HIPAA. The Final Omnibus Rule also enhanced requirements for both covered entities and business associates regarding notification of breaches of unsecured protected health information. In addition, state laws govern the privacy and security of health information in certain circumstances, many of which differ from each other in significant ways. These state laws may not have the same effect and often are not preempted by HIPAA, thus complicating compliance efforts.

Additionally, the PPACA also included the federal Physician Payments Sunshine Act, which requires applicable group purchasing organizations and manufacturers of drugs, devices, biologics and medical supplies for which payment is available under Medicare, Medicaid or the Children's Health Insurance Program (with certain exceptions) to report annually information related to certain payments or other transfers of value made in the previous year to covered recipients, including physicians, as defined by law, and teaching hospitals and, effective for data reported in 2022, expanded to include nurse practitioners, physician assistants, clinical nurse specialists, certified registered nurse anesthetists and anesthesiologist assistants, and certified nurse-midwives, including certain ownership and investment interests held by physicians or their immediate family members. Failure to comply with the required reporting requirements could subject applicable reporting entities such as manufacturers to substantial civil monetary penalties.

Also, many states have similar healthcare statutes or regulations that apply to items and services reimbursed under Medicaid and other state programs, or, in several states, apply regardless of the payor. Certain states require pharmaceutical companies to implement a comprehensive compliance program that includes a limit or outright ban on expenditures for, or payments to, individual medical or health professionals and/or require pharmaceutical companies to track and report gifts and other payments made to physicians and other healthcare providers.

If our operations are found to be in violation of any of the healthcare laws or regulations described above or any other laws that apply to us, we may be subject to penalties, including potentially significant criminal, civil or administrative penalties, damages, fines, disgorgement, individual imprisonment, exclusion of products from reimbursement under government programs, contractual damages, reputational harm, administrative burdens, diminished profits and future earnings or the curtailment or restructuring of our operations, any of which could adversely affect our ability to operate our business and our results of operations. To the extent that any of our products will be sold in a foreign country, we may be subject to similar foreign laws and regulations, which may include, for instance, applicable post-marketing requirements, including safety surveillance, fraud and abuse laws, and implementation of corporate compliance programs and reporting of payments or transfers of value to healthcare professionals.



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If we do not comply with laws regulating the protection of the environment and health and human safety, our business could be adversely affected.

Our research and development involves, and may in the future involve, the use of potentially hazardous materials and chemicals. Our operations may produce hazardous waste products. Although we believe that our safety procedures for handling and disposing of these materials comply with the standards mandated by local, state and federal laws and regulations, the risk of accidental contamination or injury from these materials cannot be eliminated. If an accident occurs, we could be held liable for resulting damages, which could be substantial. We are also subject to numerous environmental, health and workplace safety laws and regulations and fire and building codes, including those governing laboratory procedures, exposure to blood-borne pathogens, use and storage of flammable agents and the handling of biohazardous materials. Although we maintain workers' compensation insurance as prescribed by Washington State and the Province of British Columbia to cover us for costs and expenses we may incur due to injuries to our employees resulting from the use of these materials, this insurance may not provide adequate coverage against potential liabilities. We do not maintain insurance for environmental liability or toxic tort claims that may be asserted against us. Additional federal, state and local laws and regulations affecting our operations may be adopted in the future. We may incur substantial costs to comply with, and substantial fines or penalties if we violate, any of these laws or regulations.

Risks Related to Employee Matters and Managing Growth

We may fail to achieve the expected cost savings and related benefits from our reduction in workforce initiated in January 2022 and the announcement of our key strategic priorities for 2022 and 2023.

In January 2022, we announced a plan to reduce our workforce to reflect our renewed focus on key priorities and enable us to help achieve a more cost-efficient organization necessary to execute on those priorities. The target of the reduction in workforce is to reduce employee headcount by at least 25% by the end of 2022. The full scope, scale and impact of the reduction in workforce is not yet known. In January 2022, we also announced our key strategic priorities for 2022 and 2023. For additional information, see Part I - Item 1, "Business - Our Strategy."

We may fail to effectively execute on, or achieve the stated goals of, the reduction in workforce or our key strategic priorities. Our plans may also change as we continue to refocus on our key priorities. These actions may take more time than we currently estimate and we may not be able to achieve the cost-efficiencies sought. In addition, the reduction in workforce may negatively impact employee morale for those that are not directly impacted, which may increase employee attrition and hinder our ability to achieve our key priorities. Furthermore, certain of our shareholders may not agree with our key strategic priorities or the decisions we have or may make to execute on those priorities. Any failure to achieve the expected benefits from the reduction in workforce or from other recent management and personnel related changes could adversely affect our stock price, financial condition and ability to achieve our key priorities, as well as lead to shareholder complaints and litigation.

Our future success depends on our ability to retain key executives and to attract, retain and motivate qualified personnel.

We are highly dependent on key members of our senior management team, including Kenneth Galbraith, the Chair of our Board of Directors, Chief Executive Officer and President, Neil Klompas, our Chief Operating Officer and Chief Financial Officer, Neil Josephson, our Chief Medical Officer, and other key members of our senior management, scientific and clinical teams. Although we have entered into employment agreements with our executive officers, each of them may terminate their employment with us at any time. The loss of the services of our key senior managers and employees could impede the achievement of our research, development and commercialization objectives and seriously harm our ability to successfully implement our business strategy.

Retention and any future recruitment of qualified scientific, technical, clinical, manufacturing and sales and marketing personnel will also be critical to our success. In addition, we will need to effectively manage our managerial, operational, financial, development and other resources in order to successfully pursue our research, development and commercialization efforts for our existing and future product candidates. Furthermore, replacing key senior managers and employees may be difficult and may take an extended period of time because of the limited talent pool in our industry due to the breadth of skills and experience required to successfully develop, gain regulatory approval of and commercialize products. The reduction in workforce announced in January 2022 may also make retention of our current personnel both more important and more challenging. Intense competition for attracting key skill-sets may limit our ability to retain and motivate these key personnel on acceptable terms. We also experience competition for the hiring of scientific and clinical personnel from universities and research institutions. 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. If we are unable to continue to attract and retain high quality personnel, our ability to pursue our business strategy will be limited.

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As we advance our development and commercialization plans and strategies, we may need to grow or modify our organization, and we may experience difficulty in managing such change, which could disrupt our operations.

As of December 31, 2021, we had 455 full-time employees. As a result of the reduction in workforce announced in January 2022, we expect to reduce our workforce by at least 25% by the end of 2022. However, as we advance our development and commercialization plans and strategies in the future, we anticipate that we may need to expand or modify our employee base. Additionally, as our product candidates enter and advance through preclinical studies and any clinical trials, we may need to expand our development, manufacturing, regulatory sales and marketing capabilities or contract with other organizations to provide these capabilities for us. Future growth would impose significant added responsibilities on members of management, including the need to identify, recruit, maintain, motivate and integrate additional employees. Also, our management may need to divert a disproportionate amount of their attention away from our day-to-day activities and devote a substantial amount of time to managing any necessary growth activities. We may not be able to effectively manage an expansion of our operations, which may result in weaknesses in our infrastructure, give rise to operational errors, loss of business opportunities, loss of employees and reduced productivity amongst remaining employees. Any growth could require significant capital expenditures and may divert financial resources from other projects, such as the development of existing and additional product candidates. If our management is unable to effectively manage any needed growth, our expenses may increase more than expected, our ability to generate or grow revenue could be reduced and we may not be able to implement our business strategy. Our future financial performance and our ability to commercialize our product candidates and compete effectively with others in our industry will depend on our ability to effectively manage any future growth.

Risks Related to Our Common Shares

Our share price is likely to be volatile and the market price of our common shares may drop below the price paid by shareholders.

Investors should consider an investment in our common shares as risky and invest only if they can withstand a significant loss and wide fluctuations in the market value of their investment. Investors may be unable to sell their common shares at or above the price they paid for such shares due to fluctuations in the market price of our common shares arising from changes in our operating performance or prospects. Some of the factors that may cause the market price of our common shares to fluctuate or decrease include:

- results and timing of our clinical trials and clinical trials of our competitors' products;
- failure or discontinuation of any of our development programs;
- issues in manufacturing our product candidates or future approved products;
- regulatory developments or enforcement in the United States and foreign countries with respect to our product candidates or our competitors' products;
- competition from existing products or new products that may emerge;
- developments or disputes concerning patents or other proprietary rights;
- introduction of technological innovations or new commercial products by us or our competitors;
- announcements by us, our strategic partners or our competitors of significant acquisitions, strategic partnerships, joint ventures, or capital commitments;
- changes in estimates or recommendations by securities analysts that cover our common shares;
- fluctuations in the valuation of companies perceived by investors to be comparable to us;
- public concern over our product candidates or any future approved products;
- litigation;
- future sales of our common shares;
- share price and volume fluctuations attributable to inconsistent trading volume levels of our common shares;
- additions or departures of key personnel, including developments relating to our reduction in workforce announced in January 2022;
- our ability to execute on our key strategic priorities announced in January 2022;
- changes in the structure of health care payment systems in the United States or other countries;



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- failure of any of our product candidates, if approved, to achieve commercial success;
- economic and other external factors or other disasters or crises, such as the COVID-19 pandemic;
- period-to-period fluctuations in our financial condition and results of operations, including the timing of receipt of any milestone or other payments under commercialization or licensing agreements;
- general market conditions and market conditions for biopharmaceutical stocks;
- potential disagreements or disputes with certain of our shareholders;
- overall fluctuations in U.S. equity markets; and
- other factors that may be unanticipated or out of our control.

In addition, the stock market in general, and the stock of biopharmaceutical companies in particular, have experienced extreme price and volume fluctuations that have often been unrelated or disproportionate to the operating performance of the relevant companies, including recently in connection with the ongoing COVID-19 pandemic, which has resulted in increased volatility and decreased stock prices for many companies notwithstanding the lack of a fundamental change in their underlying business models or prospects. Broad market and industry factors, including potentially worsening economic conditions and other adverse effects or developments relating to the ongoing COVID-19 pandemic, may negatively affect the market price of our common shares, regardless of our actual operating performance. The realization of any of the above risks or any of a broad range of other risks, including those described in this “Risk Factors” section, could have a material adverse effect on the market price of our common shares.

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

An active trading market for our common shares may not be sustained. If an active market for our common shares does not continue, it may be difficult for our shareholders to sell their shares without depressing the market price for the common shares or sell their common shares at or above the prices at which they acquired their common shares or sell their common shares at the time they would like to sell. Any inactive trading market for our common shares may also impair our ability to raise capital to continue to fund our operations by selling common shares and may impair our ability to acquire other companies or technologies by using our common shares as consideration.

Substantial future sales of our common shares, or the perception that these sales could occur, may cause the price of our common shares to drop significantly, even if our business is performing well.

A large volume of sales of our common shares could decrease the prevailing market price of our common shares and could impair our ability to raise additional capital through the sale of equity securities in the future. Even if a substantial number of sales of our common shares does not occur, the mere perception of the possibility of these sales could depress the market price of our common shares and have a negative effect on our ability to raise capital in the future.

Our management team has broad discretion to use the net proceeds from public and private and debt financings and its investment of these proceeds may not yield a favorable return. They may invest the proceeds in ways with which our shareholders disagree.

Our management team has broad discretion in the application of the net proceeds we received pursuant to our January 2022 public offering of common shares and pre-funded warrants to purchase common shares, as well as net proceeds we may receive from future fundraising efforts, including pursuant to our “at-the-market” equity offering program and we could spend or invest the proceeds in ways with which our shareholders disagree. Accordingly, shareholders will need to rely on our management team’s judgment with respect to the use of these proceeds. However, the failure by management to apply these funds effectively could negatively affect our ability to operate and grow our business.

We cannot specify with certainty all of the particular uses for the net proceeds to be received from our fundraising efforts. In addition, the amount, allocation and timing of our actual expenditures will depend upon numerous factors, including milestone payments received from our strategic partnerships and royalties received on sale of any future approved product. Accordingly, we will have broad discretion in using these proceeds. Until the net proceeds are used, they may be placed in investments that do not produce significant income or that may lose value.

We do not anticipate paying cash dividends for the foreseeable future, and accordingly, shareholders must rely on share appreciation for any return on their investment.

We have never paid any dividends on our common shares. We currently intend to retain our future earnings, if any, to fund the development and growth of our business and do not anticipate that we will declare or pay any cash dividends on our common shares in the foreseeable future. As a result, capital appreciation, if any, of our common shares will be the sole source of gain on investment in our common shares for the foreseeable future. Investors seeking cash dividends should not invest in our common shares.

We are governed by the corporate laws of Canada, which in some cases have a different effect on shareholders than the corporate laws of the United States.

We are governed by the BCBCA and other relevant Canadian laws, which may affect the rights of shareholders differently than those of a company governed by the laws of a U.S. jurisdiction, and may, together with our charter documents, have the effect of delaying, deferring or discouraging another party from acquiring control of our company by means of a tender offer, a proxy contest or otherwise, or may affect the price an acquiring party would be willing to offer in such an instance. The material differences between the BCBCA and Delaware General Corporation Law (“DGCL”) that may have the greatest such effect include the following: (i) for certain corporate transactions (such as mergers and amalgamations or amendments to our articles) the BCBCA generally requires the voting threshold to be a special resolution approved by 66 2/3% of shareholders, or as set out in the articles, as applicable, whereas DGCL generally only requires a majority vote; and (ii) under the BCBCA a holder of 5% or more of our common shares can requisition a special meeting of shareholders, whereas such right does not exist under the DGCL. Investors may find our company and our common shares less attractive because we are governed by foreign laws.

U.S. civil liabilities may not be enforceable against us, our directors, our officers or certain experts named in our Annual Report on Form 10-K.

We are governed by the BCBCA and our principal place of business is in Canada. Certain of our directors and officers, as well as certain experts named in our Annual Report on Form 10-K, reside outside of the United States, and all or a substantial portion of their assets as well as all or a substantial portion of our assets are located outside the United States. As a result, it may be difficult for investors to effect service of process within the United States upon us and such directors, officers and experts or to enforce judgments obtained against us or such persons, in U.S. courts, in any action, including actions predicated upon the civil liability provisions of U.S. federal securities laws or any other laws of the United States. Additionally, rights predicated solely upon civil liability provisions of U.S. federal securities laws or any other laws of the United States may not be enforceable in original actions, or actions to enforce judgments obtained in U.S. courts, brought in Canadian courts, including courts in the Province of British Columbia. Furthermore, provisions in our articles provide that, unless we consent in writing to the selection of an alternative forum, the Supreme Court of British Columbia and the appellate courts therefrom, to the fullest extent permitted by law, will be the sole and exclusive forum for certain actions or proceedings brought against us, our directors and/or our officers. These provisions may limit our shareholders’ ability to bring a claim against us in a judicial forum that our shareholders consider favorable or convenient for such disputes and may discourage lawsuits with respect to such claims.

U.S. holders of our common shares may suffer adverse U.S. federal income tax consequences if we are characterized as a passive foreign investment company.

Generally, we will be a “passive foreign investment company” (“PFIC”) for U.S. federal income tax purposes for any taxable year if either (i) at least 75% of our gross income is passive income or (ii) at least 50% of the average quarterly value of our assets is attributable to assets that produce passive income or are held for the production of passive income. For purposes of these tests, passive income generally includes dividends, interest, gains from the sale of investment property, and certain rents and royalties. If we are a PFIC for any taxable year during which a U.S. holder holds our common shares, such U.S. holder may suffer adverse U.S. federal income tax consequences. Additionally, if we are a PFIC for any taxable year during which a U.S. holder holds our common shares, we will generally continue to be treated as a PFIC with respect to such U.S. holder for all succeeding taxable years during which such U.S. holder holds our common shares (unless certain elections are made), even if we cease to satisfy the PFIC tests described above.

We believe that we were not classified as a PFIC for the taxable year ended December 31, 2021. However, whether we are a PFIC for the current taxable year or any future taxable year is a fact-intensive determination made on an annual basis and based on the application of complex U.S. federal income tax rules that are subject to differing interpretations. U.S. holders should consult their own tax advisors regarding the tax consequences if we are a PFIC for any taxable year.

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Our principal shareholders, in aggregate, could exert substantial control over us which could delay or prevent a change in corporate control or result in the entrenchment of management or the board of directors.

Our principal shareholders, being our shareholders that beneficially own (or upon exercise of convertible securities would own) 10% or more of our common shares, together with their affiliates and related persons, in aggregate, own or could acquire (contingent upon the exercise of convertible securities they own) approximately 13.4% of our outstanding common shares as of December 31, 2021 (3.7% excluding the exercise of convertible securities). Our directors and named executive officers beneficially own, in the aggregate, approximately 5.3% of our outstanding common shares as of December 31, 2021. Our principal shareholders, if acting together (with or without our directors and named executive officers), may have the ability to exert substantial control over the outcome of matters submitted to our shareholders for approval, including the election and removal of directors and any merger or sale of all or substantially all of our assets. In addition, our principal shareholders, if acting together (with or without our directors and named executive officers), may have the ability to exert substantial control over the management and affairs of our company. Accordingly, this concentration of ownership could harm the market price of our common shares by:

- delaying, deferring, or preventing a change in control;
- entrenching our management or the board of directors;
- impeding a merger, takeover, or other business combination involving us; or
- discouraging a potential acquirer from making a tender offer or otherwise attempting to obtain control of us.

Provisions in our corporate charter documents and Canadian law could make an acquisition of us, which may be beneficial to our shareholders, more difficult and may prevent attempts by our shareholders to replace or remove our current management and/or limit the market price of our common shares.

Provisions in our notice of articles and articles, as well as certain provisions under the BCBCA, and applicable Canadian securities laws, may discourage, delay or prevent a merger, acquisition or other change in control of us that shareholders may consider favorable, including transactions in which they might otherwise receive a premium for their common shares. These provisions include the establishment of a staggered board of directors, which divides the board into three groups, with directors in each group serving a three-year term. The existence of a staggered board can make it more difficult for shareholders to replace or remove incumbent members of our board of directors. As such, these provisions could also limit the price that investors might be willing to pay in the future for our common shares, thereby depressing the market price of our common shares. In addition, because our board of directors is responsible for appointing the members of our management team, these provisions may frustrate or prevent any attempts by our shareholders to replace or remove our current management by making it more difficult for shareholders to replace members of our board of directors. Among other things, these provisions include the following:

- shareholders cannot amend our articles unless such amendment is approved by shareholders holding at least a majority of the shares entitled to vote on such approval;
- our board of directors may, without shareholder approval, issue preferred shares having any terms, conditions, rights, preferences and privileges as the board of directors may determine; and
- shareholders must give advance notice to nominate directors or to submit proposals for consideration at shareholders' meetings.

General Risk Factors

If we fail to maintain an effective system of internal control over financial reporting, we may not be able to accurately report our financial results or prevent fraud. As a result, shareholders could lose confidence in our financial and other public reporting, which would harm our business and the trading price of our common shares.

Under the Sarbanes-Oxley Act of 2002, we are required to establish and maintain effective internal control over financial reporting and adequate disclosure controls and procedures. Effective internal control over financial reporting is necessary for us to provide reliable financial reports and, together with adequate disclosure controls and procedures, are designed to prevent fraud. Even if our management concludes that our internal control over financial reporting is effective, our independent registered public accounting firm may conclude that there are material weaknesses or significant deficiencies with respect to our internal controls or the level at which our internal controls are documented, designed, implemented or reviewed. Undetected material weaknesses in our internal controls could lead to financial statement restatements and require us to incur the expense of remediation. Inferior internal controls could also cause investors to lose confidence in our reported financial information, which

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could have a negative effect on the trading price of our common shares. Furthermore, if we cannot provide reliable financial reports or prevent fraud, including as a result of remote working by our employees in connection with COVID-19 and related public health safety measures, our business and results of operations would likely be materially and adversely affected.

We are at risk of securities class action litigation.

Securities class action litigation has often been brought against companies following a decline in the market price of their securities. This risk is especially relevant for us because biotechnology companies have experienced significant stock price volatility in recent years. If we face such litigation, it could result in substantial costs and a diversion of management's attention and resources, which could materially harm our business.

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

The trading market for our common shares will depend on the research and reports that securities or industry analysts publish about us or our business. We do not have any control over these analysts. We cannot assure that analysts will cover us or provide accurate or favorable coverage. If one or more of the analysts who cover us downgrade our stock or change their opinion of our common shares negatively, our share price would likely decline. If one or more of these analysts cease coverage of our company or fail to regularly publish reports on us, we could lose visibility in the financial markets, which could cause our share price or trading volume to decline. Moreover, the research and reports that analysts publish may suggest a price for our common shares that does not fully or accurately reflect the true value of our company. Furthermore, even if such analyst publications are favorable, these reports could have negative consequences for us.

Item 1B. Unresolved Staff Comments

Not applicable.

Item 2. Properties

Our headquarters are located in a single building containing office and laboratory space in Vancouver, British Columbia. The lease, which we entered into on January 25, 2019, has an initial term expiring in February 2032, with two five-year extension options. We completed our relocation to this space in February 2022 from our prior Vancouver office and laboratory spaces. Our leases for those prior Vancouver office and laboratory spaces expire on February 28, 2022.

Our U.S. office is located in Seattle, Washington. The expiration date of the lease is May 2027.

We believe that our existing facilities are adequate for our immediate needs and our anticipated growth. We believe that, should it be needed, additional space can be leased to accommodate any future growth.

Item 3. Legal Proceedings

From time to time, we may become involved in legal proceedings or be subject to claims arising in the ordinary course of our business. As of December 31, 2021, we are not a party to any legal proceedings that, in the opinion of our management, would reasonably be expected to have a material adverse effect on our business, financial condition, operating results or cash flows if determined adversely to us. Regardless of the outcome, litigation can have an adverse impact on us because of defense and settlement costs, diversion of management resources and other factors.

Item 4. Mine Safety Disclosures

Not applicable.

PART II

Item 5. Market for Registrant's Common Equity, Related Shareholder Matters and Issuer Purchases of Equity Securities

Holders

As of February 22, 2022, we had 26 shareholders of record holding our common shares, of which eight were U.S. shareholders. A substantially greater number of holders of Zymeworks' common stock are "street name" or beneficial holders whose shares of record are held by banks, brokers, and other financial institutions.

Dividends

We have never paid any dividends on our common shares or any of our other securities. We currently intend to retain any future earnings to finance the growth and development of our business, and we do not anticipate that we will declare or pay any cash dividends in the foreseeable future. Any future determination to pay cash dividends will be at the discretion of our board of directors and will be dependent upon our financial condition, results of operations, capital requirements, restrictions under any future indebtedness and other factors the board of directors deems relevant.

Certain Canadian Federal Income Tax Considerations for U.S. Holders

The following is a general summary of the principal Canadian federal income tax considerations generally applicable under *Income Tax Act* (Canada) (the "Tax Act") to a holder of common shares, each of whom, at all relevant times, for the purposes of the Tax Act, holds such common shares as capital property, deals at arm's length with the Company, is not affiliated with the Company and, for purposes of the Tax Act, is not, and is not deemed to be, a resident of Canada and has not and will not use or hold or be deemed to use or hold the common shares in the course of carrying on business in Canada (a "Non-Resident Holder") and is not a "specified shareholder" (as defined in subsection 18(5) of the Tax Act). A "specified shareholder" for these purposes generally includes a person who (either alone or together with persons with whom that person is not dealing at arm's length for purposes of the Tax Act) owns or has the right to acquire or control 25% or more of the common shares determined on a votes or fair market value basis. Special rules, which are not discussed below, may apply to a non-resident of Canada that is an insurer that carries on business in Canada and elsewhere.

The common shares will generally be considered capital property to a Non-Resident Holder unless either (i) the Non-Resident Holder holds the common shares in the course of carrying on a business of buying and selling securities or (ii) the Non-Resident Holder has acquired the common shares in a transaction or transactions considered to be an adventure or concern in the nature of trade.

The term "U.S. Holder," for the purposes of this section, means a Non-Resident Holder who, for purposes of the *Canada-United States Tax Convention* (1980), as amended (the "Convention"), is at all relevant times a resident of the United States and is a "qualifying person" within the meaning of the Convention. In some circumstances, fiscally transparent entities (including limited liability companies) will be entitled to benefits under the Convention. U.S. Holders are urged to consult with their own tax advisors to determine their entitlement to benefits under the Convention based on their particular circumstances.

This summary is based on the current provisions of the Tax Act, the regulations thereunder (the "Regulations"), the current provisions of the Convention, and counsel's understanding of the current published administrative policies and assessing practices of the Canada Revenue Agency (the "CRA") publicly available prior to the date hereof. This summary also takes into account all specific proposals to amend the Tax Act and Regulations publicly announced by or on behalf of the Minister of Finance (Canada) prior to the date hereof (collectively, the "Proposed Tax Amendments"). No assurances can be given that the Proposed Tax Amendments will be enacted or will be enacted as proposed. Other than the Proposed Tax Amendments, this summary does not take into account or anticipate any changes in law or the administration policies or assessing practice of CRA, whether by judicial, legislative, governmental or administrative decision or action, nor does it take into account provincial, territorial or foreign income tax legislation or considerations, which may differ significantly from those discussed herein.

This summary is of a general nature only and is not intended to be, nor should it be construed to be, legal or tax advice to any Non-Resident Holder and no representations with respect to the income tax consequences to any particular Non-Resident Holder are made. This summary is not exhaustive of all Canadian federal income tax considerations. Accordingly, Non-Resident Holders should consult their own tax advisors with respect to their own particular circumstances. The discussion below is qualified accordingly.

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Currency Conversion

Subject to certain exceptions that are not discussed herein, for purposes of the Tax Act, all amounts relating to the acquisition, holding or disposition of common shares, including dividends, adjusted cost base and proceeds of dispositions must be determined in Canadian dollars using the daily exchange rate of the Bank of Canada on the particular date the particular amount arose or such other rate of exchange as acceptable to the CRA.

Disposition of Common Shares

A Non-Resident Holder will not be subject to tax under the Tax Act in respect of any capital gain realized by such Non-Resident Holder on a disposition of the common shares, nor will capital losses arising from the disposition be recognized under the Tax Act, unless the common shares constitute “taxable Canadian property” (as defined in the Tax Act) of the Non-Resident Holder at the time of disposition and the Non-Resident Holder is not entitled to relief under an applicable income tax treaty or convention. As long as the shares are then listed on a “designated stock exchange” (as defined in the Tax Act) (which currently includes the NYSE) at the time of disposition, the common shares generally will not constitute taxable Canadian property of a Non-Resident Holder, unless at any time during the 60-month period immediately preceding the disposition the following two conditions are met concurrently: (i) the Non-Resident Holder, persons with whom the Non-Resident Holder did not deal at arm’s length, partnerships in which the Non-Resident Holder or persons with whom the Non-Resident Holder did not deal at arm’s length holds a membership interest directly or indirectly through one or more partnerships, or the Non-Resident Holder together with all such persons, owned or was considered to own 25% or more of the issued shares of any class or series of shares of the capital stock of the Company; and (ii) more than 50% of the fair market value of the common shares was derived directly or indirectly from one or any combination of real or immovable property situated in Canada, “Canadian resource properties” (as defined in the Tax Act), “timber resource properties” (as defined in the Tax Act) or options in respect of, or interests in, or civil law rights in, such properties, whether or not it exists.

If the common shares are taxable Canadian property to a Non-Resident Holder, any capital gain realized on the disposition or deemed disposition of such shares may not be subject to Canadian federal income tax pursuant to the terms of an applicable income tax treaty or convention between Canada and the country of residence of a Non-Resident Holder, including the Convention.

A Non-Resident Holder whose shares are taxable Canadian property should consult their own advisors.

Dividends on Common Shares

Under the Tax Act, dividends on common shares paid or credited to a Non-Resident Holder will be subject to Canadian withholding tax at the rate of 25% of the gross amount of the dividends. This withholding tax may be reduced pursuant to the terms of an applicable income tax treaty or convention between Canada and the country of residence of a Non-Resident Holder. Under the Convention, a U.S. Holder will generally be subject to Canadian withholding tax at a rate of 15% of the gross amount of such dividends (or 5% in the case of a U.S. Holder that is a company beneficially owning at least 10% of the Company’s voting shares). In addition, under the Convention, dividends may be exempt from Canadian non-resident withholding tax if paid to certain U.S. Holders that are qualifying religious, scientific, literary, educational or charitable tax-exempt organizations and qualifying trusts, companies, organizations or arrangements operated exclusively to administer or provide pension, retirement or employee benefits that are exempt from tax in the United States and that have complied with specific administrative procedures.

The CRA allows residents of any country with which Canada has a tax treaty to certify that they reside in that country, so they are eligible to have Canadian non-resident tax withheld on the payment of dividends at the reduced tax treaty rate. Individual registered shareholders should complete a Form NR301—“Declaration of Eligibility for Benefits (Reduced Tax) under a Tax Treaty for a Non-Resident Person” and return it to our transfer agent, Computershare Investor Services Inc.

Certain U.S. Income Tax Considerations For U.S. Holders

The following discussion is a general summary of certain U.S. federal income tax consequences of the ownership and disposition of the common shares. It applies only to U.S. Holders (as defined below) that acquire and hold the common shares as capital assets (generally, property held for investment purposes). This summary should not be construed to constitute legal or tax advice to any particular U.S. Holder.

This summary does not apply to or address U.S. Holders subject to special rules, including, without limitation, brokers, dealers in securities or currencies, traders in securities that elect to use a mark-to-market method of accounting for securities holdings,

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tax-exempt organizations, insurance companies, banks, thrifts and other financial institutions, persons liable for alternative minimum tax, persons that hold an interest in an entity that holds the common shares, persons that will own, or will have owned, directly, indirectly or constructively 10% or more (by vote or value) of the Company's equity, persons that hold the common shares as part of a hedging, integration, conversion or constructive sale transaction or a straddle, or persons whose functional currency is not the U.S. dollar.

This summary does not purport to be a complete analysis of all of the potential U.S. federal income tax considerations that may be relevant to U.S. Holders in light of their particular circumstances. Further, it does not address any aspect of foreign, state, local or estate or gift taxation or the 3.8% surtax imposed on certain net investment income. **Investors should consult their own tax advisor as to the U.S. federal, state, local, foreign and any other tax consequences of the ownership and disposition of the common shares.**

This summary is based on the Internal Revenue Code of 1986, as amended (the "Code"), its legislative history, U.S. Treasury Regulations, Internal Revenue Service ("IRS") rulings, published court decisions, and the Convention, all as in effect as of the date hereof, and any of which may be repealed, revoked or modified (possibly with retroactive effect) so as to result in U.S. federal income tax consequences different from those discussed below. This summary is applicable to U.S. Holders who are residents of the United States for purposes of the Convention and who qualify for the full benefits of the Convention.

A "U.S. Holder" is a beneficial owner of the common shares who, for U.S. federal income tax purposes, is a citizen or individual resident of the United States, a corporation (or other entity that is classified as a corporation for U.S. federal income tax purposes) that is created or organized in or under the laws of the United States or any State thereof or the District of Columbia, an estate whose income is subject to U.S. federal income tax regardless of its source, or a trust (i) if a U.S. court can exercise primary supervision over the trust's administration and one or more U.S. persons are authorized to control all substantial decisions of the trust, or (ii) that validly elects to be treated as a U.S. person for U.S. federal income tax purposes.

If a partnership or other pass-through entity holds the common shares of the Company, the U.S. federal income tax treatment of a partner, beneficiary, or other stakeholder will generally depend on the status of that person and the tax treatment of the pass-through entity. A partner, beneficiary, or other stakeholder in a pass-through entity holding the common shares should consult its own tax advisor with regard to the U.S. federal income tax treatment of its investment in the common shares.

Distributions on the Common Shares

Subject to the PFIC rules discussed below, the gross amount of any distribution received by a U.S. Holder with respect to the common shares (including any amounts withheld to pay Canadian withholding taxes) will be included in the gross income of the U.S. Holder as a dividend to the extent attributable to the Company's current or accumulated earnings and profits, as determined under U.S. federal income tax principles. The Company does not intend to calculate its earnings and profits under U.S. federal income tax rules. Accordingly, U.S. Holders should expect that a distribution generally will be treated as a dividend for U.S. federal income tax purposes. Unless the Company is treated as a PFIC for the taxable year in which it pays a distribution or in the preceding taxable year (see "Passive Foreign Investment Company Rules" below), the Company believes that it may qualify as a "qualified foreign corporation," in which case, subject to certain requirements, including conditions relating to holding period and the absence of certain risk reduction transactions, distributions treated as dividends and received by non-corporate U.S. Holders may be eligible for a preferential tax rate. Distributions on the common shares generally will not be eligible for the dividends received deduction available to U.S. Holders that are corporations.

The amount of any distribution paid in Canadian dollars (including any amounts withheld to pay Canadian withholding taxes) will equal the U.S. dollar value of the Canadian dollars calculated by reference to the exchange rate in effect on the date the distribution is received by the U.S. Holder, regardless of whether the Canadian dollars are converted into U.S. dollars. A U.S. Holder will have a tax basis in the Canadian dollars equal to their U.S. dollar value on the date of receipt. If the Canadian dollars received are converted into U.S. dollars on the date of receipt, the U.S. Holder should generally not be required to recognize foreign currency gain or loss in respect of the distribution. If the Canadian dollars received are not converted into U.S. dollars on the date of receipt, a U.S. Holder may recognize foreign currency gain or loss on a subsequent conversion or other disposition of the Canadian dollars. Such gain or loss will be treated as U.S. source ordinary income or loss.

A U.S. Holder may be entitled to deduct or credit Canadian withholding tax imposed on dividends paid to a U.S. Holder, subject to applicable limitations in the Code. For purposes of calculating a U.S. Holder's foreign tax credit, dividends received by such U.S. Holder with respect to the common shares of a foreign corporation generally constitute foreign source income. However, and subject to certain exceptions, a portion of the dividends paid by a foreign corporation will be treated as U.S. source income for U.S. foreign tax credit purposes, in proportion to its U.S. source earnings and profits, if U.S. persons



collectively own, directly or indirectly, 50% or more of the voting power or value of the foreign corporation's common shares. If a portion of any dividends paid with respect to the common shares are treated as U.S. source income under these rules, it may limit the ability of a U.S. Holder to claim a foreign tax credit for any Canadian withholding taxes imposed in respect of such dividend, although certain elections under the Code and the Convention may be available to mitigate these effects. The rules governing the foreign tax credit are complex. U.S. Holders are urged to consult their own tax advisors regarding the availability of the foreign tax credit under their particular circumstances, including the impact of, and any exception available to, the special income sourcing rule described in this paragraph.

Sale, Exchange or Other Taxable Disposition of the Common Shares

Subject to the PFIC rules discussed below, a U.S. Holder will recognize a capital gain or loss on the sale, exchange or other taxable disposition of the common shares in an amount equal to the difference between the amount realized for the common shares and the U.S. Holder's adjusted tax basis in the common shares. Capital gains of non-corporate U.S. Holders derived with respect to capital assets held for more than one year are eligible for reduced rates of taxation. The deductibility of capital losses is subject to limitations. Any capital gain or loss recognized by a U.S. Holder generally will be treated as U.S. source gain or loss for U.S. foreign tax credit purposes.

Passive Foreign Investment Company Rules

A foreign corporation will be considered a PFIC for any taxable year in which (1) 75% or more of its gross income is "passive income" under the PFIC rules or (2) 50% or more of the average quarterly value of its assets produce (or are held for the production of) "passive income." For this purpose, "passive income" generally includes interest, dividends, certain rents and royalties, and certain gains. Royalties derived from an unrelated person in the active conduct of a trade or business in the licensing of property developed or created through its own officers or staff of employees is generally excluded from passive income. Moreover, for purposes of determining if the foreign corporation is a PFIC, if the foreign corporation owns, directly or indirectly, at least 25%, by value, of the shares of another corporation, it will be treated as if it holds directly its proportionate share of the assets and receives directly its proportionate share of the income of such other corporation. If a corporation is treated as a PFIC with respect to a U.S. Holder for any taxable year, the corporation will continue to be treated as a PFIC with respect to that U.S. Holder in all succeeding taxable years, regardless of whether the corporation continues to meet the PFIC requirements in such years, unless certain elections are made.

The determination as to whether a foreign corporation is a PFIC is based on the application of complex U.S. federal income tax rules, which are subject to differing interpretations, and the determination will depend on the composition of the income, expenses and assets of the foreign corporation from time to time and the nature of the activities performed by its officers and employees. The Company believes that it was not classified as a PFIC for the taxable year ended December 31, 2021. However, the Company cannot provide any assurance regarding its PFIC status for the current or future taxable years given that the determination of PFIC status is fact-intensive and made on an annual basis. Neither the Company's U.S. counsel nor U.S. tax advisor expresses any opinion with respect to the Company's PFIC status or with respect to the Company's expectations regarding its PFIC status.

If the Company is classified as a PFIC, a U.S. Holder that does not make any of the elections described below would be required to report any gain on the disposition of common shares as ordinary income, rather than as capital gain, and to compute the tax liability on the gain and any "Excess Distribution" (as defined below) received in respect of common shares as if such items had been earned ratably over each day in the U.S. Holder's holding period (or a portion thereof) for the common shares. The amounts allocated to the taxable year during which the gain is realized or distribution is made, and to any taxable years in such U.S. Holder's holding period that are before the first taxable year in which the Company is treated as a PFIC with respect to the U.S. Holder, would be included in the U.S. Holder's gross income as ordinary income for the taxable year of the gain or distribution. The amount allocated to each other taxable year would be taxed as ordinary income in the taxable year during which the gain is realized or distribution is made at the highest tax rate in effect for the U.S. Holder in that other taxable year and would be subject to an interest charge as if the income tax liabilities had been due with respect to each such prior year. For purposes of these rules, gifts, exchanges pursuant to corporate reorganizations and use of common shares as security for a loan may be treated as a taxable disposition of the common shares. An "Excess Distribution" is the amount by which distributions during a taxable year in respect of a common share exceed 125% of the average amount of distributions in respect thereof during the three preceding taxable years (or, if shorter, the U.S. Holder's holding period for the common shares).

Certain additional adverse tax rules will apply to a U.S. Holder for any taxable year in which the Company is treated as a PFIC with respect to such U.S. Holder and any of the Company's subsidiaries is also treated as a PFIC (a "Subsidiary PFIC"). In such a case, the U.S. Holder will generally be deemed to own its proportionate interest (by value) in any Subsidiary PFIC and be

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subject to the PFIC rules described above with respect to the Subsidiary PFIC regardless of such U.S. Holder's percentage ownership in the Company.

The adverse tax consequences described above may be mitigated if a U.S. Holder makes a timely "qualified electing fund" (a "QEF") election with respect to its interest in the PFIC. Consequently, if the Company is classified as a PFIC, it may be advantageous for a U.S. Holder to elect to treat the Company as a QEF with respect to such U.S. Holder in the first year in which it holds common shares. If a U.S. Holder makes a timely QEF election with respect to the Company, the electing U.S. Holder would be required in each taxable year that the Company is considered a PFIC to include in gross income (i) as ordinary income, the U.S. Holder's pro rata share of the ordinary earnings of the Company and (ii) as capital gain, the U.S. Holder's pro rata share of the net capital gain (if any) of the Company, whether or not the ordinary earnings or net capital gain are distributed. An electing U.S. Holder's basis in common shares will be increased to reflect the amount of any taxed but undistributed income. Distributions of income that had previously been taxed will result in a corresponding reduction of basis in the common shares and will not be taxed again as distributions to the U.S. Holder.

A QEF election made with respect to the Company will not apply to any Subsidiary PFIC; a QEF election must be made separately for each Subsidiary PFIC (in which case the treatment described above would apply to such Subsidiary PFIC). If a U.S. Holder makes a timely QEF election with respect to a Subsidiary PFIC, it would be required in each taxable year to include in gross income its pro rata share of the ordinary earnings and net capital gain of such Subsidiary PFIC, but may not receive a distribution of such income. Such a U.S. Holder may, subject to certain limitations, elect to defer payment of current U.S. federal income tax on such amounts, subject to an interest charge (which would not be deductible for U.S. federal income tax purposes if the U.S. Holder were an individual).

If the Company determines that it, and any subsidiary in which the Company owns, directly or indirectly, more than 50% of such subsidiary's total aggregate voting power, is likely a PFIC in any taxable year, the Company intends to make available to U.S. Holders, upon request and in accordance with applicable procedures, a "PFIC Annual Information Statement" with respect to the Company and any such subsidiary for such taxable year. The "PFIC Annual Information Statement" may be used by U.S. Holders for purposes of complying with the reporting requirements applicable to a QEF election with respect to the Company and any such Subsidiary PFIC.

Alternatively, if the Company were to be classified as a PFIC, a U.S. Holder could also avoid certain of the rules described above by making a mark-to-market election (instead of a QEF election), provided the common shares are treated as regularly traded on a qualified exchange or other market within the meaning of the applicable U.S. Treasury Regulations. However, a U.S. Holder will not be permitted to make a mark-to-market election with respect to a Subsidiary PFIC. U.S. Holders should consult their own tax advisors regarding the potential availability and consequences of a mark-to-market election, as well as the advisability of making a protective QEF election in case the Company is classified as a PFIC in any taxable year.

During any taxable year in which the Company or any Subsidiary PFIC is treated as a PFIC with respect to a U.S. Holder, that U.S. Holder generally must file IRS Form 8621, Information Return by a Shareholder of a Passive Foreign Investment Company or Qualified Electing Fund. U.S. Holders should consult their own tax advisors concerning annual filing requirements.

Required Disclosure with Respect to Foreign Financial Assets

Certain U.S. Holders are required to report information relating to an interest in the common shares, subject to certain exceptions (including an exception for common shares held in accounts maintained by certain financial institutions), by attaching a completed IRS Form 8938, Statement of Specified Foreign Financial Assets, with their tax return for each year in which they hold an interest in the common shares. U.S. Holders should consult their own tax advisors regarding information reporting requirements relating to their ownership of the common shares.

Securities Authorized for Issuance Under Equity Compensation Plans

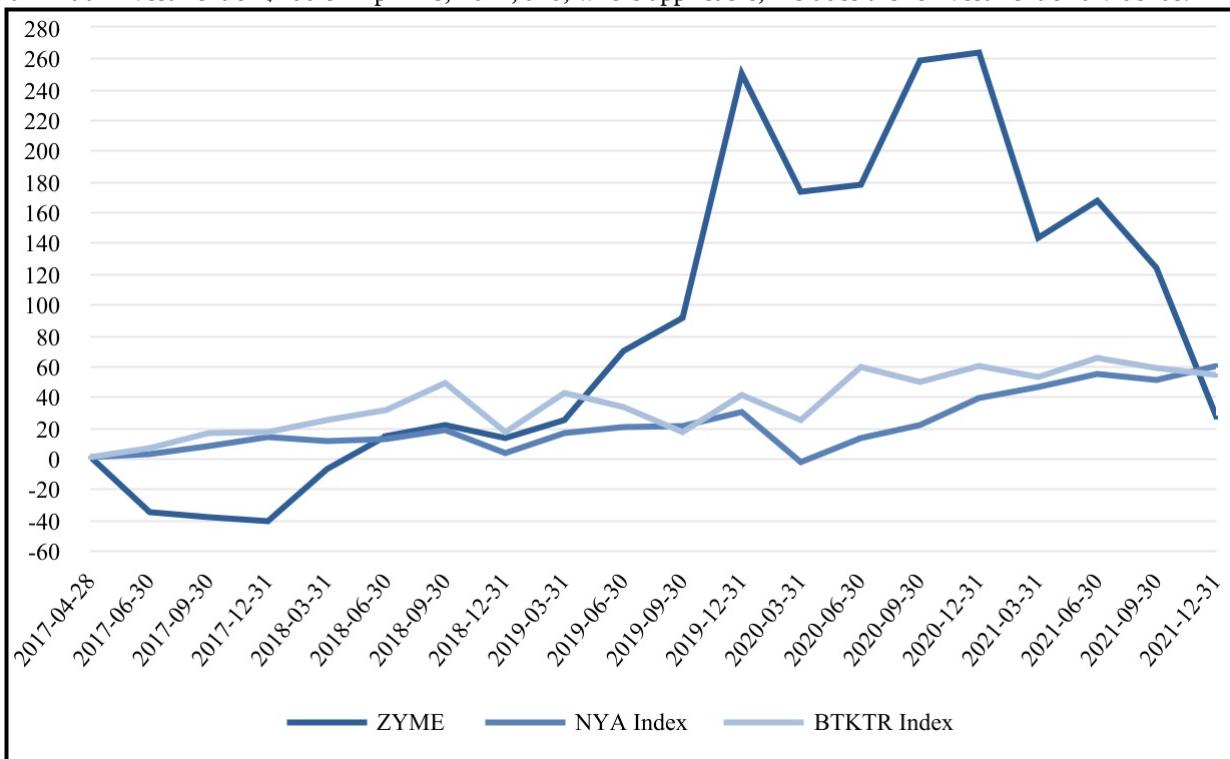
The information concerning our equity compensation plans is incorporated by reference herein to our proxy statement for the 2022 annual meeting of shareholders to be filed with the SEC within 120 days after the end of our fiscal year ended December 31, 2021.

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Performance Graph

This performance graph shall not be deemed “filed” for purposes of Section 18 of the U.S. Securities Exchange Act of 1934, as amended (the “Exchange Act”) or incorporated by reference into any of our filings under the Securities Act or the Exchange Act, except as shall be expressly set forth by specific reference in such filing.

The following stock performance graph illustrates a comparison of the total cumulative shareholder return on our common shares from April 28, 2017, which is the date our common shares commenced trading on the NYSE, through December 31, 2021, to two indices: the NYSE Composite Index (“NYA Index”) and the NYSE Arca Biotechnology Index (“BTKTR Index”). The graph assumes an initial investment of \$100 on April 28, 2017, and, where applicable, includes the reinvestment of dividends.



The comparisons in the graph above are not intended to forecast or be indicative of possible future performance of our common shares.

Recent Sales of Unregistered Securities

None.

Issuer Repurchases of Equity Securities

None.

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

The following discussion should be read in conjunction with the attached financial statements and notes thereto. This Annual Report on Form 10-K, including the following sections, contains forward-looking statements within the meaning of the U.S. Private Securities Litigation Reform Act of 1995 and the Exchange Act. These statements are subject to risks and uncertainties that could cause actual results and events to differ materially from those expressed or implied by such forward-looking statements. For a detailed discussion of these risks and uncertainties, see Item 1A, "Risk Factors" of this Annual Report on Form 10-K. We caution the reader not to place undue reliance on these forward-looking statements, which reflect management's analysis only as of the date of this Annual Report on Form 10-K. We undertake no obligation to update forward-looking statements to reflect events or circumstances occurring after the date of this Annual Report on Form 10-K. Throughout this discussion, unless the context specifies or implies otherwise, the terms "Zymeworks," "we," "us," and "our" refer to Zymeworks Inc. and its subsidiary. The discussion regarding our financial condition and results of operations for fiscal 2020 as compared to fiscal 2019 has been omitted from this Annual Report on Form 10-K and is incorporated by reference from our Annual Report on Form 10-K for the fiscal year ended December 31, 2020, filed with the SEC and with the securities commissions in all provinces and territories of Canada on February 24, 2021, under the section titled "Part II, Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations."

Overview

Zymeworks is a clinical-stage biopharmaceutical company dedicated to the development of next-generation multifunctional biotherapeutics. Our suite of complementary therapeutic platforms and our fully integrated drug development engine provide the flexibility and compatibility to precisely engineer and develop highly differentiated product candidates. These capabilities have resulted in multiple product candidates with the potential to drive positive outcomes in large underserved and unaddressed patient populations.

Our goal is to leverage our next-generation therapeutic platforms and proprietary protein engineering capabilities to become a leader in the discovery, development and commercialization of best-in-class multifunctional biotherapeutics for the treatment of cancer and other diseases with high unmet medical need.

Our key priorities to achieve this goal are to:

- Fully recruit the HERIZON-BTC-01 pivotal clinical study for zanidatamab by mid-2022;
- Fully recruit the HERIZON-GEA-01 pivotal clinical study for zanidatamab by the end of 2023;
- Complete or close out other ongoing early-stage clinical studies for zanidatamab as data become available, and use these data to identify and support strategic decisions regarding future clinical development opportunities beyond the ongoing pivotal clinical studies;
- Finalize a clear clinical development path for ZW49 based on additional clinical data expected in the second half of 2022 from the ongoing Phase 1 clinical trial;
- Select and advance two new antibody-drug conjugate or multispecific product candidates leveraging Zymeworks' novel, therapeutic platforms (Azymetric™, ZymeLink™, EFECT™ and ProTECT™) to IND-enabling studies to provide the ability to submit two IND applications by the end of 2024;
- Execute on new partnerships and collaborations to support the development and commercialization of zanidatamab and Zymeworks' early-stage R&D pipeline and technology platforms;
- Continue to support and advance Zymeworks' core technology platforms and collaborations; and
- Improve Zymeworks' financial position over 2022 and 2023 through a combination of alternatives, including forming additional partnerships and collaborations, monetizing existing assets and products and securing additional financing.

We commenced operations in 2003 and have since devoted substantially all of our resources to research and development activities including developing our therapeutic platforms, identifying and developing potential product candidates and undertaking preclinical studies and clinical trials. Additionally, we have supported our research and development activities with general and administrative support, as well as by raising capital, conducting business planning and protecting our intellectual property. We have not generated any revenue from the sale of approved products to date and do not expect to do so until such time as we obtain regulatory approval and commercialize one or more of our product candidates. We cannot be certain of the timing or success of approval of our product candidates.

Since our initial public offering ("IPO") in 2017, we have funded our operations primarily through follow-on public offerings, including the issuance of pre-funded warrants, and payments received under our license and collaboration agreements. Payments received from our license and collaboration agreements include upfront fees, milestone payments, as well as research support and reimbursement payments. Prior to our IPO, we also received financing from private equity placements and the issuance of convertible debt, which was subsequently converted into equity securities, and a credit facility. From inception to December 31, 2021, we received \$802.1 million, net of equity issue costs, from these sources of financing including proceeds

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from exercises of stock options and employee stock purchase plans. As of December 31, 2021, we had \$252.6 million of cash resources consisting of cash, cash equivalents and short-term investments.

Although it is difficult to predict our funding requirements, based upon our current operating plan, we anticipate that our existing cash and cash equivalents and short-term investments as of December 31, 2021, combined with the proceeds from our recent public offering which closed on January 31, 2022 and collaboration payments we anticipate receiving, will enable us to fund our planned operations for at least the next twelve months from the date this Annual Report on Form 10-K is filed with the SEC.

We reported a net loss of \$211.8 million for the year ended December 31, 2021 and through December 31, 2021, we had an accumulated deficit of \$683.1 million. Over the next several years, we expect to continue to incur losses as we increase our research and development expenditures in connection with the ongoing development of our product candidates and other clinical, preclinical and regulatory activities.

Recent Developments

COVID-19

COVID-19 has impacted our research and development activities, but has not caused significant disruptions to our business operations to date. In March 2020, we transitioned our workforce to a remote working arrangement to protect the health and safety of our employees. In June 2020, we implemented a program to facilitate the phased return of employees to our lab and office facilities pursuant to enhanced health and safety protocols consistent with guidelines issued by local health authorities. Our preclinical research activities were supplemented by support from external contract research organizations (“CROs”) to complement the temporarily reduced capacity at our lab facilities. Certain clinical trial activities, including patient enrollment and site activations, were delayed or otherwise impacted by COVID-19. To date, COVID-19 has not had a material impact on our financial condition, liquidity or longer-term strategic development and commercialization plans.

The extent to which COVID-19 may cause more significant disruptions to our business and greater impacts to our results of operations will depend on future developments, which are highly uncertain and cannot be predicted with confidence, such as the location, duration and severity of outbreaks, including potential future waves or cycles, and the effectiveness of actions to contain and treat COVID-19. A lack of coordinated responses on risk mitigation and global vaccination deployment with respect to the COVID-19 pandemic could result in significant increases to the duration and severity of the pandemic and could have a corresponding negative impact on our business. Insufficient vaccine availability, reduced effectiveness of vaccines over time or against new variants, or resistance to vaccination by certain persons may result in increasing infection and hospitalization rates, which have been and could be further complicated by the emergence of more virulent or infectious variants of the virus. We cannot predict the duration, scope and severity of any potential business shutdowns or disruptions that may result from future waves or cycles of outbreaks, including impacts to our ongoing and planned clinical studies and our regulatory approval prospects. Further prolonged shutdowns or other business interruptions could result in material and negative effects to our ability to conduct our business in the manner and on the timelines currently planned, which could have a material adverse impact on our business, results of operations, and financial condition. The COVID-19 pandemic continues to rapidly evolve, and we will continue to monitor the effects of COVID-19 on our business. See Part I - Item 1A, “Risk Factors – Risks Related to Our Business and the Development and Commercialization of Our Product Candidates – Our business has been and may continue to be adversely affected by the COVID-19 pandemic.”

Zanidatamab Clinical Program:

In January 2021, we presented updated clinical data at the American Society of Clinical Oncology (“ASCO”) Gastrointestinal Cancers Symposium for zanidatamab, in both HER2-expressing BTC and GEA. Overall, zanidatamab was well tolerated with the majority of treatment-related adverse events (“TRAEs”) being mild or moderate (Grade 1 or 2) in severity, and response rates and median duration of response in refractory BTC and GEA compare favorably to current standard of care and emerging treatments.

In July 2021, we announced the first patient dosed in a new cohort of our Phase 1 trial to evaluate zanidatamab in combination with Seagen’s HER2-selective tyrosine kinase inhibitor, Tukysa (tucatinib), and chemotherapy in patients with previously-treated locally advanced or metastatic HER2-expressing breast cancer.

In September 2021, we presented Phase 2 clinical data for zanidatamab in combination with chemotherapy in first-line locally advanced or metastatic HER2-positive GEA at the ESMO Annual Congress. The data demonstrated that zanidatamab in combination with chemotherapy exhibited promising response rates and durability and, overall, was well tolerated in patients

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with the majority of TRAEs considered mild to moderate in severity (Grade 1 or 2). The data presented compare favorably to current standard of care and support initiation of a global, randomized Phase 3 trial, HERIZON-GEA-01.

In October 2021, we announced the first patient dosed in the Phase 1b/2 clinical trial of zanidatamab in combination with ALX Oncology's CD47 blocker, evopacept (ALX148), in patients with advanced HER2-expressing breast cancer and other solid tumors.

In December 2021, we presented Phase 2 clinical data for zanidatamab in combination with chemotherapy in heavily pretreated locally advanced or metastatic HER2-positive breast cancer at the San Antonio Breast Cancer Symposium. The data exhibited promising response rates, with the majority of patients experiencing a reduction in their tumor size. Zanidatamab in combination with chemotherapy was also well tolerated, with the majority of the TRAEs considered mild to moderate in severity (Grade 1 or 2).

Also in December 2021, we announced that our partner BeiGene dosed the first patient in the HERIZON-GEA-01 trial, a global, randomized, Phase 3 clinical trial designed to evaluate the efficacy and safety of zanidatamab in combination with physician's choice chemotherapy (CAPOX or FP) with or without the PD-1 inhibitor, tislelizumab, compared to trastuzumab plus physician's choice chemotherapy for first-line treatment in subjects with locally advanced or metastatic HER2-positive GEA.

ZW49 Clinical Program:

In January 2021, we announced an interim update from the ongoing ZW49 Phase 1 dose-escalation study. In 35 patients who have received ZW49 across all dosing regimens, there have been no dose-limiting toxicities, no treatment-related hematologic, pulmonary, or liver toxicity, and no treatment-related deaths. Over 90% of treatment-related adverse events have been mild or moderate (Grade 1 or 2) in severity, with the most common being keratitis, fatigue, and diarrhea, which have been reversible and manageable in an outpatient setting. There have been no discontinuations due to treatment-related adverse events, and the maximum tolerated dose has not yet been established. ZW49 has demonstrated antitumor activity at all dose levels evaluated in the once every three week regimen including confirmed partial responses and stable disease per RECIST 1.1. Three indication-specific expansion cohorts (HER2-positive breast cancer, HER2-positive GEA, and a basket cohort of other HER2-positive cancers) utilizing the 2.5 mg/kg once every three week regimen were also initiated to better ascertain antitumor activity in more homogeneous patient populations.

As of January 2022, the expansion cohorts evaluating 2.5 mg/kg every three weeks have completed enrollment (30 patients). The weekly dose regimen continues to enroll patients and to dose escalate as the maximum tolerable dose has not been reached. No dose-limiting toxicities have been observed to date.

Preclinical Programs:

In April 2021, we presented five posters at the American Association for Cancer Research Annual Meeting. The presentations highlight preclinical data that reveal new insights into the unique mechanisms of action of our lead product candidate, zanidatamab, introduce our fourth therapeutic platform, ProTECT, and describe two new preclinical assets focused on the cytokine, IL-12, and the immune-oncology target, 4-1BB.

Licensing and Collaboration Agreements:

In August 2021, we announced that our partner, Janssen, dosed the first patient with a bispecific antibody developed using our Azymetric and EFECT platforms. Under our 2017 collaboration and licensing agreement with Janssen, we received a payment of \$4.0 million in connection with this milestone. In November 2021, Janssen dosed the first patient under the second program for which we received another milestone payment of \$4.0 million.

Per an amendment of the sublicensing agreement between Iconic and Exelixis in December 2021, Iconic notified us that they will receive a one-time fee from Exelixis in exchange for all future milestones for the ICON-2 program. As such, we will receive a share of this payment to Iconic. We continue to be eligible to receive future royalties pursuant to our agreement with Iconic.

In December 2021, BeiGene dosed the first patient in South Korea in the pivotal HERIZON-GEA-01 study. We received a payment of \$8.0 million in relation to this milestone.

Financing Activities:

On January 31, 2022, we announced the closing of our underwritten public offering which consisted of the issuance of 11,035,000 common shares, including the exercise in full of the underwriters' over-allotment option to purchase 1,875,000

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additional shares, and, in lieu of common shares, to certain investors, pre-funded warrants to purchase up to 3,340,000 common shares. The common shares were sold at a price to the public of \$8.00 per common share and the pre-funded warrants were sold at a price of \$ 7.9999 per pre-funded warrant, for aggregate gross proceeds to the Company of \$115.0 million, before deducting underwriting discounts and commissions and estimated offering expenses. The securities were offered in the United States pursuant to our final prospectus, dated January 26, 2022, to our U.S. automatic shelf registration statement on Form S-3ARS, including a prospectus dated October 1, 2021. No securities were offered or sold, directly or indirectly, in Canada or to any resident of Canada.

Executive Team Changes and Restructuring:

On January 19, 2022, we announced a restructuring of our workforce (the “Restructuring”), with a target of reducing employee headcount by at least 25% across the organization by the end of 2022. We took these steps as part of our renewed focus on achieving our key strategic priorities and to help create a more cost-efficient organization in order to execute on our strategic priorities. We expect to substantially complete the Restructuring by December 31, 2022. In connection with the Restructuring, we announced changes in our leadership, with the Executive Vice President, Early Development & Chief Scientific Officer, Chief People Officer and Chief Commercial Officer leaving the Company.

On January 5, 2022, we announced the appointment of Mr. Kenneth Galbraith as Chair of our Board of Directors, Chief Executive Officer and President, effective January 15, 2022. In connection with Mr. Galbraith’s appointment, Dr. Ali Tehrani resigned from the positions of President and Chief Executive Officer and as a member of our board of directors, effective January 15, 2022. We also announced the promotion of our Chief Financial Officer, Mr. Neil Klompas, to the dual position of Chief Operating Officer and Chief Financial Officer. Our Board of Directors also appointed Ms. Lota Zoth as the Board of Directors' lead independent director, effective January 15, 2022.

In May 2021, Dr. Diana Hausman transitioned from her role as our Chief Medical Officer and Dr. Neil Josephson, our Senior Vice President, Clinical Research, assumed the role of interim Chief Medical Officer. Dr. Hausman remained with the Company as a clinical advisor through November 2021, and Dr. Josephson was promoted to Chief Medical Officer in November 2021.

Financial Operations Overview

Revenue

Our revenue consists of collaboration revenue, including amounts recognized relating to upfront non-refundable payments for licenses or options to obtain future licenses, research and development funding and milestone payments earned under collaboration and license agreements. We expect that collaboration revenue from our strategic partnerships will be our primary source of revenue for the foreseeable future.

Operating Expenses

Our operating expenses consist primarily of research and development expenses and general and administrative expenses. Personnel costs including salaries, benefits, bonuses and stock-based compensation expense, comprise a significant component of research and development and general and administrative expenses. We allocate certain indirect expenses associated with our facilities, information technology, depreciation and other overhead costs between research and development and general and administrative categories based on employee headcount and the nature of work performed by each employee.

Research and Development Expense

Research and development expenses consist of expenses incurred in performing research and development activities such as conducting clinical trials and preclinical research studies, technical and manufacturing operations, regulatory affairs and other indirect expenses in support of advancing our product candidates and therapeutic platforms. Research and development expenses include third-party program costs, internal personnel costs and other indirect costs as follows:

- fees paid to CROs, consultants, subcontractors and other third-party vendors for work performed for our clinical trials, preclinical studies and regulatory activities;
- fees paid to third-party manufacturers to produce our product candidate supplies;
- amounts paid to vendors and suppliers for laboratory supplies;
- fees, milestone payments and other expenses incurred in connection with license agreements and amendments;
- employee-related expenses such as salaries and benefits and stock-based compensation;
- depreciation of laboratory equipment, computers and leasehold improvements; and
- overhead expenses such as facilities, information technology and other allocated items.

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It is difficult to determine with certainty the duration and completion costs of our current or future clinical trials and preclinical programs of our product candidates, or if, when or to what extent we will generate revenue from the commercialization and sale of any of our product candidates that obtain regulatory approval. We may never succeed in achieving regulatory approval for any of our product candidates. The duration, costs and timing of clinical trials and development of our product candidates will depend on a variety of factors, including the uncertainties of clinical trials and preclinical studies, uncertainties in clinical trial enrollment rates and significant and changing government regulation. In addition, the probability of success for each product candidate will depend on numerous factors, including competition, manufacturing capability and commercial viability. We will determine which programs to pursue and how much to fund each program in response to the scientific and clinical success of each product candidate, as well as an assessment of each product candidate's commercial potential. We expect our research and development expenses to increase for the foreseeable future as we continue to develop our platforms and product candidates.

General and Administrative Expense

General and administrative expenses consist of salaries, benefits and stock-based compensation costs for employees in our executive, finance, legal, intellectual property, business development, human resources and other support functions, as well as legal and professional fees, business insurance, facilities and information technology costs and other expenses. We expect general and administrative expenses to increase as we expand our infrastructure to support our ongoing research and development activities.

Other Income (Expense)

Other income (expense) primarily consists of interest income and foreign exchange gain (loss).

Critical Accounting Policies, Significant Judgments and Estimates

Our management's discussion and analysis of financial condition and results of operations is based on our consolidated financial statements, which have been prepared in accordance with U.S. GAAP. The preparation of these consolidated financial statements requires us to make estimates, judgments and assumptions that are inherently uncertain that affect the amounts reported in the consolidated financial statements and accompanying notes. We base our estimates on historical experience and on various other assumptions that we believe to be reasonable. We review and evaluate these estimates on an ongoing basis. These assumptions and estimates form the basis for making judgments about the carrying values of assets and liabilities and amounts that have been recorded as revenue and expenses. Actual results and experiences may differ from these estimates. The results of any material revisions would be reflected in the consolidated financial statements prospectively from the date of the change in estimate.

The full extent to which the COVID-19 pandemic may directly or indirectly impact our business, results of operations and financial condition, including revenues, expenses, clinical trials, research and development costs and employee-related amounts, will depend on future developments that are evolving and highly uncertain, such as the duration and severity of outbreaks, including current and potential future waves or cycles, and the effectiveness of actions taken to contain and treat COVID-19. We considered the potential impact of COVID-19 when making certain estimates and judgments relating to the preparation of our condensed consolidated financial statements. While there was no material impact to our consolidated financial statements as of and for the year ended December 31, 2021, our future assessment of the magnitude and duration of COVID-19, as well as other factors, could result in a material impact to our consolidated financial statements in future reporting periods.

For a summary of our significant accounting policies, see Note 2 to the Consolidated Financial Statements in Part II, Item 8, "Consolidated Financial Statements and Supplementary Data". We consider the following accounting policies to be critical to an understanding of our financial condition and results of operations because these policies require the most subjective or complex judgments on the part of management in their application. There have been no material changes to our critical accounting policies during the year ended December 31, 2021.

Revenue Recognition

Our revenue consists of amounts earned under research and development license and collaboration agreements with our strategic partners. Promised deliverables within these agreements may include grants of licenses, or options to obtain licenses, to our intellectual property, research and development services, and participation on joint research and/or development committees.

In accordance with Accounting Standards Codification Topic 606, *Revenue from Contracts with Customers* ("ASC 606"), we recognize revenue when our customer obtains control of promised goods or services, in an amount that reflects the

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consideration which we expect to receive in exchange for those goods or services. For collaborative arrangements that fall within the scope of ASC 808, *Collaborative Arrangements ("ASC 808")*, we apply the revenue recognition model under ASC 606 to part or all of the arrangements, when deemed appropriate. For collaboration arrangements within the scope of ASC 808 that contain multiple elements, we determine which elements of the arrangement are within the scope of ASC 808 and which elements are within the scope of ASC 606, which may require application of judgment. To determine revenue recognition for arrangements that we determine are within the scope of Topic 606, we perform the following five steps: (i) identify the contract(s) with a customer; (ii) identify the performance obligations in the contract; (iii) determine the transaction price; (iv) allocate the transaction price to the performance obligations in the contract; and (v) recognize revenue when or as we satisfy a performance obligation. We only apply the five-step model to contracts when it is probable that we will collect the consideration that we are entitled to in exchange for the goods and services transferred to the customer. If the expectation at contract inception is such that the period between payment by the licensee and the completion of related performance obligations will be one year or less, we assume that the contract does not have a significant financing component.

When applying the revenue recognition criteria of ASC 606 to license and collaboration agreements, management applies significant judgment when evaluating whether contractual obligations represent distinct performance obligations, allocating transaction price to performance obligations within a contract, determining when performance obligations have been met, assessing the recognition and future reversal of variable consideration, and determining and applying appropriate methods of measuring progress for performance obligations satisfied over time. These judgments are discussed in more detail in the following paragraphs for each type of payment received by us under the terms of the license and collaborations agreements.

Licenses of intellectual property including platform technology access: 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, upfront fees allocated to the license when the license is transferred to the licensee and the licensee is able to use and benefit from the license. For licenses that are not distinct from other promises, we apply judgment to assess the nature of the combined performance obligation to determine whether the combined performance obligation is satisfied over time or at a point in time and, if over time, the appropriate method of measuring progress for purposes of recognizing revenue from non-refundable, upfront fees. We evaluate the measure of progress each reporting period and, if necessary, adjust the related revenue recognition accordingly.

Milestone payments: At the inception of each arrangement that includes research, development or regulatory milestone payments, we evaluate whether the milestones are 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. Milestone payments that are not within our control or that of the licensee, such as regulatory approvals, are not considered probable of being achieved until those approvals are received. The transaction price is then allocated to each performance obligation on a relative stand- alone selling price basis, for which we recognize revenue as or when the performance obligations under the contract are satisfied.

At the end of each subsequent reporting period, we re-evaluate the probability of achievement of such development milestones and any related constraint, and if necessary, adjust our estimate of the overall transaction price. Any such adjustments are recorded on a cumulative catch-up basis, which would affect license, collaboration and other revenues and earnings in the period of adjustment. The process of successfully achieving the criteria for the milestone payments is highly uncertain. Consequently, there is a significant risk that we may not earn all of the milestone payments from each of our strategic partners. We apply significant judgment when assessing the likelihood of whether milestones are considered probable of being achieved and when allocating the transaction price to each performance obligation for revenue recognition purposes.

Royalties and commercial milestones: For arrangements that include sales-based royalties, including commercial milestone payments based on pre-specified level of sales, 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). Achievement of these royalties and commercial milestones may solely depend upon performance of the licensee. Since inception to date, we have not recognized any royalty revenue or commercial milestone from any of our out-licensing arrangements.

Research support and other payments: Payments by the licensees in exchange for research activities performed by us on behalf of the licensee are recognized as revenue upon performance of such activities at rates consistent with prevailing market rates. Payments for research supplies provided are recognized as revenue upon delivery of the supplies.

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Research and Development Costs and Related Accrued Expenses

Research and development costs are expensed as incurred and include costs that we incur for our own and for our strategic partners' research and development activities. These costs primarily consist of employee-related expenses, including salaries and benefits, expenses incurred under agreements with CROs on our behalf, costs associated with investigative sites and consultants that conduct our clinical trials, the cost of acquiring and manufacturing clinical trial materials and other allocated expenses, share-based compensation expense, and costs associated with nonclinical activities and regulatory approvals.

Clinical trial expenses represent a significant component of research and development expenses and we outsource a significant portion of these activities to third-party CROs. Third-party clinical trial expenses include investigator fees, site costs, clinical research organization costs and other trial-related vendor costs. As part of preparing our consolidated financial statements, we estimate accrued liabilities for services that have been performed by clinical research organizations or investigator sites but have not yet been invoiced to us. When making these estimates, management uses operational and contractual information from third party service providers and operational data from internal personnel. We make considerable judgements and estimates in determining the progress of patients based on enrollment and treatment data provided by the third-party service providers and internal personnel. The accrued balance factors in management's best estimate of the date on which certain services commence, the level of services performed before a given date, whether certain services are invoiceable and the cost of such services. Any changes to the estimates could have a significant impact on the accruals for clinical trial activities that we outsourced to third party CROs. If the actual timing of provision of services or level of effort varies from our estimates, we adjust research and development expense and accrued liabilities accordingly on a prospective basis.

Impairment of Long-Lived Assets

Goodwill and IPR&D assets classified as indefinite-lived are not amortized, but are evaluated for impairment annually or more frequently if impairment indicators arise. IPR&D becomes definite-lived upon the completion or abandonment of the associated research and development efforts. For definite-lived intangible assets, if there is a major event indicating that the carrying value may be impaired, then management will perform an impairment test.

Impairment tests for goodwill and intangibles assets involve considerable use of judgment and require management to make estimates and assumptions. The fair values of reporting units are derived from valuation models, which consider various factors such as discount rates, future earnings and growth rates. Changes in estimates and assumptions can affect the reported value of goodwill and intangible assets.

As at December 31, 2021, we performed a qualitative assessment for our annual impairment test of goodwill after concluding that it was not more likely than not that the fair value of the reporting unit was less than its carrying value. Consequently, the quantitative impairment test was not required. We concluded that there were no impairment indicators related to goodwill or other intangible assets as of December 31, 2021.

Stock-Based Compensation

We recognize stock-based compensation expense on certain stock-based awards granted to employees and members of the board of directors based on their estimated fair values using the Black-Scholes option pricing model. The Black-Scholes option pricing model requires assumptions for various inputs to measure fair value, including expected term of the awards, underlying share price volatility, forfeiture rates, risk-free interest rate and expected dividend yields of our common shares. Management uses judgement to determine the inputs to the Black-Scholes option pricing model and changes in these assumptions could have a material impact to the fair value calculations and the amount and timing of share-based compensation expense recognized in earnings.

Recent Accounting Pronouncements

A summary of recent accounting pronouncements is presented in Note 3 of our Annual Consolidated Financial Statements for the year ended December 31, 2021 within this Annual Report on Form 10-K.

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Results of Operations for the Years Ended December 31, 2021, 2020 and 2019

Revenue

	Year Ended December 31,			Change 2021 – 2020
	2021	2020	2019	
	(dollars in millions)			
Revenue from research and development collaborations	\$ 26.7	\$ 39.0	\$ 29.5	\$ (12.3) (32 %)

Revenue for all periods presented relates primarily to non-recurring upfront fees, expansion payments or milestone payments from our licensing and collaboration agreements.

Total revenue decreased by \$12.3 million in 2021 compared to 2020. Revenue for 2021 included \$8.0 million from BeiGene for development milestone, \$8.0 million from Janssen for two development milestones, \$5.0 million from Iconic for partner revenue and \$5.7 million from our partners for research and development support under cost sharing arrangements. Revenue for 2020 included \$15.0 million from BeiGene for development milestones, \$12.0 million from BMS for an expansion fee, \$4.0 million from Iconic for partner revenue and \$8.0 million from our partners for research and development support under cost sharing arrangements.

Research and Development Expense

(dollars in millions)	Year Ended December 31,			Change 2021 – 2020	
	2021	2020	2019		
Third-party research and development program expenses:					
Clinical development programs:					
Zanidatamab	\$ 86.8	\$ 80.5	\$ 56.6	\$ 6.3 8 %	
ZW49	12.7	11.5	6.5	1.2 10 %	
Preclinical and other research programs	13.9	12.1	9.6	1.8 15 %	
	113.4	104.1	72.7	9.3 9 %	
Unallocated departmental research and development expenses:					
Salaries and benefits	50.3	35.1	21.1	15.2 43 %	
Stock-based compensation expense	15.5	12.3	14.3	3.2 26 %	
Other unallocated expenses	20.6	19.7	9.3	0.9 5 %	
Research and development expense	\$ 199.8	\$ 171.2	\$ 117.4	\$ 28.6 17 %	

Research and development expense increased by \$28.6 million in 2021 compared to 2020. In 2021, research and development expense included non-cash stock-based compensation expense of \$15.5 million comprised of \$20.1 million from equity classified awards (2020 – \$12.3 million) and a \$4.6 million recovery related to the non-cash mark-to-market revaluation of certain historical liability classified awards (2020 - a nominal expense). Excluding stock-based compensation expense, research and development expense increased by \$25.4 million or 16% in 2021 compared to 2020. The increase related primarily to higher salary and benefit expenses from additional headcount, as well as an increase in zanidatamab clinical trial and other preclinical and research and development expenses which were partially offset by a decrease in drug manufacturing activities.

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General and Administrative Expense

(dollars in millions)	Year Ended December 31,			Change 2021 – 2020
	2021	2020	2019	
Salaries and benefits	\$ 23.5	\$ 18.0	\$ 12.6	\$ 5.5 31 %
Stock-based compensation (recovery) expense	(5.6)	16.1	34.2	(21.7) (135)%
Professional fees, consulting and business insurance	15.2	11.3	8.3	3.9 35 %
Other general and administrative expenses	9.5	9.8	7.6	(0.3) (3)%
General and administrative expense	\$ 42.6	\$ 55.2	\$ 62.7	\$ (12.6) (23)%

General and administrative expense decreased by \$12.6 million in 2021 compared to 2020. In 2021, general and administrative expense included a non-cash stock-based compensation recovery of \$5.6 million comprised of a \$18.2 million expense from equity-classified awards (2020 – \$14.6 million expense) and a \$23.8 million recovery from the non-cash mark-to-market revaluation of certain historical liability-classified awards (2020 – \$1.4 million expense). Excluding stock-based compensation expense, general and administrative expense increased by \$9.1 million or 23% in 2021 compared to 2020. The increase was primarily due to higher salary and benefit expenses from additional headcount, and professional fees, partially offset by a U.S. state sales tax refund recognized in 2021.

Other Income (Expense)

(dollars in millions)	Year Ended December 31,			Change 2021 – 2020
	2021	2020	2019	
Other income (expense), net	\$ 3.3	\$ 7.3	\$ 5.3	\$ (4.0) (55)%

Net other income decreased by \$4.0 million in 2021 compared to 2020. Net other income for 2021 included interest income of \$2.0 million and a net foreign exchange gain of \$1.2 million primarily due to the revaluation of stock option liabilities and certain cash, cash equivalents and investments denominated in Canadian dollars. Net other income for 2020 primarily included interest income of \$5.7 million and a net foreign exchange gain of \$1.7 million.

Liquidity and Capital Resources

Sources of Liquidity

Since our IPO in 2017, we have funded our operations primarily through follow-on public offerings, including the issuance of pre-funded warrants, as well as from upfront fees, milestone payments, and research support payments generated from our strategic collaborations and licensing agreements.

We completed a public offering on January 27, 2020 pursuant to which we sold (i) 5,824,729 common shares (including the sale of 900,000 common shares to the underwriters upon their full exercise of their over-allotment option) and (ii) 1,075,271 pre-funded warrants in lieu of common shares. We received gross proceeds of \$320.9 million and net cash proceeds of \$300.9 million, after underwriting discounts, commissions and estimated offering expenses.

On January 31, 2022, we completed a public offering pursuant to which we sold (i) 11,035,000 common shares (including the sale of 1,875,000 common shares to the underwriters upon their full exercise of their over-allotment option), at \$8.00 per common share and 3,340,000 pre-funded warrants in lieu of common shares at \$7.9999 per pre-funded warrant. We received gross proceeds of \$115.0 million and net proceeds were approximately \$107.6 million, after underwriting discounts, commissions and estimated offering expenses.

On October 1, 2021, we amended our Open Market Sale AgreementSM, dated as of November 5, 2019 (as amended, the “Sales Agreement”), with Jefferies LLC (“Jefferies”). The Sales Agreement provides for the offer and sale of our common shares from time to time through Jefferies as our sales agent, subject to the maximum aggregate dollar amount registered pursuant to the applicable prospectus supplement. Sales of common shares through Jefferies, if any, will be made by any method permitted by law deemed to be an “at the market offering” as defined in Rule 415(a)(4) under the Securities Act. No shares of our common stock were sold under the Sales Agreement since its inception to date.

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As of December 31, 2021, we had \$252.6 million in cash resources consisting of cash, cash equivalents and short-term investments.

Cash Flows

The following table represents a summary of our cash flows for the years ended December 31, 2021, 2020 and 2019:

	Year Ended December 31,		
	2021	2020	2019
(dollars in millions)			
Net cash provided by (used in):			
Operating activities	\$ (192.5)	\$ (151.4)	\$ (81.9)
Investing activities	144.6	(43.4)	(25.6)
Financing activities	8.0	309.0	193.7
Effect of exchange rate changes on cash and cash equivalents	(0.3)	(0.6)	—
Net (decrease) increase in cash and cash equivalents	\$ (40.2)	\$ 113.6	\$ 86.2

Operating Activities

In 2021, we used net cash of \$192.5 million in operating activities compared to \$151.4 million in 2020. The increase in net cash used in operating activities was primarily due to the expansion of our clinical programs and other research and development activities and decrease in receipts from our collaboration partners, which were partially offset by collections under Canada's emergency wage and rent subsidy program as well as a U.S. state sales tax refund.

Investing Activities

Net cash provided by investing activities in 2021 is primarily related to net redemptions of short-term investments in marketable securities of \$157.9 million partially offset by cash outflows of \$12.4 million for the acquisition of property and equipment as well as leasehold improvement expenses for our new office and lab spaces. Net cash used in investing activities in 2020 is primarily related to purchases of short and long-term investments in marketable securities. A significant portion of the proceeds from our January 2020 public offering was invested in guaranteed investment certificates ("GICs"), term deposits and commercial paper resulting in a net change in short-term and long-term investments of \$37.2 million. The remaining change was due to the acquisition of property and equipment and intangible assets.

Financing Activities

Net cash provided by financing activities in 2021 related primarily to net proceeds of \$6.4 million from stock option exercises and \$2.1 million from the issuance of common shares in relation to our employee stock purchase plan. Net cash provided by financing activities in 2020 included \$300.9 million relating to net proceeds from our January 2020 public offering of equity securities, \$7.1 million from stock option exercises, and \$1.1 million from the issuance of common shares in relation to our employee stock purchase plan.

Funding Requirements

We have not generated any revenue from approved product sales to date and do not expect to do so until such time as we obtain regulatory approval and commercialize one or more of our product candidates. As we are currently in the clinical and preclinical stages of development, it will be some time before we expect to achieve this, and it is uncertain that we ever will. We expect that we will continue to increase our operating expenses in connection with ongoing clinical trials and preclinical activities and the development of product candidates in our pipeline. Our funding requirements in the short-term and long-term will consist of the operational, capital, and manufacturing expenditures, a portion of which contain contractual or other obligations including future minimum lease payments under non-cancelable operating leases as presented in Note 15 and other commitments and contingencies as presented in Note 17 to the consolidated financial statements. Because of the inherent risks and uncertainties associated with the development and commercialization of our drug candidates, we are unable to estimate the amounts of capital outflows and operating expenditures associated with our current and anticipated clinical trials and preclinical studies.

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Although it is difficult to predict our funding requirements, based on our current operating plan, we anticipate that our existing cash and cash equivalents and short-term investments combined with the proceeds from our recent public offering which closed on January 31, 2022 and certain anticipated milestone payments from our collaborations will enable us to fund our operating expenses and capital expenditure requirements for at least the next twelve months from the date this Annual Report on Form 10-K is filed with the SEC. We have based these estimates on assumptions and plans which may change and which could impact the magnitude and/or timing of operating expenses, capital expenditures and our cash runway. These estimates include future milestone payments which are dependent upon the successful completion of specified research and development activities by us and our collaborators and are therefore uncertain at this time. The successful development of our product candidates and the achievement of milestones by our strategic partners is uncertain, and therefore we are unable to estimate the actual funds we will require to complete the research, development and commercialization of product candidates. See Item 1A, “Risk Factors - Risks Related to Our Business and the Development and Commercialization of Our Product Candidates” and “Risk Factors - Risks Related to Our Dependence on Third Parties - We may not realize the anticipated benefits of our strategic partnerships”.

We will need substantial additional funding to support our continuing operations and pursue our long-term business plans. Accordingly, our future funding requirements will depend on many factors, including but not limited to:

- the scope, rate of progress, results and costs of our clinical trials, preclinical studies and other related activities;
- our ability to establish and maintain strategic collaborations, licensing or other arrangements and the financial terms of such agreements as well as our ability to enter into new arrangements;
- the timing and the costs of obtaining regulatory approvals for any of our current or future drug candidates;
- the cost of commercialization activities if any of our current or future drug candidates are approved for sale, including marketing, sales and distribution costs; and
- the amount of revenue, if any, received from commercial sales of our drug candidates, should any of our drug candidates receive marketing approval.

If adequate funds are not available at favorable terms, we may be required to reduce operating expenses, delay or reduce the scope of our product development and commercial expansion programs, obtain funds through arrangements with others that may require us to relinquish rights to certain of our technologies or products that we would otherwise seek to develop or commercialize ourselves or cease operations. If we do raise additional capital through public or private equity or convertible debt offerings, the ownership interest of our existing stockholders will be diluted, and the terms of these securities may include liquidation or other preferences that adversely affect our stockholders' rights. If we raise additional capital through debt financing, we may be subject to covenants limiting or restricting our ability to take specific actions, such as incurring additional debt, making capital expenditures or declaring dividends.

Segment Reporting

We view our operations and manage our business in one segment, which is the development of next-generation multifunctional biotherapeutics.

Outstanding Share Data

As of February 22, 2022, our authorized share capital consisted of an unlimited number of common shares, each without par value, of which 57,736,293 were issued and outstanding, and an unlimited number of preferred shares, each without par value, none of which were issued and outstanding. As of February 22, 2022, we had 8,581,961 common shares issuable pursuant to 8,581,961 pre-funded warrants, 4,094,697 common shares issuable pursuant to 4,094,697 exercisable outstanding stock options, 2,949,470 common shares issuable pursuant to 2,949,470 outstanding options that were not exercisable at that date, and 253,703 outstanding restricted stock units.

Item 7A. Quantitative and Qualitative Disclosure About Market Risk

We are exposed to market risks in the ordinary course of our business that may affect our results of operations, cash flows and fair values of assets and liabilities, including interest rate movements, volatility in foreign currency exchange rates, and changes in economic conditions as a result of the COVID-19 pandemic. The primary market risk inherent in our financial instruments and in our financial position represents the potential loss arising from adverse changes in interest rates and foreign exchange rates.

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Interest Rate Risk

Our exposure to interest rate risk relates primarily to our cash, cash equivalent and short-term investment. At December 31, 2021 and December 31, 2020, we had cash, cash equivalents, short-term investments and certain long-term investments of \$252.6 million and \$451.6 million, respectively, consisting primarily of funds in cash, guaranteed investment certificates and term deposits. The primary objective of our investment activities is to preserve principal while also maintaining liquidity and maximizing investment returns without significantly increasing risk. We do not enter into investments for trading or speculative purposes. Due to the short-term nature of our investment portfolio, a hypothetical 10% increase or decrease in interest rates or in investment returns would not have a material effect on the fair market value of our portfolio or investment income. Our investment portfolio is primarily composed of short term investments with maturities less than 12 months and our long term investments in debt securities are held to maturity. Accordingly, we do not expect our operating results or cash flows to be materially affected by a sudden change in market interest rates.

Foreign Currency Exchange Risk

Our functional currency is the U.S. dollar as most of our revenues and operating expenses are denominated in U.S. dollars. We incur certain operating expenses in Canadian dollars and other foreign currencies and accordingly, are subject to foreign currency transaction risk. We do not use derivative instruments to hedge exposure to foreign currency transaction risk due to the low volume of transactions denominated in Canadian dollars and other foreign currencies. We do not anticipate that foreign currency transaction gains or losses will be significant at our current level of operations.

At December 31, 2021, our net monetary assets denominated in Canadian dollars were \$6.1 million (C\$7.7 million). We are subject to foreign currency translation risk when translating these foreign currency denominated net monetary assets to U.S. dollars for period end financial statement preparation. The fluctuation of the Canadian dollar relative to the U.S. dollar will have an impact on the reported balances for net assets, net loss and shareholders' equity in our consolidated financial statements. A hypothetical 10% increase (decrease) in the value of the Canadian dollar relative to the U.S. dollar would result in a foreign exchange gain (loss) of \$0.6 million in our Consolidated Statement of Loss and Comprehensive Loss for the year ended December 31, 2021.

Inflation Risk

Inflation generally may affect us by increasing our cost of labor and clinical trial expenses. We do not believe that inflation and changing prices had a material impact on our business, financial condition, or results of operations for any of the periods presented herein.

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Item 8. Financial Statements and Supplementary Data

Zymeworks Inc.

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Report of Independent Registered Public Accounting Firm

To the Shareholders and Board of Directors
Zymeworks, Inc.:

Opinion on the Consolidated Financial Statements

We have audited the accompanying consolidated balance sheets of Zymeworks, Inc. (the Company) as of December 31, 2021 and 2020, the related consolidated statements of loss and comprehensive loss, changes in shareholders' equity, and cash flows for each of the years in the three-year period ended December 31, 2021, and the related notes (collectively, the consolidated financial statements). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2021 and 2020, and the results of its operations and its cash flows for each of the years in the three-year period ended December 31, 2021, 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, 2021, based on criteria established in *Internal Control – Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission, and our report dated February 24, 2022 expressed an unqualified opinion on the effectiveness of the Company's internal control over financial reporting.

Basis for Opinion

These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these consolidated 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 consolidated 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 consolidated 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 consolidated 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 consolidated financial statements. We believe that our audits provide a reasonable basis for our opinion.

Critical Audit Matter

The critical audit matter communicated below is a matter arising from the current period audit of the consolidated financial statements that was communicated or required to be communicated to the audit committee and that: (1) relates to accounts or disclosures that are material to the consolidated financial statements and (2) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matter does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing a separate opinion on the critical audit matter or on the accounts or disclosures to which it relates.

Assessment of accrual for research and development costs related to clinical trial activities

As discussed in Note 2 to the consolidated financial statements, the Company accrues for clinical trial activities outsourced to third party contract research organizations. Third-party clinical trial expenses include investigator fees, site costs, clinical research organization costs and other trial-related vendor costs. These accruals are based on estimates derived from operational and contractual information contained in the reports provided by third-party service providers and data from internal personnel. Considerable judgment is applied, and estimates are made, by the Company in determining the progress of patients based on enrollment and treatment data provided by the third-party service providers and internal personnel. As discussed in Note 9 to the consolidated financial statements, the Company has total accrued research expenses of \$50,963 thousand as of December 31, 2021, which includes the accrual for research and development costs related to clinical trial activities.

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We identified the assessment of the accrual for research and development costs related to clinical trial activities as a critical audit matter. The accrual included estimates of the progress of patients' treatment which can be challenging to assess. A higher degree of auditor judgment was required to evaluate the accuracy of the estimates, and changes to the estimates could have had a significant impact on the accrual for clinical trial activities outsourced to third party contract research organizations recorded by the Company.

The following are the primary procedures we performed to address this critical audit matter. We evaluated the design and tested the operating effectiveness of certain internal controls related to the Company's process for determining the accrual for research and development costs related to clinical trial activities. This included a control over the Company's tracking of the progress of each patient's treatment in the trials. For certain clinical trial studies, we assessed the Company's estimates of the accrual for invoiceable patient costs by:

- obtaining third-party reports detailing site visit and patient information and agreeing the inputs to the Company's estimates of the phase they are enrolled in;
- developing an expectation of the accrual for clinical trial activities based on costs specified in the contractual agreements and progress of patient treatment, and compared this expectation to the Company's accrual; and
- performing a lookback analysis by comparing the prior year's estimated accrual balance to the actual amounts that were ultimately invoiced to assess the Company's ability to estimate the accrual.

/s/ KPMG LLP

Chartered Professional Accountants

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

Vancouver, Canada

February 24, 2022

Report of Independent Registered Public Accounting Firm

To the Shareholders and Board of Directors
Zymeworks, Inc.:

Opinion on Internal Control Over Financial Reporting

We have audited Zymeworks, Inc.'s (the Company) internal control over financial reporting as of December 31, 2021, based on criteria established in *Internal Control – Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission. In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2021, based on criteria established in *Internal Control – Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission.

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, 2021 and 2020, the related consolidated statements of loss and comprehensive loss, changes in shareholders' equity, and cash flows for each of the years in the three-year period ended December 31, 2021, and the related notes (collectively, the consolidated financial statements), and our report dated February 24, 2022 expressed an unqualified opinion on those consolidated financial statements.

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 Controls 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 of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audit also included 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.

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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/ KPMG LLP

Chartered Professional Accountants

Vancouver, Canada
February 24, 2022

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ZYMEWORKS INC.
Consolidated Balance Sheets
(Expressed in thousands of U.S. dollars except share data)

	December 31,	
	2021	2020
Assets		
Current assets:		
Cash and cash equivalents	\$ 201,867	\$ 242,036
Short-term investments (note 5)	50,741	184,318
Accounts receivable	15,614	15,293
Prepaid expenses and other current assets	<u>19,998</u>	<u>13,429</u>
Total current assets	288,220	455,076
Deferred financing fees	1,214	805
Long-term investments (note 5)	886	25,921
Long-term prepaid assets	12,490	2,290
Deferred tax asset (note 14)	3,070	1,723
Property and equipment, net (note 7)	22,783	12,185
Operating lease right-of-use assets (note 15)	26,987	5,429
Intangible assets, net (note 8)	3,838	5,303
Acquired in-process research and development (note 6)	17,628	17,628
Goodwill (note 6)	12,016	12,016
Total assets	<u>\$ 389,132</u>	<u>\$ 538,376</u>
Liabilities and shareholders' equity		
Current liabilities:		
Accounts payable and accrued liabilities (note 9)	\$ 62,767	\$ 43,655
Fair value of liability-classified stock options	7,754	39,284
Current portion of operating lease liability (note 15)	1,310	2,710
Other current liabilities	<u>22</u>	<u>17</u>
Total current liabilities	71,853	85,666
Long-term portion of operating lease liability (note 15)	30,923	5,812
Deferred revenue (note 12)	32,941	32,941
Other long-term liabilities (note 9)	2,748	2,857
Deferred tax liability (note 14)	1,573	1,178
Total liabilities	<u>140,038</u>	<u>128,454</u>
Shareholders' equity:		
Common shares, no par value; unlimited authorized shares at December 31, 2021 and 2020; 46,633,935 and 46,035,389 shares issued and outstanding at December 31, 2021 and 2020, respectively (note 10b)	741,147	724,219
Additional paid-in capital	197,710	163,623
Accumulated other comprehensive loss	(6,659)	(6,659)
Accumulated deficit	<u>(683,104)</u>	<u>(471,261)</u>
Total shareholders' equity	<u>249,094</u>	<u>409,922</u>
Total liabilities and shareholders' equity	<u>\$ 389,132</u>	<u>\$ 538,376</u>
Research collaboration and licensing agreements (note 12)		
Commitments and contingencies (note 17)		
Subsequent events (note 18)		

The accompanying notes are an integral part of these financial statements

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ZYMEWORKS INC.

Consolidated Statements of Loss and Comprehensive Loss

(Expressed in thousands of U.S. dollars except share and per share data)

	Year Ended December 31,		
	2021	2020	2019
Revenue:			
Research and development collaborations (note 12)	\$ 26,680	\$ 38,951	\$ 29,544
Operating expenses:			
Research and development	199,752	171,203	117,367
General and administrative	42,561	55,216	62,710
Impairment of acquired IPR&D (note 6)	—	—	768
Total operating expenses	<u>242,313</u>	<u>226,419</u>	<u>180,845</u>
Loss from operations	(215,633)	(187,468)	(151,301)
Other income (expense):			
Interest income	1,965	5,697	5,877
Other income (expense), net (note 13)	1,309	1,648	(595)
Total other income (expense), net	<u>3,274</u>	<u>7,345</u>	<u>5,282</u>
Loss before income taxes	(212,359)	(180,123)	(146,019)
Income tax recovery (expense), net (note 14)	516	(429)	582
Net loss and comprehensive loss	<u>\$ (211,843)</u>	<u>\$ (180,552)</u>	<u>\$ (145,437)</u>
Net loss per common share (note 4):			
Basic	\$ (4.11)	\$ (3.58)	\$ (3.83)
Diluted	\$ (4.61)	\$ (3.58)	\$ (3.83)
Weighted-average common shares outstanding (note 4):			
Basic	51,553,869	50,382,497	38,022,014
Diluted	52,131,596	50,382,497	38,022,014

The accompanying notes are an integral part of these financial statements

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ZYMEWORKS INC.

Consolidated Statements of Changes in Shareholders' Equity
(Expressed in thousands of U.S. dollars except share data)

	Common shares		Accumulated deficit	Accumulated other comprehensive loss	Additional paid-in capital	Total shareholders' equity
	Shares	Amount				
Balance at December 31, 2018	31,977,668	\$ 320,074	\$ (145,272)	\$ (6,659)	\$ 12,347	\$ 180,490
Issuance of common shares on exercise of stock options (note 10e)	529,661	11,432	—	—	(2,129)	9,303
Issuance of common shares through employee stock purchase plan (note 10f)	43,308	763	—	—	—	763
Fair value adjustments upon reclassification of stock options to liabilities	—	—	—	—	(119)	(119)
Stock-based compensation	—	—	—	—	12,676	12,676
Issuance of common shares and pre-funded warrants in connection with public offering, net of offering costs (note 10a and 10d)	7,013,892	117,941	—	—	70,064	188,005
Net loss	—	—	(145,437)	—	—	(145,437)
Balance at December 31, 2019	39,564,529	\$ 450,210	\$ (290,709)	\$ (6,659)	\$ 92,839	\$ 245,681
Issuance of common shares on exercise stock options (note 10e)	602,158	18,373	—	—	(2,943)	15,430
Issuance of common shares through employee stock purchase plan (note 10f)	43,973	1,618	—	—	—	1,618
Fair value adjustments upon reclassification of stock options to liabilities	—	—	—	—	(110)	(110)
Stock-based compensation	—	—	—	—	26,945	26,945
Issuance of common shares and pre-funded warrants in connection with public offering, net of offering costs (notes 10a and 10d)	5,824,729	254,018	—	—	46,892	300,910
Net loss	—	—	(180,552)	—	—	(180,552)
Balance at December 31, 2020	46,035,389	\$ 724,219	\$ (471,261)	\$ (6,659)	\$ 163,623	\$ 409,922
Issuance of common shares on exercise of stock options (note 10e)	502,019	12,878	—	—	(3,218)	9,660
Issuance of common shares through employee share purchase plan (note 10f)	68,964	3,080	—	—	—	3,080
Issuance of common shares upon vesting of restricted stock units ("RSUs")	27,563	970	—	—	(970)	—
Stock-based compensation	—	—	—	—	38,275	38,275
Net loss	—	—	(211,843)	—	—	(211,843)
Balance at December 31, 2021	46,633,935	\$ 741,147	\$ (683,104)	\$ (6,659)	\$ 197,710	\$ 249,094

The accompanying notes are an integral part of these financial statements

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ZYMEWORKS INC.
Consolidated Statements of Cash Flows
(Expressed in thousands of U.S. dollars)

	Year Ended December 31,		
	2021	2020	2019
Cash flows from operating activities:			
Net loss	\$ (211,843)	\$ (180,552)	\$ (145,437)
Items not involving cash:			
Depreciation and amortization of property and equipment	3,739	3,355	2,312
Amortization of intangible assets	2,793	4,160	3,113
Impairment of acquired IPR&D	—	—	768
Stock-based compensation (note 10e)	10,756	29,116	48,996
Amortization and impairment of operating lease right-of-use assets	3,051	2,764	1,906
Deferred income tax expense (recovery)	(953)	266	(726)
Non-cash consideration from licensing agreement	—	(218)	—
Change in fair value of contingent consideration liability (note 17)	213	307	271
Change in fair value of investments in equity instruments	(167)	—	—
Unrealized foreign exchange (gain) loss	(433)	(453)	504
Changes in non-cash operating working capital:			
Accounts receivable	(266)	(13,107)	(1,828)
Prepaid expenses and other current assets	(15,792)	(3,519)	(8,680)
Accounts payable and accrued liabilities	16,477	7,618	21,572
Operating lease liabilities	(26)	(1,140)	(795)
Deferred revenue	—	—	(3,530)
Income taxes payable	—	—	(299)
Net cash used in operating activities	\$ (192,451)	\$ (151,403)	\$ (81,853)
Cash flows from financing activities:			
Proceeds from public offerings, net of issuance costs (note 10a)	—	300,910	188,231
Issuance of common shares on exercise of stock options (note 10e)	6,428	7,111	5,498
Issuance of common shares through employee stock purchase plan (note 10f)	2,070	1,111	598
Deferred financing fees	(470)	(113)	(650)
Finance lease payments	(17)	(41)	(16)
Net cash provided by financing activities	\$ 8,011	\$ 308,978	\$ 193,661
Cash flows from investing activities:			
Net redemptions (purchases) of short-term investments	157,881	13,325	(11,714)
Purchases of long-term investments	—	(50,500)	—
Acquisition of property and equipment	(12,404)	(4,310)	(6,322)
Acquisition of intangible assets	(881)	(1,955)	(7,556)
Net cash provided by (used in) investing activities	\$ 144,596	\$ (43,440)	\$ (25,592)
Effect of exchange rate changes on cash and cash equivalents	(325)	(550)	30
Net change in cash and cash equivalents	(40,169)	113,585	86,246
Cash and cash equivalents, beginning of year	242,036	128,451	42,205
Cash and cash equivalents, end of year	\$ 201,867	\$ 242,036	\$ 128,451
<i>Supplemental disclosure of non-cash investing and finance items:</i>			
Leased assets obtained in exchange for operating lease liabilities	\$ 24,609	\$ 2,407	\$ 7,026
Acquisition of property and equipment in accounts payable and accrued liabilities	1,933	130	607

The accompanying notes are an integral part of these financial statements

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ZYMEWORKS INC.

Notes to the Consolidated Financial Statements

(Expressed in thousands of U.S. dollars except share and per share data)

1. Nature of Operations

Zymeworks Inc. (the “Company” or “Zymeworks”) is a clinical-stage biopharmaceutical company dedicated to the development of next-generation multifunctional biotherapeutics. Zymeworks was incorporated on September 8, 2003 under the laws of the Canada Business Corporations Act. On October 22, 2003, the Company was registered as an extra-provincial company under the Company Act (British Columbia). On May 2, 2017, the Company continued under the Business Corporations Act (British Columbia).

Since its inception, the Company has devoted substantially all of its resources to research and development activities, including developing its therapeutic platforms and identifying and developing potential product candidates by undertaking preclinical studies and clinical trials. The Company supports these activities through general and administrative support, as well as by raising capital, conducting business planning and protecting its intellectual property.

2. Summary of Significant Accounting Policies

Basis of Presentation

The consolidated financial statements of the Company have been prepared in accordance with generally accepted accounting principles in the United States of America (“U.S. GAAP”). The consolidated financial statements include the accounts of Zymeworks Inc. and its wholly owned subsidiary, Zymeworks Biopharmaceuticals Inc., which was incorporated in the State of Washington on December 5, 2014. All inter-company accounts and transactions have been eliminated on consolidation.

All amounts expressed in the consolidated financial statements of the Company and the accompanying notes thereto are expressed in thousands of U.S. dollars, except for share and per share data and where otherwise indicated. References to “\$” are to U.S. dollars and references to “C\$” are to Canadian dollars.

Certain prior period amounts have been reclassified from general and administrative expenses to research and development expenses to conform to the current period's presentation. These reclassifications had no effect on previously reported operating expenses, net loss, shareholders' equity, and cash flows from operating activities.

Foreign Currency

The functional currency of the Company is the U.S. dollar. Transactions denominated in foreign currencies are translated at the approximate exchange rate prevailing on the date of the transaction. At period end, monetary assets and liabilities denominated in foreign currencies are translated into U.S. dollars using exchange rates in effect at the balance sheet date. Resulting foreign exchange gains and losses are reflected in the Consolidated Statements of Loss and Comprehensive Loss.

Use of Estimates

The preparation of consolidated financial statements in accordance with U.S. GAAP requires the Company to make estimates and judgments in certain circumstances that affect the reported amounts of assets, liabilities, revenue and expenses, and related disclosure of contingent assets and liabilities. On an ongoing basis, the Company evaluates its estimates, most notably those related to revenue recognition including estimated timing of completion of performance obligations required to meet revenue recognition criteria, accrual of expenses including clinical and preclinical study expense accruals, stock-based compensation, valuation allowance for deferred taxes, benefits under the Scientific Research and Experimental Development (“SR&ED”) program, and other contingencies. Management bases its estimates on historical experience and on various other assumptions that it believes to be reasonable under the circumstances. Actual results could differ from these estimates.

The full extent to which the COVID-19 pandemic may directly or indirectly impact the Company’s business, results of operations and financial condition, including revenues, expenses, clinical trials, research and development costs and employee-related amounts, will depend on future developments that are evolving and highly uncertain, such as the duration and severity of outbreaks, including potential future waves or cycles, and the effectiveness of actions taken to contain and treat COVID-19. The Company considered the potential impact of COVID-19 when making certain estimates and judgments relating to the preparation of these consolidated financial statements. While there was no material impact to the Company’s consolidated financial statements as of and for the year ended December 31, 2021, the Company’s future assessment of the magnitude and

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duration of COVID-19, as well as other factors, could result in a material impact to the Company's consolidated financial statements in future reporting periods.

Revenue Recognition

Accounting Standards Codification Topic 606, *Revenue from Contracts with Customers* ("ASC 606" or "Topic 606") applies to all contracts with customers, except for contracts that are within the scope of other standards, such as leases, insurance, collaboration arrangements and financial instruments. In accordance with ASC 606, the Company recognizes revenue when the Company's customer obtains control of promised goods or services, in an amount that reflects the consideration which the Company expects to receive in exchange for those goods or services.

The Company applied ASC 606 to all revenue arrangements to date. For collaborative arrangements that fall within the scope of ASC 808, Collaborative Arrangements ("ASC 808"), the Company applies the revenue recognition model under ASC 606 to part or all of the arrangements, when deemed appropriate.

In accordance with ASC 606, the Company recognizes revenue when the Company's customer obtains control of promised goods or services, in an amount that reflects the consideration that the Company 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 each of its agreements, the Company performs the following steps: (i) identification of the promised deliverables in the contract; (ii) determination of whether the promised deliverables are performance obligations including whether they are distinct; (iii) measurement of the transaction price, including uncertainties related to variable consideration; (iv) allocation of the transaction price to the performance obligations based on the stand-alone selling prices; 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 that it is entitled to in exchange for the goods and services transferred to the customer. At contract inception, the Company assesses the goods or services promised within each contract that falls under the scope of Topic 606, to identify distinct performance obligations. The Company then recognizes as revenue the amount of the transaction price that is allocated to the respective performance obligation when or as the performance obligation is satisfied.

The Company has entered into a number of collaboration and licensing agreements. Promised deliverables within these agreements may include: (i) grants of licenses, or options to obtain licenses, to the Company's intellectual property, (ii) research and development services, (iii) drug product manufacturing, and (iv) participation on joint research and/or development committees. The terms of these agreements typically include one or more of the following types of payments to the Company:

- non-refundable, upfront license and platform technology access fees;
- research, development and regulatory milestone payments;
- research support payments; and
- royalties and commercial milestone payments.

If the expectation at contract inception is such that the period between payment by the licensee and the completion of related performance obligations will be one year or less, the Company assumes that the contract does not have a significant financing component.

When applying the revenue recognition criteria of ASC 606 to license and collaboration agreements, the Company may be required to apply significant judgment when evaluating whether contractual obligations represent distinct performance obligations, allocating transaction price to performance obligations within a contract, determining when performance obligations have been met, assessing the recognition and future reversal of variable consideration, and determining and applying appropriate methods of measuring progress for performance obligations satisfied over time. These judgments are discussed in more detail in the following paragraphs for each type of payment received by the Company under the terms of the license and collaborations agreements.

Non-refundable, upfront license and platform technology access fees

If the license to the Company's intellectual property is determined to be distinct from the other performance obligations identified in the arrangement, the Company recognizes revenue from non-refundable, upfront fees allocated to the license when the license is transferred to the licensee and the licensee is able to use and benefit from the license. For licenses that are not

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distinct from other promises, the Company uses judgment to assess the nature of the combined performance obligation to determine whether the combined performance obligation is satisfied over time or at a point in time and, if over time, the appropriate method of measuring progress for purposes of recognizing revenue from non-refundable, upfront fees. The Company evaluates the measure of progress each reporting period and, if necessary, adjusts the related revenue recognition accordingly.

Research, development and regulatory milestone payments

At the inception of each arrangement that includes research, development or regulatory milestone payments, the Company evaluates whether the milestones are considered probable of being reached and estimates the amount to be included in the transaction price using the most likely amount method. When it is probable that a significant revenue reversal would not occur, the associated milestone value is included in the transaction price. Milestone payments that are not within the control of the Company or the licensee, such as regulatory approvals, are not considered probable of being achieved until those approvals are received. The transaction price is then allocated to each performance obligation on a relative stand-alone selling price basis, for which the Company recognizes revenue as or when the performance obligations under the contract are satisfied. At the end of each subsequent reporting period, the Company re-evaluates the probability of achievement of such development milestones and any related constraint, and if necessary, adjusts its estimate of the overall transaction price. Any such adjustments are recorded on a cumulative catch-up basis, which would affect license, collaboration and other revenues and earnings in the period of adjustment. The probability of successfully achieving the criteria for the milestone payments is highly uncertain. Consequently, there is a significant risk that the Company may not earn all of the milestone payments from each of its strategic partners.

Research and development milestones in the Company's collaboration agreements may include some, but not necessarily all, of the following types of events:

- completion of preclinical research and development work leading to selection of product candidates;
- initiation of Phase 1, Phase 2 and Phase 3 clinical trials; and
- achievement of certain other technical, scientific or development criteria.

Regulatory milestone payments may include the following types of events:

- filing of regulatory applications for marketing approval in the United States, Europe or Japan, including Investigational New Drug ("IND") applications and Biologics License Application ("BLA"); and
- marketing approval in major markets, such as the United States, Europe or Japan.

Research support and other payments

Payments by the licensees in exchange for research activities performed by the Company on behalf of the licensee are recognized as revenue upon performance of such activities at rates consistent with prevailing market rates. Payments for research supplies provided are recognized as revenue upon delivery of the supplies.

Royalties and commercial milestone payments

For arrangements that include sales-based royalties, including commercial milestone payments based on pre-specified level of sales, the Company recognizes 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). Achievement of these royalties and commercial milestones may solely depend upon performance of the licensee.

Contract assets and liabilities

Contract assets are mainly comprised of trade receivables net of expected credit losses, which includes amounts billed and currently due from customers.

Contract liabilities are mainly comprised of deferred revenues. Amounts received prior to satisfying all revenue recognition criteria are recorded as deferred revenue in the Company's consolidated financial statements. Amounts not expected to be recognized as revenue within the next twelve months of the consolidated balance sheet date are classified as long-term deferred revenue.

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Cash and Cash Equivalents

The Company considers all highly liquid investments purchased with original maturities of 90 days or less at the date of acquisition to be cash equivalents. Cash and cash equivalents consist primarily of money market funds and are recorded at cost, which approximates fair value.

Investments

The Company's short-term and long-term investments include guaranteed investment certificates and term deposits with original maturities exceeding three months. These investments are recorded at cost plus accrued interest, which approximates their fair value.

The Company also holds debt securities and equity securities in private entities which are accounted for as available for sale financial instruments with changes in fair value recorded through other comprehensive income or at cost subject to impairment (note 5).

Accounts Receivable and Expected Credit Losses

Accounts receivable are recorded at invoiced amounts, net of any allowance for doubtful accounts. The allowance for doubtful accounts is the Company's best estimate of the amount of probable credit losses in existing accounts receivable.

The Company evaluates the collectability of accounts receivable on a regular basis based upon various factors including the financial condition and payment history of customers, an overall review of collections experience on other accounts and economic factors or events expected to affect future collections experience. Expected credit losses on our accounts receivable were immaterial as at December 31, 2021 and 2020.

Deferred Financing Fees

Deferred financing fees consist of amounts charged by underwriters, attorneys, accountants and printers that are directly attributable to future financing transactions. These costs are deferred and subsequently charged against the gross proceeds of the related financing transaction upon closing of such transaction.

Segment Information

The Company operates and manages its business in one segment, which is the discovery, development and commercialization of next-generation multifunctional biotherapeutics. Operating segments are defined as components of an enterprise about which separate discrete information is available for the chief operating decision maker, or decision making group, in deciding how to allocate resources and assessing performance.

Property and Equipment

Property and equipment are recorded at cost net of accumulated depreciation. Upon retirement or sale, the cost of assets disposed of and the related accumulated depreciation are removed from the accounts and any resulting gain or loss is recognized in earnings. Repairs and maintenance costs are expensed as incurred.

The Company records depreciation using the straight-line method over the estimated useful lives of the property and equipment as follows:

Asset Class	Rate
Computer hardware	3 years
Office equipment	3 years
Furniture and fixtures	5 years
Laboratory equipment	7 years
Leasehold improvements	Shorter of the initial lease term or useful life

Property and equipment acquired or disposed of during the year are depreciated proportionately for the period they are in use.

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Leases

The Company accounts for leases in accordance with ASC 842, Leases. The Company determines if an arrangement contains a lease at inception. 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 that lease. For leases with a term greater than 12 months, ROU assets and liabilities are recognized at the lease commencement date based on the estimated present value of lease payments over the lease term. The lease term includes the option to extend the lease when it is reasonably certain the Company will exercise that option. When available, the Company uses the rate implicit in the lease to discount lease payments to present value. In the case the implicit rate is not available, the Company uses its incremental borrowing rate based on information available at the lease commencement date, to determine the present value of lease payments.

Patents and Intellectual Property Costs

Costs incurred to acquire patents and to prosecute and maintain intellectual property rights are expensed as incurred to general and administrative expense due to the uncertainty surrounding the drug development process and the uncertainty of future benefits. Patents and intellectual property acquired from third parties are capitalized and amortized over the remaining life of the patent, if related to approved products or if there are alternative future uses for the underlying technology. No patent or intellectual property costs have been capitalized to date.

Impairment of Long-Lived Assets

The Company assesses the recoverability of its long-lived assets whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. Recoverability of the long-lived asset is measured by a comparison of the carrying amount of the asset to future undiscounted net cash flows expected to be generated by the asset or group of assets. If carrying value exceeds the sum of undiscounted cash flows, the Company then determines the fair value of the underlying asset. Any impairment to be recognized is measured by the amount by which the carrying amount of the asset group exceeds the estimated fair value of the asset or asset group. Assets classified as held for sale are reported at the lower of the carrying amount or fair value, less costs to sell. As of December 31, 2021 and 2020, the Company determined that there were no indicators of impairment of long-lived assets and there were no assets held-for-sale.

Government Grants and Credits

Government grants are recognized where there is reasonable assurance that the grant will be received and all associated conditions will be complied with. Reimbursements of eligible research and development expenditures pursuant to government assistance programs are recorded as reductions of research and development costs when the related costs have been incurred and there is reasonable assurance regarding collection of the claim.

Grant claims not settled by the balance sheet date are recorded as receivables, provided their receipt is probable. The determination of the amount of the claim, and hence the receivable amount, requires management to make calculations based on its interpretation of eligible expenditures in accordance with the terms of the programs. The reimbursement claims submitted by the Company are subject to review by the relevant government agencies. The Company has used its best judgment and understanding of the related program agreements in determining the receivable amount.

The Company participates in SR&ED and Research Tax Credit Programs, two federal tax incentive programs that encourage Canadian and U.S. businesses to conduct research and development in Canada and in United States, respectively. The benefits of investment tax credits for scientific research and development expenditures are recognized in the year the qualifying expenditure is made provided there is reasonable assurance of recoverability. The refundable portion of investment tax credits are recorded as reductions to research and development expenditures.

The Company also participates in the Canada Emergency Wage Subsidy (“CEWS”) and Canada Emergency Rent Subsidy (“CERS”) programs announced by the Government of Canada in April 2020, in order to help employers keep and/or return Canadian-based employees to payrolls in response to challenges posed by the COVID-19 pandemic. The Company recognizes CEWS and CERS grants when it is probable that it complied with relevant eligibility requirements and conditions of the grant and that the grant would be received. These grants are recorded as reductions to wage and rent expenditures.

Research and Development Costs

Research and development costs are expensed as incurred and include costs that the Company incurs for its own and for the Company's strategic partners' research and development activities. These costs primarily consist of expenses incurred under

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agreements with contract research organizations on the Company's behalf, investigative sites and consultants that conduct the Company's clinical trials, the cost of acquiring and manufacturing clinical trial materials and other allocated expenses, the cost of acquired research patents and intellectual property that do not meet the requirements for capitalization, employee related expenses, including salaries and benefits, stock-based compensation expense, and costs associated with nonclinical activities and regulatory approvals.

Clinical Trial Expense Accruals

Clinical trial expenses represent a significant component of research and development expenses and the Company outsources a significant portion of these activities to third party contract research organizations. Third-party clinical trial expenses include investigator fees, site costs, clinical research organization costs and other trial-related vendor costs. As part of preparing the consolidated financial statements, the Company estimates accrued liabilities for services that have been performed by clinical research organizations or investigator sites but have not yet been invoiced to the Company. When making these estimates, the Company uses operational and contractual information from third party service providers and operational data from internal personnel. The Company makes considerable judgments and estimates in determining the progress of patients based on enrollment and treatment data provided by the third-party service providers and internal personnel. The accrued balance factors in the Company's best estimate of the date on which certain services commence, the level of services performed before a given date, whether certain services are invoiceable and the cost of such services. Any changes to the estimates could have a significant impact on the accruals for clinical trial activities that we outsourced to third party contract research organizations. If the actual timing of provision of services or level of effort varies from the Company's estimates, the Company adjusts research and development expense and accrued liabilities accordingly on a prospective basis.

Income Taxes

The Company accounts for income taxes using an asset and liability method. Deferred tax assets and liabilities are determined based on the difference between the financial statement and tax basis of assets and liabilities using enacted tax rates in effect for the year in which the differences are expected to reverse. The measurement of deferred tax assets is reduced, if necessary, by the extent of a valuation allowance. The recognition of uncertain tax positions is evaluated based on whether it is considered more likely than not that the position taken, or expected to be taken, on a tax return will be sustained upon examination through litigation or appeal. For those positions that meet the recognition criteria, they are measured as the largest amount that is more than 50% likely to be realized upon ultimate settlement.

Stock-Based Compensation

The Company recognizes stock-based compensation expense on equity and liability classified stock-based awards granted to employees, directors, and certain consultants. The Company measures the cost of such awards based on the fair value of the award, net of estimated forfeitures, and recognizes stock-based compensation expense in the consolidated statements of loss and comprehensive loss on a straight-line basis over the requisite service period. The requisite service period generally equals the vesting period of the awards. The fair values of stock option awards are estimated using the Black-Scholes option pricing model which uses various inputs including estimated fair value of the Company's underlying common share at the grant date, expected term, estimated volatility, risk-free interest rate and expected dividend yields of the Company's common shares. The Company applies an estimated forfeiture rate derived from historical employee termination behavior. If the actual number of forfeitures differs from those estimated by management, adjustments to compensation expense may be required in future periods. The fair value of restricted stock units ("RSU") is measured using the per share fair value of the Company's common stock on the dates of grant.

Equity classified awards are measured using their grant date fair value. Liability classified awards are initially measured using their grant date fair value and are subsequently remeasured at fair value at each balance sheet date until exercised or cancelled, with changes in fair value recognized as compensation cost (ASC 718 awards) or other income and expenses (ASC 815 awards) for the period, while fair value changes below the grant date fair value of the original awards are recorded in additional paid-in capital.

ASC 718 "Compensation—Stock Options" ("ASC 718"), with an exercise price which is not denominated in: (a) the currency of a market in which a substantial portion of the Company's equity securities trades, (b) the currency in which the individual's pay is denominated, or (c) the Company's functional currency, are required to be classified as liabilities. For awards accounted for under ASC 815 "Derivatives and Hedging" ("ASC 815"), any warrant or option that provides for an exercise price which is not denominated in the Company's functional currency is required to be classified as a liability. Certain option awards which were classified as equity on grant dates were subsequently reclassified to liability upon the change of the compensation currency for certain executives and employees holding these option awards from Canadian dollars to U.S. dollars. Total fair

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value of these options on reclassification date were recorded as liability awards. Accumulated expense amount to the reclassification date was reversed from additional paid-in capital and the remaining amount was recorded to the statement of loss on reclassification date.

The Company has an employee stock purchase plan which is considered compensatory. Accordingly, the Company recognizes compensation expense on these awards based on their estimated grant date fair value using the Black-Scholes option pricing model. The Company recognizes compensation expense in the consolidated statements of loss and comprehensive loss on a straight-line basis over the requisite service period.

Business Combinations and Goodwill

Business combinations are accounted for using the acquisition method. The fair value of total purchase consideration is allocated to the fair values of identifiable tangible and intangible assets acquired and liabilities assumed, with the remaining amount being classified as goodwill. All assets, liabilities and contingent liabilities acquired or assumed in a business combination are recorded at their fair values at the date of acquisition. If the Company's interest in the fair value of the acquiree's net identifiable assets exceeds the cost of the acquisition, the excess is recognized in earnings or loss immediately. Transaction costs that are incurred in connection with a business combination, other than costs associated with the issuance of debt or equity securities, are expensed as incurred.

Goodwill is evaluated for impairment on an annual basis or more frequently if an indicator of impairment is present (note 6). As part of the impairment evaluation, the Company may elect to perform an assessment of qualitative factors. If this qualitative assessment indicates that it is more likely than not that the fair value of the reporting unit that includes the goodwill is less than its carrying value, then a quantitative impairment test would be prepared to compare the fair value to the carrying value and record an impairment charge if the carrying value exceeds the fair value.

Acquired In-Process Research and Development (IPR&D) and Definite-lived Intangible Assets

Acquired IPR&D represents the fair value assigned to research and development assets that have not reached technological feasibility. IPR&D is classified as an indefinite-lived intangible asset and is not amortized. IPR&D becomes definite-lived upon the completion or abandonment of the associated research and development efforts. All research and development costs incurred subsequent to the acquisition of IPR&D are expensed as incurred. Indefinite-lived intangible assets are evaluated for impairment on an annual basis or more frequently if an indicator of impairment is present.

Definite-lived intangible assets include computer software and a research license and are amortized on a basis which reflects the pattern in which the economic benefits are consumed. Amortization begins when the assets are put into use. If there is an event indicating that the carrying value of a definite-lived intangible asset may be impaired, then the Company will perform an impairment test. When an impairment test is performed, if the carrying value exceeds the recoverable value, based on the sum of undiscounted future cash flows, then such asset is written down to its fair value.

Net loss per share

Basic net loss per share attributable to common shareholders is computed by dividing the net loss attributable to common shareholders by the weighted average number of common shares outstanding for the year. Diluted net loss per share attributable to common shareholders is computed by adjusting net loss attributable to common shareholders to reallocate undistributed earnings based on the potential impact of dilutive securities, including outstanding stock options and warrants. Diluted net loss per share attributable to common shareholders is computed by dividing the diluted net loss attributable to common shareholders by the weighted-average number of common shares outstanding for the year, including potential dilutive common shares assuming the dilutive effect of outstanding instruments. The treasury stock method is used to determine the dilutive effect of the Company's stock option grants and warrants. ASC 260 "Earnings Per Share" requires an adjustment to the numerator for any income or loss related to liability classified warrants and stock options, if dilutive, if they are presumed to be share settled. Stock options outstanding, with the exception of liability classified stock options, were excluded from the calculation of diluted loss per share because their inclusion would have been anti-dilutive.

3. Recent Accounting Pronouncements

Initial adoption of new accounting pronouncements

In December 2019, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") 2019-12, Simplifying the Accounting for Income Taxes (Topic 740). ASU 2019-12 removes certain exceptions for performing

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intra-period tax allocations, recognizing deferred taxes for investments, and calculating income taxes in interim periods. The guidance also simplifies the accounting for franchise taxes, transactions that result in a step-up in the tax basis of goodwill, and the effect of enacted changes in tax laws or rates in interim periods. The Company adopted ASU2019-12 in the first quarter of 2021 and the adoption had no material impact to the Company's consolidated financial statements.

Recent accounting pronouncements not yet adopted

The Company has reviewed other recent accounting pronouncements and concluded that they are either not applicable, or that no material impact is expected on the consolidated financial statements as a result of future adoption.

4. Net Loss per Share

Net loss per share for the years ended December 31, 2021, 2020 and 2019 was as follows:

	Year Ended December 31,		
	2021	2020	2019
Numerator:			
Net loss attributable to common shareholders:			
Basic	\$ (211,843)	\$ (180,552)	\$ (145,437)
Adjustment for change in fair value of liability classified stock options	\$ (28,534)	\$ —	\$ —
Diluted	\$ (240,377)	\$ (180,552)	\$ (145,437)
Denominator:			
Weighted-average common shares outstanding:			
Basic	51,553,869	50,382,497	38,022,014
Adjustment for dilutive effect of liability classified stock options	577,727	—	—
Diluted	52,131,596	50,382,497	38,022,014
Net loss per common share – basic	\$ (4.11)	\$ (3.58)	\$ (3.83)
Net loss per common share – diluted	\$ (4.61)	\$ (3.58)	\$ (3.83)

Weighted average number of common shares used in the basic and diluted earnings per share calculations include the pre-funded warrants issued in connection with the Company's June 2019 and January 2020 offerings as the warrants are exercisable at any time for nominal cash consideration.

5. Investments

Short-term Investments

Short-term investments are denominated in U.S. dollars or Canadian dollars and consist of guaranteed investment certificates ("GICs") acquired from financial institutions in accordance with the Company's cash investment policy. Short-term GICs bear interest at rates of 0.25%-1.00% per annum, and are classified as held to maturity and available for sale and are accounted for at amortized cost or at fair value.

Long-term Investments

Long-term investments at December 31, 2021 consist of equity securities of \$886 acquired for strategic purposes or in connection with licensing and collaboration agreements (December 31, 2020 - \$718 which included both equity and debt securities). Other long-term investments are accounted for as available for sale financial instruments with changes in fair value recorded through net income. Long term investments as of December 31, 2020 also included GIC of \$25,203 purchased from a financial institution in accordance with the Company's cash investment policy. These were classified as held to maturity and were accounted for at amortized cost as of December 31, 2020.

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6. IPR&D and Goodwill

Acquired IPR&D

In-process research and development assets (“IPR&D”) acquired in the 2016 Kairos Therapeutics Inc. (“Kairos”) business combination are classified as indefinite-lived intangible assets and are not currently being amortized. The following table summarizes the carrying value of IPR&D, net of impairment:

	Acquired IPR&D	Accumulated Impairment	Net
Balance at December 31, 2018	\$ 20,700	\$ (2,304)	\$ 18,396
Change during the period	—	(768)	(768)
Balance at December 31, 2019	\$ 20,700	\$ (3,072)	\$ 17,628
Change during the period	—	—	—
Balance at December 31, 2020	\$ 20,700	\$ (3,072)	\$ 17,628
Change during the period	—	—	—
Balance at December 31, 2021	<u>\$ 20,700</u>	<u>\$ (3,072)</u>	<u>\$ 17,628</u>

For the years ended December 31, 2021 and December 31, 2020, the Company did not record any impairment charge related to the fair value of IPR&D. For the year ended December 31, 2019, the Company recorded an impairment charge of \$768 related to the fair value of IPR&D recognized in relation to collaboration efforts with VAR2 Pharmaceuticals ApS (“VAR2”) as the parties jointly decided not to pursue opportunities for the co-development and collaboration for antibody-based therapies. The Company performed a qualitative test and concluded that IPR&D was not impaired as of December 31, 2021.

Goodwill

The Company performed its annual impairment test of goodwill as of December 31, 2021 and concluded that no impairment existed. As part of the evaluation of the recoverability of goodwill, the Company identified only one reporting unit to which the total carrying amount of goodwill has been assigned. As at December 31, 2021, the Company performed a qualitative assessment for its annual impairment test of goodwill after concluding that it was not more likely than not that the fair value of the reporting unit was less than its carrying value. Consequently, the quantitative impairment test was not required.

7. Property and Equipment

Property and equipment consist of the following:

	December 31,	
	2021	2020
Computer hardware	\$ 3,554	\$ 2,691
Furniture and fixtures	1,558	1,559
Office equipment	1,045	971
Laboratory equipment	8,326	7,280
Leasehold improvements	9,104	9,054
Construction in progress	13,257	964
Property and equipment	<u>\$ 36,844</u>	<u>\$ 22,519</u>
Less accumulated depreciation	<u>(14,061)</u>	<u>(10,334)</u>
Property and equipment, net	<u><u>\$ 22,783</u></u>	<u><u>\$ 12,185</u></u>

Depreciation expense on property and equipment including assets acquired under capital leases for the years ended December 31, 2021, 2020 and 2019 was \$3,739, \$3,355 and \$2,312, respectively.

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8. Intangible Assets

Intangible assets consist of the following:

	December 31,	
	2021	2020
Research licenses and computer software	\$ 16,430	\$ 16,390
Software implementation costs	\$ 1,289	\$ —
Less accumulated amortization	<u>(13,881)</u>	<u>(11,087)</u>
Intangible assets, net	<u>\$ 3,838</u>	<u>\$ 5,303</u>

Amortization expense on intangible assets for the years ended December 31, 2021, 2020 and 2019 was \$2,793, \$4,160 and \$3,113, respectively.

At December 31, 2021, amortization expense on intangible assets is estimated to be as follows for each of the next five years:

	Amortization expense
2022	\$ 597
2023	\$ 452
2024	\$ 432
2025	\$ 427
2026	<u>\$ 427</u>
	<u>\$ 2,335</u>

9. Liabilities

Accounts payable and accrued expenses consisted of the following:

	December 31,	
	2021	2020
Trade payables	\$ 5,174	\$ 6,244
Accrued research and development expenses	50,963	25,962
Employee compensation and vacation accruals	3,346	9,439
Accrued legal and professional fees	1,064	859
Other	2,220	1,151
Total	<u>\$ 62,767</u>	<u>\$ 43,655</u>

Other long term liabilities consisted of the following:

	December 31,	
	2021	2020
Liability for contingent consideration (note 17)	\$ 1,498	\$ 1,285
Liabilities from in-licensing agreements	1,150	1,450
Finance lease liability	100	122
Total	<u>\$ 2,748</u>	<u>\$ 2,857</u>

10. Shareholders' Equity

a. Equity Offerings

2019 Public Offering

On June 24, 2019, the Company closed an offering pursuant to which the Company sold 7,013,892 common shares including the sale of 1,458,336 common shares to the underwriters upon their full exercise of their over-allotment option at an offering price of \$18.00 per common share and 4,166,690 Pre-Funded Warrants (note 10d) in lieu of common shares at \$17.9999 per Pre-Funded Warrant. Net proceeds were approximately \$188,005, after underwriting discounts, commissions and offering expenses of \$13,245.

2020 Public Offering

On January 27, 2020, the Company closed a public offering pursuant to which the Company sold 5,824,729 common shares, including the sale of 900,000 common shares to the underwriters upon their full exercise of their over-allotment option, at \$46.50 per common share and 1,075,271 Pre-Funded Warrants (note 10d) in lieu of common shares at \$46.4999 per Pre-Funded Warrant. Net proceeds were \$300,910, after underwriting discounts, commissions and offering expenses of \$19,940.

b. Authorized

The Company has an unlimited authorized number of voting Common Shares and Preferred Shares without par value.

c. Preferred Shares

As of December 31, 2021 and 2020, no preferred shares were issued or outstanding, respectively.

Holders of Preferred Shares will be entitled to preference with respect to payment of dividends over the Common Shares and any other shares ranking junior to the Preferred Shares.

d. Pre-Funded Common Share Warrants

In connection with a public offering completed on June 24, 2019 (note 10a), the Company issued 4,166,690 Pre-Funded Warrants at a price of \$17.9999 per Pre-Funded Warrant which granted holders of warrants the right to purchase up to 4,166,690 common shares of the Company, at an exercise price of \$0.0001 per share.

In connection with a public offering completed on January 27, 2020 (note 10a), the Company issued 1,075,271 Pre-Funded Warrants at a price of \$46.4999 per Pre-Funded Warrant which granted holders of warrants the right to purchase up to 1,075,271 common shares of the Company, at an exercise price of \$0.0001 per share.

The Pre-Funded Warrants are exercisable by the holders at any time on or after the original issue date. The Pre-Funded Warrants do not expire unless they are exercised or settled in accordance with the Pre-Funded Warrant agreement. As the Pre-Funded Warrants meet the condition for equity classification, proceeds from issuance of the Pre-Funded Warrants, net of any transaction costs, are recorded in additional paid-in capital. Upon exercise of the Pre-Funded Warrants, the historical costs recorded in additional paid-in capital along with exercise price collected from holders will be recorded in common shares. No Pre-Funded Warrants have been exercised to date.

e. Stock-Based Compensation

Original Stock Option Plan:

On July 14, 2006, the shareholders of the Company approved an employee stock option plan (the "Original Plan"). The Original Plan provides for the granting of options to directors, officers, employees and consultants. Options to purchase common shares may be granted at an exercise price of each option equal to the last private issuance of common shares immediately preceding the date of the grant. The total number of options outstanding is not to exceed 20% of the issued common shares of the Company.

Options granted under the Original Plan are exercisable at various dates over their 10-year life. Common shares are issued from treasury when options are exercised.

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The exercise prices of the Company's stock options under the Original Plan are denominated in Canadian dollars. The Canadian dollar amounts have been translated to U.S. dollars using the period end rate or the average foreign exchange rate for the period, as applicable, and have been provided for information purposes. Upon the effectiveness of the Company's New Stock Option Plan described below, no further options were issuable under the Original Plan. However, all outstanding options granted under the Original Plan remain outstanding, subject to the terms of the Original Plan and the applicable grant documents, until such outstanding options are exercised or they terminate or expire by their terms.

New Stock Option and Equity Compensation Plan

On April 10, 2017, the Company's shareholders approved a new stock option plan, which became effective immediately prior to the consummation of the Company's IPO. This plan allows for the grant of options to directors, officers, employees and consultants in U.S. or Canadian dollars, and also permits the Company to grant incentive stock options ("ISOs"), within the meaning of Section 422 of the Internal Revenue Code, to its employees. On June 7, 2018, the Company's shareholders approved an amendment and restatement of this plan (this plan, as amended and restated, the "New Plan"), which includes an article that allows the Company to grant restricted shares, restricted share units ("RSUs") and other share-based awards, in addition to stock options. On March 4, 2020, the Board of Directors approved certain minor amendments to the New Plan that did not require shareholder approval.

The original maximum number of common shares reserved for issuance under the New Plan as of June 7, 2018 was 5,686,097, which includes 3,686,097 shares issuable upon exercise of options outstanding as of March 31, 2018. Beginning in 2019 and ending in 2028, this maximum number may be increased on the first day of each calendar year by up to 4.0% of the number of outstanding shares on the last day of the immediately preceding calendar year. As of December 31, 2021, 952,632 common shares were available for future award grants under the New Plan (December 31, 2020: 1,242,038 common shares). ISOs may be granted with respect to a maximum fixed amount equal to 20% of the shares reserved for issuance under the New Plan as of June 7, 2018.

On January 5, 2022, the Board approved the "Zymeworks Inc. Inducement Stock Option and Equity Compensation Plan" and reserved 750,000 of the Company's common shares for issuance pursuant to equity awards granted thereunder.

RSUs

During the year ended December 31, 2020, the Company started granting RSUs to certain employees, which typically vest over a period of three years, in the amount of one-third each year on the anniversary of the grant date. RSUs are equity-settled on each vesting date, subject to the grantee's continued employment with the Company on the vesting date. The fair value of RSUs granted was calculated by using the Company's closing stock price on the grant date.

	Number of RSUs	Weighted-average grant date fair value (\$)
Outstanding, December 31, 2020	82,704	35.19
Granted	316,212	24.71
Vested and settled	(27,563)	35.19
Forfeited	(17,084)	34.96
Outstanding, December 31, 2021	354,269	25.85

As of December 31, 2021, there was \$5,224 of unamortized RSU expense that will be recognized over a weighted average period of 1.47 years.

Stock Options

All options granted under the New Plan will have an exercise price determined and approved by the Board of Directors on the date of the grant, which shall not be less than the market price of the common shares at such time. For the purposes of the New Plan, the market price of a common share shall be the closing sale price of a share on the grant date reported by the stock exchange with the greatest trading volume or, if such day is not a trading day, the closing sale price reported for the immediately preceding trading day. The Company may convert a market price denominated in Canadian dollars into United States dollars and vice versa and such converted amount shall be the market price.

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An option shall be exercisable during a period established by the Board which shall commence on the date of the grant and shall terminate not later than ten years after the date of the granting of the option. The New Plan provides that the exercise period shall automatically be extended if the date on which it is scheduled to terminate shall fall during a black-out period. In such cases, the extended exercise period shall terminate on the tenth business day after the last day of the black-out period, provided that the exercise period shall in no case be extended beyond the tenth anniversary of the date the option was granted. All options shall vest in accordance with the terms of their grant agreements.

The following table summarizes the Company's stock options granted in Canadian dollars under the Original Plan and the New Plan:

	Number of Options	Weighted- Average Exercise Price (C\$)	Weighted- Average Exercise Price (\$)	Weighted- Average Contractual Term (years)	Aggregate intrinsic value (C\$)	Aggregate intrinsic value (\$)
Outstanding, December 31, 2019	2,356,413	16.21	12.46	6.70	101,404	77,807
Granted	413,750	49.22	36.25			
Expired	—	—	—			
Exercised	(404,963)	13.82	10.48			
Forfeited	(79,631)	33.89	25.30			
Outstanding, December 31, 2020	2,285,569	22.00	17.27	6.46	87,545	68,664
Granted	480,117	42.83	34.12			
Expired	—	—	—			
Exercised	(212,817)	14.77	11.69			
Forfeited	(64,214)	40.69	32.48			
Outstanding, December 31, 2021	2,488,655	26.15	20.70	6.24	7,919	6,224
December 31, 2021						
Exercisable	1,715,062	19.29	15.16	5.03	7,658	6,018
Vested and expected to vest	2,440,510	25.84	20.31	6.12	7,734	6,078

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The following table summarizes the Company's stock options granted in U.S. dollars under the New Plan:

	Number of Options	Weighted- Average Exercise Price (\$)	Weighted- Average Contractual Term (years)	Aggregate intrinsic value (\$)
Outstanding, December 31, 2019	2,853,346	15.85	8.66	84,481
Granted	1,247,550	37.11		
Expired	—	—		
Exercised	(197,195)	14.59		
Forfeited	(113,375)	18.01		
Outstanding, December 31, 2020	3,790,326	22.85	8.20	92,705
Granted	1,726,421	33.61		
Expired	—	—		
Exercised	(289,202)	13.66		
Forfeited	(310,631)	31.95		
Outstanding, December 31, 2021	4,916,914	26.59	7.93	5,555
December 31, 2021				
Exercisable	2,314,998	20.18	6.97	5,224
Vested and expected to vest	4,750,727	26.37	7.90	5,537

During the year ended December 31, 2021, the Company received cash proceeds of \$6,428 (2020: \$7,111, 2019: \$5,498) from stock options exercised. The stock options outstanding at December 31, 2021 expire at various dates from January 1, 2022 to December 9, 2031.

A summary of the non-vested stock option activity and related information of the Company's stock options granted in Canadian dollars is as follows:

	Number of options	Weighted- average grant date fair value (C\$)	Weighted- average grant date fair value (US\$)
Non-vested, December 31, 2020	690,776	24.44	19.17
Options granted	480,117	29.50	23.18
Options vested	(344,786)	21.36	16.79
Options forfeited and cancelled	(52,514)	27.76	21.81
Non-vested, December 31, 2021	773,593	27.97	21.98

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A summary of the non-vested stock option activity and related information of the Company's stock options granted in U.S. dollars is as follows:

	Number of options	Weighted-average grant date fair value (US\$)
Non-vested, December 31, 2020	2,290,287	18.75
Options granted	1,726,421	23.05
Options vested	(1,114,482)	17.45
Options forfeited and cancelled	(300,310)	21.32
Non-vested, December 31, 2021	<u>2,601,916</u>	<u>21.85</u>

The estimated fair values of options granted to officers, directors, employees and consultants are amortized over the relevant vesting periods. Stock-based compensation expense for equity classified instruments, as well as the financial statement impact of the amortization and periodic revaluation of liability classified instruments (note 2), are recorded in research and development expenses, general and administration expense and finance expense as follows:

	Year Ended December 31,		
	2021	2020	2019
Research and development expense:			
Stock-based compensation for equity classified instruments	\$ 20,090	\$ 12,299	\$ 5,939
Change in fair value of liability classified instruments	(4,646)	(6)	8,358
	<u>\$ 15,444</u>	<u>\$ 12,293</u>	<u>\$ 14,297</u>
General and administrative expense:			
Stock-based compensation for equity classified instruments	\$ 18,184	\$ 14,645	\$ 6,737
Change in fair value of liability classified instruments	(23,758)	1,416	27,470
	<u>\$ (5,574)</u>	<u>\$ 16,061</u>	<u>\$ 34,207</u>
Finance expense (income):			
Stock-based compensation for equity classified instruments	\$ —	\$ —	\$ —
Change in fair value of liability classified instruments	(129)	(41)	166
	<u>\$ (129)</u>	<u>\$ (41)</u>	<u>\$ 166</u>

Amounts for equity classified instruments above include stock-based compensation expense relating to RSUs of \$3,101 for the year ended December 31, 2021 (2020: \$1,387 and 2019: \$nil).

For the year ended December 31, 2021, stock-based compensation expense of \$38,275 was recorded in additional paid-in capital and recovery of \$27,517 was recorded in the liability classified stock options and ESPP liability accounts (2020: \$26,945 in additional paid-in capital and \$2,171 in liability classified stock options and ESPP liability accounts, 2019: \$12,676 in additional paid-in capital and \$36,320 in liability classified stock options and ESPP liability accounts).

The estimated fair value of stock options granted under the New Plan was determined using the Black-Scholes option pricing model with the following weighted-average assumptions:

	Year ended December 31,		
	2021	2020	2019
Dividend yield	0 %	0 %	0 %
Expected volatility	80.3 %	76.8 %	73.2 %
Risk-free interest rate	1.02 %	0.66 %	2.09 %
Expected average life of options	6.05 years	6.04 years	6.03 years

Expected Volatility — Volatility is a measure of the amount by which a financial variable such as a share price has fluctuated (historical volatility) or is expected to fluctuate (expected volatility) during a period. As the Company does not yet have sufficient history of its own volatility, the Company has identified several public entities of similar complexity and stage of development and calculates historical volatility using the volatility of these companies.

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Risk-Free Interest Rate — This rate is from the Government of Canada and U.S. Federal Reserve marketable bonds for the month prior to each option grant during the year, having a term that most closely resembles the expected life of the option.

Expected Term — This is the period of time that the options granted are expected to remain unexercised. Options granted have a maximum term of ten years. The Company uses the simplified method to calculate the average expected term, which represents the average of the vesting period and the contractual term.

Share Fair Value — Options granted after the Company's IPO are issued with exercise price equal to the fair market value of the Company's common stock on the grant date. Before the IPO, the Company granted stock options at exercise prices not less than the fair value of its common shares as determined by the Board of Directors, with input from management. Management estimated the fair value of its common shares based on a number of objective and subjective factors, including the most recently available valuation of common shares prepared by independent valuation specialists, external market considerations affecting the biotechnology industry and the historic prices at which the Company sold common shares.

The weighted-average Black-Scholes option pricing assumptions for liability classified stock options outstanding at December 31, 2021 and 2020 are as follows:

	December 31, 2021	December 31, 2020
Dividend yield	0 %	0 %
Expected volatility	74.3 %	77.2 %
Risk-free interest rate	0.99 %	0.43 %
Expected average option term	2.35 years	2.47 years
Number of liability classified stock options outstanding	911,400	1,028,676

The total intrinsic value of stock options exercised during the years ended December 31, 2021, 2020 and 2019 was \$10,998, \$19,446 and \$9,416 respectively. At December 31, 2021, the unamortized compensation expense related to unvested options was \$33,960. The remaining unamortized compensation expense as of December 31, 2021 will be recognized over a weighted-average period of 1.9 years.

f. Employee Stock Purchase Plan:

On April 10, 2017, the Company's shareholders approved an employee stock purchase plan ("ESPP") which became effective immediately prior to the consummation of the Company's IPO. On June 7, 2018, certain amendments to the ESPP were approved by shareholders. Prior to these amendments, the ESPP allowed eligible employees to acquire common shares at a discounted purchase price of 85% of the market value of the Company's common shares on the purchase date. The ESPP, as amended, allows eligible employees to acquire common shares at a discounted purchase price of the lesser of (i) 85% of the market price of a common share on the first day of the applicable purchase period and (ii) 85% of the market price of a common share on the purchase date. The ESPP qualifies as an "employee stock purchase plan" within the meaning of Section 423 of the Code for employees who are United States taxpayers.

The Company currently holds offerings consisting of a single six-month purchase period commencing on January 1 and July 1 of each calendar year, with a single purchase date at the end of the purchase period on June 30 and December 31 of each calendar year.

Eligible employees are able to contribute up to 15% of their gross base earnings for purchases under the ESPP through regular payroll deductions. Purchases of shares under the ESPP are limited for each employee at \$25 thousand worth of the Company's common shares (determined using the lesser of (i) the market price of a common share on the first day of the applicable purchase period and (ii) the market price of a common share on the purchase date) for each year such purchase right is outstanding.

As this plan is considered compensatory, the Company recognizes compensation expense on these awards based on their estimated grant date fair value using the Black-Scholes option pricing model. The Company recognizes compensation expense in the consolidated statements of loss and comprehensive loss on a straight-line basis over the requisite service period. For the year ended December 31, 2021, the Company recorded compensation expense of \$1,016 (2020: \$803) in research and development expense and general and administrative expense accounts. As of December 31, 2021, the total amount contributed by ESPP participants and not yet settled is \$1,243 (December 31, 2020: \$926).

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11. Government Grants and Credits

	Year Ended December 31,		
	2021	2020	2019
CEWS and CERS subsidies	\$ 3,402	\$ 3,031	\$ —
SR&ED credits, net	\$ 78	\$ 142	\$ 110
Total	\$ 3,480	\$ 3,173	\$ 110

In April 2020, the Government of Canada announced the CEWS and CERS programs for Canadian employers whose businesses were affected by the COVID-19 pandemic. The CEWS and CERS provide a subsidy of up to a certain percentage of eligible employees' eligible remuneration and eligible rent payments, subject to certain criteria. The Company applied for the CEWS and CERS to the extent it met the requirements to receive the subsidy and recognized \$2,805 (2020: \$3,005) and \$597 (2020: \$26) in total CEWS and CERS subsidies respectively, as a reduction to salaries and benefits expense and rent expense in research and development expense and general administrative expense in the consolidated statement of loss and comprehensive loss.

For the year ended December 31, 2021, the Company recognized refundable investment tax credits of \$78 as a reduction of research and development expense. Although the Company has used its best judgment and understanding of the related income tax legislation in determining its claims, it is possible the amounts could increase or decrease materially in the future, as the Canada Revenue Agency and Revenue Québec reserve the right to review and audit the investment tax credit claims.

12. Research, Collaboration and Licensing Agreements

Revenue recognized from the Company's strategic partnerships is summarized as follows:

	Year ended December 31,		
	2021	2020	2019
BeiGene:			
Milestone revenue	\$ 8,000	\$ 15,000	\$ —
Recognition of upfront fee	—	—	3,530
Janssen:			
Milestone revenue	8,000	—	—
Iconic:			
Partner revenue	5,000	4,000	—
Milestone revenue	—	—	1,000
BMS:			
Upfront fee relating to amendment	—	12,000	—
Option exercise fee	—	—	7,500
Merck:			
Milestone revenue	—	—	2,000
Lilly:			
Milestone revenue	—	—	8,000
Daiichi Sankyo:			
Commercial license option fee	—	—	3,500
Research support payments and other payments	5,680	7,951	4,014
	<u>\$ 26,680</u>	<u>\$ 38,951</u>	<u>\$ 29,544</u>

Contract Assets and Liabilities

As at December 31, 2021 and 2020, contract assets from research, collaboration and licensing agreements were \$nil and contract liabilities were \$32,941. Contract liabilities relate to deferred revenue from the BeiGene agreement described below.

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2021 Agreements:

In 2021, there were no new significant licensing or collaboration agreements nor amendments to existing agreements.

2020 and prior agreements:

Research and License Agreement with Merck Sharp & Dohme Research Ltd. (“Merck”)

On August 22, 2011, the Company entered into a research and license agreement with Merck, which was amended and restated in December 2014, to develop and commercialize three bispecific antibodies generated through the use of the Company’s Azymetric and EFECT platforms. Under the terms of the agreement, the Company granted Merck a worldwide, royalty-bearing antibody sequence pair exclusive license to research, develop and commercialize certain licensed products. The amendments did not impact the determination of units of accounting or the allocation of the arrangement consideration.

From contract inception to December 31, 2021, the Company has received an upfront payment of \$1.25 million and research and development related payments totaling \$5.5 million. Currently, there are no active programs under development pursuant to this agreement.

In July 2020, the Company entered into a new licensing agreement with Merck granting Merck a worldwide, royalty-bearing license to research, develop and commercialize up to three new multispecific antibodies toward Merck’s therapeutic targets in the human health field and up to three new multispecific antibodies toward Merck’s therapeutic targets in the animal health field using the Company’s Azymetric and EFECT platforms. The Company is eligible to receive up to \$419.3 million in option exercise fees and clinical development and regulatory approval milestone payments and up to \$502.5 million in commercial milestone payments, as well as tiered royalties on worldwide sales.

Licensing and Collaboration Agreement with Eli Lilly and Company (“Lilly”)

On December 17, 2013, the Company entered into a Licensing and Collaboration Agreement with Lilly to develop novel bispecific antibody therapeutics using the Company’s proprietary Azymetric platform. The Company will apply its Azymetric platform in combination with Lilly’s proprietary targets to create novel bispecific antibodies which Lilly will have the right to develop and commercialize worldwide.

From contract inception to December 31, 2021, the Company has received an upfront payment of \$1.0 million and research and development related payments of \$3.0 million. Currently, there are no active programs under development pursuant to this agreement.

Licensing and Collaboration Agreement with Lilly

On October 22, 2014, the Company entered into a second Licensing and Collaboration Agreement with Lilly to develop novel bispecific antibody therapeutics using the Company’s proprietary Azymetric platform. This agreement did not alter or amend the initial agreement entered into on December 17, 2013. Under the terms of this agreement Lilly was granted a worldwide, royalty-bearing antibody sequence pair-specific license to research, develop and commercialize certain licensed products. Each of the two agreements with Lilly were negotiated independently and the deliverables covered by the respective contracts are unrelated to one another as they cover different product candidates. Accordingly, the second Licensing and Collaboration Agreement with Lilly has been accounted for as a new arrangement.

From contract inception to December 31, 2021, the Company has received research and development related payments totaling \$10.0 million. Currently, there are no active programs under development pursuant to this agreement.

Licensing and Collaboration Agreement with Celgene Corporation & Celgene Alpine Investment Co. LLC (formerly “Celgene” and now a Bristol- Myers Squibb company, “BMS”)

On December 23, 2014, the Company entered into an agreement with Celgene (now “BMS”) to develop novel bispecific antibody therapeutics using the Company’s proprietary Azymetric platform. The Company will apply its Azymetric platform in combination with BMS’s proprietary targets to create novel bispecific antibodies for which BMS has an option to develop and commercialize a certain number of products (“Commercial License Option”).

Upon the execution of the Agreement, the Company received an upfront payment of \$8.0 million and an expansion fee of \$4.0 million. BMS has the right to exercise options on up to ten programs and if BMS opts in on a program, the Company is eligible to receive up to \$164.0 million per product candidate (up to \$1.64 billion for all ten programs), comprised of a commercial

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license option payment of \$7.5 million, development milestone payments of up to \$101.5 million and commercial milestone payments of up to \$55.0 million. From contract inception to December 31, 2021, BMS has exercised one commercial license option and the Company has received a total of \$7.5 million in product candidate-specific payments. After conclusion of BMS's research period, BMS will be solely responsible for the research, development, manufacturing and commercialization of the products. In addition, the Company is eligible to receive tiered royalties calculated upon the global net sales of the resulting products. BMS will have exclusive worldwide commercialization rights to products derived from the agreement if BMS elects to exercise a Commercial License Option for each product. The Company determined that, the events and conditions resulting in payments for research, development and commercial milestones solely depend on BMS's performance.

In June 2020, the Company's existing collaboration agreement with BMS was amended to expand the license grant to include the use of the Company's EFECT platform for the development of therapeutic candidates and to extend the research term. The amendment included an upfront fee of \$12.0 million and all other financial terms were unchanged. The Company's performance obligations in relation to the upfront fee were met on the date of amendment. Accordingly, the upfront payment was recognized as revenue during the year ended December 31, 2020.

Collaboration and License Agreement with GlaxoSmithKline Intellectual Property Development Ltd. ("GSK")

On December 1, 2015, the Company entered into a Collaboration and License Agreement with GSK for the research, development, and commercialization of novel Fc-engineered monoclonal and bispecific antibody therapeutics, which have been optimized for specific therapeutic effects. The Company and GSK will collaborate to further develop the Company's EFECT platform through the design, engineering, and testing of novel engineered Fc domains tailored to induce specific antibody-mediated immune responses.

At the conclusion of the research collaboration, both GSK and the Company will have the right to develop and commercialize monoclonal and bispecific antibody candidates that incorporate the Company's optimized immune-modulating Fc domains.

Under the terms of the agreement, GSK will have the right to develop a minimum of four products across multiple disease areas, and the Company will be eligible to receive up to \$1.1 billion, including research, development, and commercial milestones of up to \$110.0 million for each product. In addition, the Company is eligible to receive tiered sales royalties. Under the terms of the agreement, each party is liable for their own internal and external research costs incurred in the project. Furthermore, the Company will have the right to develop up to four products with the intellectual property arising from the collaboration without any royalty or milestone payment to GSK. The Company determined that, the events and conditions resulting in payments for research, development and commercial milestones solely depend on GSK's performance.

No development or commercial milestone payments or royalties have been received to date.

Platform Technology Transfer and License Agreement with GSK

On April 21, 2016, the Company entered into a Platform Technology Transfer and License Agreement with GSK for the research, development, and commercialization of novel bispecific antibodies enabled using the Company's Azymetric platform. Each of the two agreements with GSK were negotiated independently and the deliverables covered by the respective contracts utilize different therapeutic platforms and are unrelated to one another. Accordingly, the Platform Technology and License Agreement with GSK has been accounted for as a new arrangement. In May 2019, this agreement was expanded to provide GSK access to the Company's unique heavy-light chain pairing technology under the Azymetric platform. This may include bispecific antibodies incorporating new engineered Fc regions generated under the 2015 GSK agreement.

The Company is eligible to receive up to \$1.1 billion in milestone and other payments. From contract inception to December 31, 2021, the Company has received an upfront technology access fee payment of \$6.0 million. The Company is also eligible to receive research milestone payments of up to \$37.5 million, development milestone payments of up to \$183.5 million and commercial milestone payments of up to \$867.0 million. In addition, the Company is entitled to receive tiered royalties on potential sales. The Company determined that, the events and conditions resulting in payments for research, development and commercial milestones solely depend on GSK's performance.

No research, development or commercial milestone payments or royalties have been received to date.

Collaboration and Cross License Agreement with Daiichi Sankyo, Co., Ltd. (“Daiichi Sankyo”)

On September 26, 2016, the Company entered into a Collaboration and Cross License Agreement with Daiichi Sankyo for the research, development, and commercialization of one bispecific antibody enabled using the Company’s Azymetric and EFECT platforms. Additionally, the Company will license immuno-oncology antibodies from Daiichi Sankyo, with the right to research, develop and commercialize multiple products globally in exchange for royalties on product sales. Under the agreement, Daiichi Sankyo will have the option to develop and commercialize a single bispecific immuno-oncology therapeutic.

The Company is also eligible to \$149.9 million in milestone and other payments. From contract inception to December 31, 2021, the Company has received an upfront technology access fee payment of \$2.0 million and research and commercial option related payments totaling \$4.5 million. The Company is also eligible to receive additional development milestone payments of up to \$63.4 million, and commercial milestone payments of up to \$80.0 million. In addition, the Company is eligible to receive tiered royalties ranging from the low single digits up to 10% on product sales. The Company also has non-exclusive rights to develop and commercialize up to three products using Daiichi Sankyo’s proprietary immune-oncology antibodies, with royalties in the low single digits to be paid to Daiichi Sankyo on sales of such products. Daiichi Sankyo is solely responsible for the research, development, manufacturing and commercialization of the products. Under the non-exclusive immuno-oncology antibody license to Zymeworks, Zymeworks is solely responsible for all research, development and commercialization of the resulting products.

Second License Agreement with Daiichi Sankyo

In May 2018, the Company entered into a second license agreement with Daiichi Sankyo to research, develop and commercialize two bispecific antibodies generated through the use of the Company’s Azymetric and EFECT platforms. Under the terms of the agreement, the Company granted Daiichi Sankyo a worldwide, royalty-bearing, antibody sequence pair-specific, exclusive license to research, develop and commercialize certain products. Under the agreement, Daiichi Sankyo will be solely responsible for the research, development, manufacturing and commercialization of the products.

The Company is also eligible to receive up to \$484.7 million in various milestone and other payments. From contract inception to December 31, 2021, the Company has received an upfront technology access fee payment of \$18.0 million. The Company is also eligible to receive development milestone payments totaling up to \$126.7 million and commercial milestone payments of up to \$340.0 million. In addition, the Company is eligible to receive tiered royalties ranging from the low single digits up to 10% on product sales, with the royalty term being, on a product-by-product and country-by-country basis, either (i) for as long as there is Zymeworks platform patent coverage on products, or (ii) for 10 years beginning from the first commercial sale, whichever period is longer. If there is no Zymeworks patent coverage on products, royalty rates may be reduced.

No development or commercial milestone payments or royalties have been received to date.

Collaboration and License Agreement with Janssen Biotech, Inc. (“Janssen”)

On November 13, 2017, the Company entered into a Collaboration and License Agreement with Janssen to research, develop and commercialize up to six bispecific antibodies generated through the use of the Azymetric and EFECT platforms. Under the terms of the agreement, the Company granted Janssen a worldwide, royalty-bearing, antibody sequence pair-specific exclusive license to research, develop and commercialize certain products. Janssen also has the option to develop two additional bispecific antibodies under this agreement subject to a future option payment. Under the agreement, Janssen will be solely responsible for the research, development, manufacturing and commercialization of the products.

The Company is eligible to receive up to \$1.45 billion in various license and milestone payments. From contract inception to December 31, 2021, the Company has received an upfront payment of \$50.0 million and development milestones totaling \$8.0 million with two bispecific antibodies initiating clinical trials in 2021. The Company is also eligible to receive development milestone payments of up to \$274.0 million and commercial milestone payments of up to \$1.12 billion. In addition, the Company is eligible to receive tiered royalties in the mid-single digits on product sales, with the royalty term being, on a product-by-product and country-by-country basis, either (i) for as long as there is Zymeworks platform patent coverage on products, or (ii) for 10 years, beginning from the first commercial sale, whichever period is longer. If there is no Zymeworks patent coverage on products, royalty rates may be potentially reduced. Janssen has the right, prior to the first dosing of a patient in a Phase 3 clinical trial for a product, to buy down the royalty relating to such product by one percentage point with a payment of \$10.0 million. The Company determined that, the events and conditions resulting in payments for research, development and commercial milestones solely depend on Janssen’s performance.

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No commercial milestone payments or royalties have been received to date.

Research and License Agreement with LEO Pharma A/S (“LEO”)

On October 23, 2018, the Company entered into a collaboration agreement with LEO. The Company granted LEO a worldwide, royalty-bearing, antibody sequence pair-specific exclusive license to research, develop and commercialize two bispecific antibodies, generated through the use of the Company’s Azymetric and EFECT platforms, for dermatologic indications. The Company will retain rights to develop antibodies resulting from this collaboration in all other therapeutic areas. The Company and LEO are jointly responsible for certain research activities, with the Company’s cost to be fully reimbursed by LEO. Each party is solely responsible for the development, manufacturing, and commercialization of their own products.

Pursuant to this agreement, the Company received an upfront payment of \$5.0 million. In addition, (i) for the first therapeutic candidate, the Company is eligible to receive preclinical and development milestone payments of up to \$74.0 million and commercial milestone payments of up to \$157.0 million together with tiered royalties on future sales of up to 20% in the United States and up to high single digits elsewhere, and (ii) for the second therapeutic candidate, the Company is eligible to receive preclinical and development milestone payments of up to \$86.5 million and commercial milestone payments of up to \$157.0 million together with tiered royalties on future sales of up to low double digits globally. For products developed by the Company outside of dermatology, LEO is eligible to receive commercial milestone payments and up to single-digit royalties on future sales.

No development or commercial milestone payments or royalties have been received to date.

Collaboration and License Agreements with BeiGene, Ltd. (“BeiGene”)

On November 26, 2018, the Company entered into three concurrent agreements with BeiGene whereby the Company granted BeiGene royalty-bearing exclusive licenses for the research, development and commercialization of its bispecific therapeutic candidates, zanidatamab (formerly known as “ZW25”) (“Zanidatamab Agreement”) and ZW49 (“ZW49 Agreement”) in Asia (excluding Japan but including the People’s Republic of China, South Korea and other countries), Australia and New Zealand. In addition, the Company also granted BeiGene a worldwide, royalty-bearing, antibody sequence pair-specific license to research, develop and commercialize globally three bispecific antibodies generated through the use of the Company’s Azymetric and EFECT platforms.

Pursuant to these agreements, the Company received an upfront payment of \$60.0 million for the totality of the rights described. The Company considered the fair value of performance obligations based on the Company’s best estimate of their relative stand-alone selling prices, and allocated \$40.0 million of the transaction price to the License and Collaboration Agreements for zanidatamab and ZW49 and \$20.0 million to the Company’s performance obligations under the Research and Licensing Agreement for Azymetric and EFECT Platforms.

License and Collaboration Agreements for Zanidatamab and ZW49

The Company is also eligible to receive development and commercial milestone payments of up to \$390.0 million, together with tiered royalties from high single digits and up to 20% on future sales of the products. Under the agreements, the Company and BeiGene are collaborating on certain global clinical studies and both the Company and BeiGene will be independently conducting clinical studies in their own respective territories. Each of the Company and BeiGene are responsible for all the development and commercialization costs in their own territories.

In relation to the Zanidatamab Agreement, the Company identified the following promised goods and services at the inception of the BeiGene agreement that are material: development and commercial licenses, initial transfer of the Company’s technologies and relevant know-how, continuing technology transfer, participation in the Joint Steering Committee (“JSC”) and other sub-committees, manufacturing technology transfer, provision of development supply, provision of commercial supply, and transfer of future rights related to the development and commercial license. The Company concluded that the licenses and initial technology transfer are distinct together and the continuing technology transfer and the Company’s participation to the JSC and other sub-committees’ activities are also distinct together. Remaining deliverables were individually determined to be distinct.

Development and commercial licenses as well as initial transfer of technologies and relevant know-how were considered to be a single performance obligation. The consideration of \$7.1 million allocated to this performance obligation was recognized as revenue over a two-month period during which the delivery of the license and transfer of the relevant technology occurred.

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Deliverables of continuing technology transfer and participation in the JSC and other sub-committees together were considered to be a single performance obligation and the consideration allocated to this performance obligation will be recognized as revenue over time as these activities are completed. Remaining deliverables are considered individually distinct and the revenue will be recognized as delivery or transfer of future rights to BeiGene occurs.

In March 2020, BeiGene dosed the first patient in a two-arm Phase 1b/2 trial evaluating zanidatamab in combination with chemotherapy as a first-line treatment for patients with metastatic HER2-positive breast cancer and in combination with chemotherapy and BeiGene's PD-1-targeted antibody tislelizumab as a first-line treatment for patients with metastatic HER2-positive GEA. The Company recognized revenue of \$5.0 million in relation to this milestone. In November 2020, BeiGene dosed the first patient in South Korea in the pivotal HERIZON-BTC-01 study. The Company recognized revenue of \$10.0 million in relation to this milestone. In December 2021, BeiGene dosed the first patient in South Korea in the pivotal HERIZON-GEA-01 study and the Company recognized revenue of \$8.0 million in relation to this milestone.

In relation to the ZW49 Agreement, the Company identified the following promised goods and services at the inception of the BeiGene agreement that are material: development and commercial licenses, initial transfer of the Company's technologies and relevant know-how, continuing technology transfer, participation in the JSC and other sub-committees, manufacturing technology transfer, provision of development supply, provision of commercial supply, and transfer of future rights related to the development and commercial license. The Company concluded that the licenses and initial technology transfer together are distinct together and the continuing technology transfer and the Company's participation to the JSC and other sub-committees' activities are also distinct together. Manufacturing technology transfer, provision of development supply and provision of commercial supply were individually determined to be distinct.

Development and commercial licenses as well as initial transfer of technologies and relevant know-how were considered to be a single performance obligation while continuing technology transfer and participation in the JSC and other sub-committees together were considered as a single performance obligation. Remaining deliverables were considered individually distinct. No performance obligations were completed by the Company as of December 31, 2021 as the initial transfer of technologies and relevant know-how is not going to start until the earlier of completion of the Company's Phase-1 clinical studies for ZW49 or completion of dose escalation studies. Accordingly, no revenue was recognized from the ZW49 Agreement to date.

As of December 31, 2021, the Company recorded \$32,941 of the upfront fees from the zanidatamab and ZW49 agreements as deferred revenue on the Company's consolidated balance sheet (December 31, 2020: \$32,941). Amounts not expected to be recognized as revenue within the next twelve months of the consolidated balance sheet date are classified as long-term deferred revenue.

Research and Licensing Agreement for Azymetric and Efect Platforms

For the development and commercialization licenses of up to three bispecific antibody therapeutics using the Company's Azymetric and Efect platforms, the Company received an upfront payment of \$20.0 million. The Company is also eligible to receive development and commercial milestone payments of up to \$702.0 million. In addition, the Company is eligible to receive tiered royalties in the mid-single digits on product sales. No development or commercial milestone payments or royalties have been received to date. BeiGene is solely responsible for the research, development, manufacturing, and commercialization of the products.

License Agreement with Iconic Therapeutics, Inc. ("Iconic")

On May 13, 2019, the Company entered into a license agreement with Iconic to develop and commercialize an antibody-drug conjugate (ICON-2) targeting tissue factor generated through the use of the Company's ZymeLink platform. Under the terms of this agreement, the Company granted Iconic a worldwide, royalty-bearing, antibody sequence-specific, exclusive license to develop and commercialize certain products. Iconic is responsible for the development, manufacturing, and commercialization of the products.

Pursuant to this agreement, the Company was initially eligible to receive development and commercial milestone payments and tiered royalties on worldwide net sales. From contract inception to December 31, 2021, the Company has received \$1.0 million in milestone payments. This agreement also provides the Company with co-promotion rights with increased royalties for products generated from this collaboration. If Iconic was to sublicense the program, in lieu of co-promotion rights, the Company would receive a share of the revenue Iconic receives from any partners as well as tiered royalties on worldwide net sales.

In December 2020, Exelixis, Inc. exercised an option under an existing agreement with Iconic to license ICON-2 (also known as XB002) and under the Company's agreement with Iconic, the Company received \$4.0 million accordingly, a share of the \$20.0 million option fee paid to Iconic by Exelixis. In December 2021, under an amendment between Iconic and Exelixis, the

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Company recognized \$5.0 million as a share of the one-time fee received by Iconic in exchange for all future milestones owing to Iconic from Exelixis. The Company will continue to be eligible to receive future royalties on the ICON-2 program pursuant to the agreement with Iconic. Iconic and its partners are responsible for the development, manufacturing, and commercialization of the products.

13. Other income, (expense), net

Other expenses consist of the following:

	Year ended December 31,		
	2021	2020	2019
Foreign exchange gain (loss)	\$ 1,191	\$ 1,683	\$ (567)
Other	118	(35)	(28)
	\$ 1,309	\$ 1,648	\$ (595)

14. Income Taxes

a. Income tax (expense) recovery is comprised of the following:

	Year Ended December 31,		
	2021	2020	2019
Current income tax expense	\$ (437)	\$ (292)	\$ (1,373)
Deferred income tax recovery (expense)	953	(137)	1,955
Income tax recovery (expense)	\$ 516	\$ (429)	\$ 582

Current income tax expense for the years ended December 31, 2021, 2020 and 2019 arose from the operations of Zymeworks Biopharmaceuticals Inc., the Company's wholly owned subsidiary in the United States, and from the withholding taxes paid by the Company abroad in 2021, 2020 and 2019.

b. Income tax (expense) recovery varies from the amounts that would be computed by applying the expected Canadian income tax rate of 27% (2020: 27%, 2019: 27%) to loss before income taxes as shown in the following tables:

	Year Ended December 31,		
	2021	2020	2019
Computed taxes at Canadian tax rate	\$ 57,368	\$ 48,627	\$ 39,453
Non-deductible expenses	(1,026)	(9,191)	(13,020)
Difference between domestic and foreign tax rate	(345)	185	104
Effect of change in tax rates	—	—	(10)
Adjustments to prior year	(33)	(441)	(39)
Change in valuation allowance	(60,260)	(48,411)	(29,057)
Share issuance costs in equity	2	5,385	3,578
Change in recognition and measurement of tax positions	—	—	(2,391)
Changes due to SR&ED and research credits	5,096	4,067	2,200
Other	(286)	(650)	(236)
Income tax recovery (expense)	\$ 516	\$ (429)	\$ 582

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c. Deferred income tax assets and liabilities result from the temporary differences between the amounts of assets and liabilities recognized for financial statement and income tax purposes. The significant components of the deferred income tax assets and liabilities are as follows:

	<u>December 31, 2021</u>	<u>December 31, 2020</u>
<u>Deferred tax assets:</u>		
Non-capital losses carried forward	\$ 123,554	\$ 71,566
Deferred revenue	8,894	8,894
Share issue costs	6,058	8,365
Property and equipment	1,219	1,423
Intangible assets	2,911	1,352
Research and development deductions and credits	35,401	27,994
Contingent consideration	421	366
Stock options	4,330	2,038
Operating lease liability	7,871	1,837
Other	351	280
	<u>\$ 191,010</u>	<u>\$ 124,115</u>
<u>Deferred tax liabilities:</u>		
Property and equipment	(1,085)	(1,296)
IPR&D	(4,760)	(4,760)
Operating lease right-of-use assets	(6,685)	(1,181)
Outside basis difference in foreign subsidiary	(1,573)	(1,178)
	<u>\$ (14,103)</u>	<u>\$ (8,415)</u>
	<u>176,907</u>	<u>115,700</u>
Less: valuation allowance	(175,410)	(115,155)
Net deferred tax assets	<u>\$ 1,497</u>	<u>\$ 545</u>
Deferred tax asset	\$ 3,070	\$ 1,723
Deferred tax liability	(1,573)	(1,178)
Net deferred tax assets	<u>\$ 1,497</u>	<u>\$ 545</u>

The realization of deferred income tax assets is dependent upon the generation of sufficient taxable income during future periods in which the temporary differences are expected to reverse. The valuation allowance is reviewed on a quarterly basis and if the assessment of the “more likely than not” criterion changes, the valuation allowance is adjusted accordingly.

d. At December 31, 2021, the Company has net operating losses carried forward for tax purposes in Canada, which are available to reduce taxable income of future years of approximately \$457.6 million (December 31, 2020: \$265.1 million) expiring commencing 2035 through 2041.

At December 31, 2021, the Company also has unclaimed tax deductions for scientific research and experimental development expenditures of approximately \$81.4 million (December 31, 2020: \$69.5 million), with no expiry. At December 31, 2021, the Company has approximately \$15.8 million (December 31, 2020: \$11.7 million) of investment tax credits available to offset Canadian federal and provincial taxes payable expiring commencing in 2029 through 2041.

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e. The investment tax credits and non-capital losses for income tax purposes expire as follows:

Expiry date	Investment tax credits	Non-capital losses
2029	1,169	—
2030	1,242	—
2031	1,758	—
2032	—	—
2033	—	—
2034	229	—
2035	1,068	3,961
2036	862	24,578
2037	1,587	10,625
2038	1,485	—
2039	1,818	81,253
2040	1,903	146,611
2041	2,686	190,578
	\$ 15,807	\$ 457,606

f. A reconciliation of total unrecognized tax benefits for the years ended December 31, 2021, 2020, and 2019 are as follows:

	Year Ended December 31,		
	2021	2020	2019
Balance, beginning of year	\$ 3,063	\$ 3,063	\$ 672
Increases related to prior year tax positions	—	—	—
Increases related to current year tax positions	—	—	2,391
Balance, end of year	\$ 3,063	\$ 3,063	\$ 3,063

Included in the balance of unrecognized tax benefits at December 31, 2021, 2020 and 2019 are potential benefits of \$nil that, if recognized, would affect the effective tax rate on income from continuing operations. Recognition of these potential benefits would result in a deferred tax asset in the form of net operating loss carry-forward, which would be subject to a valuation allowance based on conditions existing at the reporting date.

The Company recognizes interest expense and penalties related to unrecognized tax benefits within the provision for income tax expense on the consolidated statements of loss and comprehensive loss.

The Company currently files income tax returns in Canada and the United States, the jurisdictions in which the Company believes that it is subject to tax. Further, while the statute of limitations in each jurisdiction where an income tax return has been filed generally limits the examination period, as a result of loss carry-forwards, the limitation period for examination generally does not expire until several years after the loss carry-forwards are utilized. Other than routine audits by tax authorities for tax credits and tax refunds that the Company has claimed, management is not aware of any other material income tax examination currently in progress by any taxing jurisdiction. Tax years ranging from 2006 to 2021 remain subject to Canadian income tax examinations. Tax years ranging from 2018 to 2021 remain subject to U.S. income tax examinations.

On March 27, 2020, the Coronavirus Aid, Relief, and Economic Security Act (CARES Act) was enacted in response to the COVID-19 pandemic. The CARES Act makes qualified improvement property eligible for 15-year cost-recovery and 100% bonus depreciation. The enactment of the CARES Act did not result in any significant impact on the Company's 2021 and 2020 tax provision.

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15. Leases

The Company leases separate office and laboratory spaces in Vancouver, British Columbia, with terms of each lease expiring in February 2022. On January 25, 2019, the Company entered into a lease for a new building in Vancouver to serve as the Company's future headquarters, including both office and laboratory space. This lease commenced for accounting purposes in May 2021 and construction of leasehold improvements was in progress as of December 31, 2021 and was completed subsequent to the year-end. This lease has an initial term of ten years, with two five-year extension options. In addition, the Company leases office space in Seattle, Washington with lease terms expiring in May 2027. None of the optional extension periods have been included in the determination of the right-of-use assets or the lease liabilities for operating leases as the Company did not consider it reasonably certain that the Company would exercise any such options. The Company also leases office equipment under capital lease agreements.

The balance sheet classification of the Company's lease liabilities was as follows:

	December 31, 2021	December 31, 2020
Operating lease liabilities:		
Current portion	\$ 1,310	\$ 2,710
Long-term portion	30,923	5,812
Total operating lease liabilities	<u>32,233</u>	<u>\$ 8,522</u>
Finance lease liabilities:		
Current portion included in other current liabilities	22	17
Long-term portion included in other long-term liabilities	100	122
Total finance lease liabilities	<u>122</u>	<u>139</u>
Total lease liabilities	<u><u>\$ 32,355</u></u>	<u><u>\$ 8,661</u></u>

Cash paid for amounts included in the measurement of operating lease liabilities for the year ended December 31, 2021 was \$3,186 and was included in net cash used in operating activities in the consolidated statement of cash flows.

As of December 31, 2021, the maturities of the Company's operating lease liabilities were as follows:

	Operating leases
Within 1 year	\$ 2,248
1 to 2 years	5,181
2 to 3 years	5,117
3 to 4 years	5,262
4 to 5 years	5,246
Thereafter	<u>15,545</u>
Total operating lease payments	<u>38,599</u>
Less:	
Imputed interest	(6,366)
Operating lease liabilities	<u><u>\$ 32,233</u></u>

As of December 31, 2021, the weighted average remaining lease term is 8.3 years and the discount rate used to determine the operating lease liability was 4.8% for leases in Canadian dollars and 2.8% for leases in U.S. dollars.

During the year ended December 31, 2021, the Company incurred total operating lease expenses of \$5,658 (2020 - \$3,595), which included lease expenses associated with fixed lease payments of \$5,323 (2020 - \$3,156), and variable payments associated with common area maintenance and similar expenses of \$335 (2020 - \$439).

During the year ended December 31, 2021, the Company did not recognize any impairment losses on its right-of-use assets (2020: \$667).

16. Financial Instruments

The Company evaluates financial assets and liabilities subject to fair value measurements on a recurring basis to determine the appropriate level of classification each reporting period. This determination requires the Company to make subjective judgments as to the significance of inputs used in determining fair value and where such inputs lie within the fair value hierarchy.

Fair Value Measurements

The Company measures certain financial instruments and other items at fair value.

To determine fair value, the Company uses a fair value hierarchy that prioritizes the inputs, assumptions and valuation techniques used to measure fair value. The three levels of the fair value hierarchy are as follows:

- Level 1 inputs are unadjusted quoted market prices for identical instruments available in active markets.
- Level 2 inputs are inputs other than Level 1 prices, such as prices for a similar asset or liability that are observable either directly or indirectly. If the asset or liability has a contractual term, the input must be observable for substantially the full term. An example includes quoted market prices for similar assets or liabilities in active markets.
- Level 3 inputs are unobservable inputs for the asset or liability and will reflect management's assessment about market assumptions that would be used to price the asset or liability.

Assets and liabilities are classified based on the lowest level of input that is significant to the fair value measurements. Changes in the observability of valuation inputs may result in a reclassification of levels for certain securities within the fair value hierarchy.

The Company's financial instruments consist of cash and cash equivalents, short-term and long-term investments in marketable and other securities, accounts receivable, accounts payable and accrued liabilities, contingent consideration, finance and operating lease obligations, and other long-term liabilities.

The carrying values of cash and cash equivalents, short-term investments in marketable securities, accounts receivable and accounts payable and accrued liabilities approximate their fair values due to the near-term maturities of these financial instruments. As at December 31, 2021, long-term investments in equity securities of private entities are accounted for as available for sale at their fair values. Other long-term liabilities for contingent consideration related to business acquisitions are recorded at fair value on the acquisition date and are adjusted quarterly for changes in fair value. Changes in the fair value of contingent consideration liabilities can result from changes in anticipated milestone payments and changes in assumed discount periods and rates. These inputs are unobservable in the market and therefore categorized as level 3 inputs as defined above.

The following tables present information about the Company's assets and liabilities that are measured at fair value on a recurring basis, and indicate the fair value hierarchy of the valuation techniques used to determine such fair value:

	December 31, 2021	Level 1	Level 2	Level 3
Assets				
Cash equivalents:				
Commercial paper	61,387	—	61,387	—
Investments:				
GICs	50,741	—	50,741	—
Total	112,128	—	112,128	—
Liabilities				
Liability for contingent consideration	1,498	—	—	1,498
Total	\$ 1,498	\$ —	\$ —	\$ 1,498

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	December 31, 2020	Level 1	Level 2	Level 3
Assets				
Cash equivalents:				
Commercial paper	161,011	—	161,011	—
Investments:				
GICs	209,521	—	209,521	—
Total	370,532	—	370,532	—
Liabilities				
Liability for contingent consideration	1,285	—	—	1,285
Total	\$ 1,285	\$ —	\$ —	\$ 1,285

The following table presents the changes in fair value of the Company's liability for contingent consideration:

	Liability at the beginning of the period	Increase (decrease) in fair value of liability for contingent consideration	Liability at end of the period
Year ended December 31, 2021	\$ 1,285	\$ 213	\$ 1,498
Year ended December 31, 2020	\$ 978	\$ 307	\$ 1,285

Concentration of Credit Risk

Financial instruments that potentially subject the Company to a concentration of credit risk consist primarily of cash and cash equivalents, short-term investments, long-term investments and accounts receivable. Cash and cash equivalents and investments in marketable securities are invested in accordance with the Company's cash investment policy with the primary objective being the preservation of capital and maintenance of liquidity. The cash investment policy includes guidelines on the quality of financial instruments and defines allowable investments that the Company believes minimizes the exposure to concentration of credit risk. The Company limits its exposure to credit loss by placing its cash and cash equivalents, short-term investments and long-term investments with high credit quality financial institutions.

At December 31, 2021, the maximum exposure to credit risk for accounts receivable was \$15,614 (December 31, 2020: \$15,293) and all accounts receivable are due within the next 12 months. As at December 31, 2021 and December 31, 2020, the Company has recognized nominal amounts of provision for expected credit losses in relation to accounts receivable.

Liquidity Risk

Liquidity risk is the risk that the Company will encounter difficulty in meeting the obligations associated with its financial liabilities that are settled by delivering cash or another financial asset. The Company's short-term cash requirements are primarily to settle its financial liabilities, which consist primarily of accounts payable and accrued liabilities falling due within 45 days and current portion of lease obligations falling due within the next 12 months, with medium term requirements to invest in property and equipment and research and development. The Company's principal sources of liquidity to settle its financial liabilities are cash, cash equivalents and short-term investments, collection of accounts receivable relating to research collaboration and license agreements and additional public equity offerings as required. The Company believes that these principal sources of liquidity are sufficient to fund its operations for at least the next 12 months.

Foreign Currency Risk

The Company incurs certain operating expenses in currencies other than the U.S. dollar and accordingly is subject to foreign exchange risk due to fluctuations in exchange rates. The Company does not use derivative instruments to hedge exposure to foreign exchange risk due to the low volume of transactions denominated in foreign currencies. At December 31, 2021, the Company's net monetary assets denominated in Canadian dollars were \$6.1 million (C\$7.7 million).

The operating results and financial position of the Company are reported in U.S. dollars in the Company's consolidated financial statements. The fluctuation of the U.S. dollar relative to the Canadian dollar and other foreign currencies will have an impact on the reported balances for net assets, net loss and shareholders' equity in the Company's consolidated financial statements.

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17. Commitments and Contingencies

Commitments

The Company has entered into research collaboration agreements with strategic partners in the ordinary course of operations that may include contractual milestone payments related to the achievement of pre-specified research, development, regulatory and commercialization events and indemnification provisions, which are common in such agreements. Pursuant to the agreements, the Company is obligated to make research and development and regulatory milestone payments upon the occurrence of certain events and royalty payments based on net sales. The maximum amount of potential future indemnification is unlimited, however, the Company currently holds commercial and product liability insurance that limits the Company's liability and may enable it to recover a portion of any future amounts paid. Historically, the Company has not made any indemnification payments under such agreements and believes that the fair value of these indemnification obligations is minimal. Accordingly, the Company has not recognized any liabilities relating to indemnification obligations for any period presented in the consolidated financial statements.

In connection with the Company's 2016 Kairos acquisition, the Company may be required to make future payments to CDRD Ventures Inc. ("CVI") upon the direct achievement of certain development milestones for products incorporating certain Kairos intellectual property, as well as royalty payments on the net sales of such products. For out-licensed products and technologies incorporating certain Kairos intellectual property, the Company may be required to pay CVI a mid-single digit percentage of the future revenue as a result of a revenue sharing agreement. As of December 31, 2021, the contingent consideration had an estimated fair value of \$1,498, which has been recorded within other long-term liabilities on the Company's consolidated balance sheet (December 31, 2020: \$1,285). The contingent consideration was calculated using a probability weighted assessment of the likelihood of the milestones being met, a probability adjusted discount rate that reflects the stage of the development and time to complete the development. Contingent consideration is a financial liability and measured at its fair value at each reporting period, with any changes in fair value from the previous reporting period recorded within research and development expenses in the statement of loss and comprehensive loss.

Contingencies

From time to time, the Company may be subject to various legal proceedings and claims related to matters arising in the ordinary course of business. The Company does not believe it is currently subject to any material matters where there is at least a reasonable possibility that a material loss may be incurred.

18. Subsequent Events

On January 5, 2022, the Company announced the appointment of Mr. Kenneth Galbraith as Chair of the Board of Directors, Chief Executive Officer and President, effective January 15, 2022. In connection with Mr. Galbraith's appointment, Dr. Ali Tehrani resigned from the positions of President and Chief Executive Officer and as a member of the board of directors, effective January 15, 2022. The Company also announced the promotion of our Chief Financial Officer, Mr. Neil Klompas, to the dual position of Chief Operating Officer and Chief Financial Officer.

On January 19, 2022, the Company announced its plans to implement a restructuring of its workforce (the "Restructuring"), with a target of reducing employee headcount by at least 25% across the organization by the end of 2022. The Restructuring is expected to be substantially completed by December 31, 2022. In connection with the Restructuring, the Company announced changes in senior management team, with the Executive Vice President, Early Development & Chief Scientific Officer, Chief People Officer and Chief Commercial Officer leaving the Company.

On January 31, 2022, the Company closed a public offering pursuant to which the Company sold 11,035,000 common shares, at \$8.00 per common share and 3,340,000 pre-funded warrants in lieu of common shares at \$7.9999 per pre-funded warrant, resulting in gross proceeds of approximately \$115.0 million. Net proceeds were approximately \$107.6 million, after underwriting discounts, commissions and offering expenses.

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

None.

Item 9A. Controls and Procedures

Evaluation of Disclosure Controls and Procedures

As of the end of the period covered by this Annual Report on Form 10-K, our management, with the participation of our Chief Executive Officer and Chief Financial Officer, evaluated the design and operating effectiveness of our disclosure controls and procedures as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act. Our disclosure controls and procedures are designed to ensure that information required to be disclosed in the reports that the Company files or submits under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms. Any such information is accumulated and communicated to the Company's management, including its principal executive and principal financial officers, as appropriate, to allow timely decisions regarding required disclosure.

Management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving their objectives and management necessarily applies its judgment in evaluating the cost-benefit relationship of possible controls and procedures. Based on our evaluation of our disclosure controls and procedures as of December 31, 2021, our Chief Executive Officer and our Chief Financial Officer concluded that, as of such date, our disclosure controls and procedures were, in design and operation, effective at the reasonable assurance level.

Management's Annual Report on Internal Control over Financial Reporting

Our management, with the participation of our Chief Executive Officer and our Chief Financial Officer, is responsible for establishing and maintaining adequate internal control over our financial reporting, as defined in Rule 13a-15(f) and Rule 15d-15(f) of the Exchange Act.

The effectiveness of any system of internal control over financial reporting, including ours, is subject to inherent limitations, including the exercise of judgment in designing, implementing, operating, and evaluating the controls and procedures, and the inability to eliminate misconduct completely. Accordingly, any system of internal control over financial reporting, including ours, no matter how well designed and operated, can only provide reasonable, not absolute, assurances. 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. Management has assessed the effectiveness of our internal control over financial reporting as at December 31, 2021. In making its assessment, management used the criteria set forth in the internal control – integrated framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 COSO framework) to evaluate the effectiveness of our internal control over financial reporting. Based on this evaluation, management has concluded that our internal control over financial reporting was effective as of December 31, 2021.

Attestation Report of Independent Registered Public Accounting Firm

The effectiveness of our internal control over financial reporting as of December 31, 2021 has been audited by KPMG LLP, an independent registered public accounting firm, as stated in their report included elsewhere in this Annual Report on Form 10-K.

Changes in Internal Control Over Financial Reporting

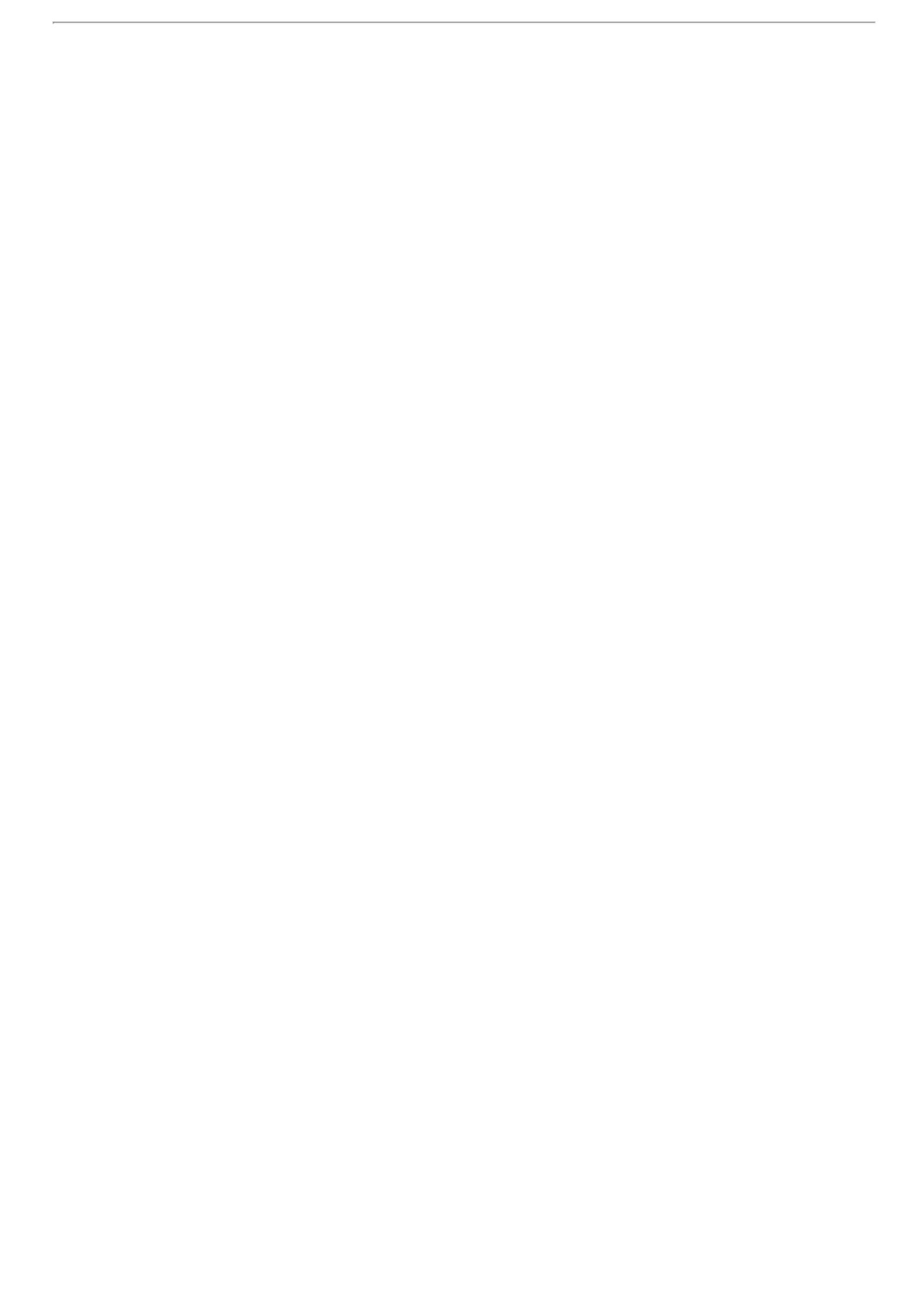
There were no changes in our internal control over financial reporting during the quarter ended December 31, 2021 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Item 9B. Other Information

None.

Item 9C. Disclosure Regarding Foreign Jurisdictions that Prevent Inspections

Not applicable.



PART III

Item 10. Directors, Executive Officers and Corporate Governance

The information required by Item 10. of Form 10-K is incorporated by reference to our proxy statement for the 2022 annual meeting of shareholders (the “2022 Proxy Statement”), to be filed with the SEC within 120 days after the end of the fiscal year ended December 31, 2021.

Item 11. Executive Compensation

The information required by Item 11. of Form 10-K is incorporated by reference to our 2022 Proxy Statement, to be filed with the SEC within 120 days after the end of the fiscal year ended December 31, 2021.

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

The information required by Item 12. of Form 10-K is incorporated by reference to our 2022 Proxy Statement, to be filed with the SEC within 120 days after the end of the fiscal year ended December 31, 2021.

Item 13. Certain Relationships and Related Transactions and Director Independence

The information required by Item 13. of Form 10-K is incorporated by reference to our 2022 Proxy Statement, to be filed with the SEC within 120 days after the end of the fiscal year ended December 31, 2021.

Item 14. Principal Accounting Fees and Services

The information required by Item 14. of Form 10-K is incorporated by reference to our 2022 Proxy Statement, to be filed with the SEC within 120 days after the end of the fiscal year ended December 31, 2021.

PART IV

Item 15. Exhibits, Financial Statement Schedules

- (a)(1) Financial Statements—The financial statements included in Item 8 are filed as part of this Annual Report on Form 10-K.
- (a)(2) Financial Statement Schedules—All schedules have been omitted because they are not applicable or required, or the information required to be set forth therein is included in the consolidated Financial Statements or notes thereto included in Item 8 of this Annual Report on Form 10-K.
- (a)(3) Exhibits—The exhibits required by Item 601 of Regulation S-K are listed in paragraph (b) below.
- (b) Exhibits—The exhibits listed on the Exhibit Index below are filed herewith or are incorporated by reference to exhibits previously filed with the SEC.

EXHIBITS INDEX

Exhibit No.	Description
3.1	Notice of Articles of the Company.
3.2	Form of Articles of the Company (incorporated by reference to Exhibit 3.2 to the Company's Registration Statement on Form F-1 (File No. 333-217100), originally filed with the SEC on April 17, 2017).
4.1	Specimen common share certificate.
4.2	Description of Capital Stock (incorporated by reference to Exhibit 4.2 to the Company's Annual Report on Form 10-K (File No. 001-38068), originally filed with the SEC on March 2, 2020).
4.3	Form of Pre-Funded Warrant to Purchase Common Shares (incorporated by reference to Exhibit 99.2 to the Company's Current Report on Form 8-K filed with the SEC on June 20, 2019).
4.4	Form of Pre-Funded Warrant to Purchase Common Shares (incorporated by reference to Exhibit 4.1 to the Company's Current Report on Form 8-K filed with the SEC on January 24, 2020).
4.5	Registration Rights Agreement dated March 16, 2020, by and among the Company, Baker Brothers Life Sciences, L.P. and 667, L.P. (incorporated by reference to Exhibit 4.1 to the Company's Current Report on Form 8-K filed with the SEC on March 16, 2020).
4.6	Form of Pre-Funded Warrant to Purchase Common Shares (incorporated by reference to Exhibit 4.1 to the Company's Current Report on Form 8-K filed with the SEC on January 27, 2022).
10.1#	Amended and Restated Employment Agreement, dated January 17, 2017, by and between the Company and Dr. Ali Tehrani (incorporated by reference to Exhibit 10.2 to the Company's Registration Statement on Form F-1 (File No. 333-217100), originally filed with the SEC on April 3, 2017).
10.2#	Separation Agreement and Release by and between the Company and Ali Tehrani, dated January 5, 2022 (incorporated by reference to Exhibit 10.2 to the Company's Current Report on Form 8-K originally filed with the SEC on January 5, 2022).
10.3#	Amended and Restated Employment Agreement, dated January 17, 2017, by and between the Company and Neil Klompas (incorporated by reference to Exhibit 10.4 to the Company's Registration Statement on Form F-1 (File No. 333-217100), originally filed with the SEC on April 3, 2017).
10.4#	Promotion Letter from the Company to Neil Klompas, dated January 5, 2022 (incorporated by reference to Exhibit 10.3 to the Company's Current Report on Form 8-K originally filed with the SEC on January 5, 2022).
10.5#	Amended and Restated Employment Agreement, dated January 18, 2017, by and between the Company and Diana Hausman (incorporated by reference to Exhibit 10.6 to the Company's Registration Statement on Form F-1 (File No. 333-217100), originally filed with the SEC on April 3, 2017).
10.6#	Form of Indemnity Agreement between the Company and its officers and directors (incorporated by reference to Exhibit 10.13 to the Company's Registration Statement on Form F-1 (File No. 333-217100), originally filed with the SEC on April 17, 2017).
10.7#	Second Amended and Restated Employee Stock Option Plan and forms of agreements thereunder (incorporated by reference to Exhibit 10.14 to the Company's Registration Statement on Form F-1 (File No. 333-217100), originally filed with the SEC on April 17, 2017).

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Exhibit No.	Description
10.8†	Amended and Restated Research and License Agreement, effective as of December 3, 2014, by and between the Company and Merck Sharp & Dohme Research GmbH (incorporated by reference to Exhibit 10.16 to the Company's Registration Statement on Form F-1 (File No. 333-217100), originally filed with the SEC on April 3, 2017).
10.9†	Licensing and Collaboration Agreement, effective as of December 17, 2013, by and between the Company and Eli Lilly and Company (incorporated by reference to Exhibit 10.17 to the Company's Registration Statement on Form F-1 (File No. 333-217100), originally filed with the SEC on April 3, 2017).
10.10†	First Amendment to Licensing and Collaboration Agreement, effective as of May 30, 2014, by and between the Company and Eli Lilly and Company, as amended February 25, 2014 and June 16, 2014 (incorporated by reference to Exhibit 10.18 to the Company's Registration Statement on Form F-1 (File No. 333-217100), originally filed with the SEC on April 3, 2017).
10.11†	Licensing and Collaboration Agreement, effective as of October 22, 2014, by and between the Company and Eli Lilly and Company (incorporated by reference to Exhibit 10.19 to the Company's Registration Statement on Form F-1 (File No. 333-217100), originally filed with the SEC on April 3, 2017).
10.12†	First Amendment to Licensing and Collaboration Agreement, effective as of June 4, 2015, by and between the Company and Eli Lilly and Company (incorporated by reference to Exhibit 10.20 to the Company's Registration Statement on Form F-1 (File No. 333-217100), originally filed with the SEC on April 3, 2017).
10.13†	Second Amendment to Licensing and Collaboration Agreement, effective as of January 24, 2017, by and between the Company and Eli Lilly and Company (incorporated by reference to Exhibit 10.21 to the Company's Registration Statement on Form F-1 (File No. 333-217100), originally filed with the SEC on April 3, 2017).
10.14†	Collaboration Agreement, effective as of December 23, 2014, by and among the Company, Celgene Corporation and Celgene Alpine Investment Co. LLC (incorporated by reference to Exhibit 10.22 to the Company's Registration Statement on Form F-1 (File No. 333-217100), originally filed with the SEC on April 3, 2017).
10.15†	First Amendment to Collaboration Agreement, effective as of May 29, 2017, by and between the Company, Celgene Corporation and Celgene Alpine Investment Co. LLC (incorporated by reference to Exhibit 99.1 to a Report of Foreign Private Issuer on Form 6-K (File No. 001-38068), originally furnished to the SEC on July 18, 2017 and deemed filed under the Exchange Act).
10.16*	Second Amendment to Collaboration Agreement, effective as of March 31, 2020, by and between the Company, Celgene Corporation and Celgene Alpine Investment Co. LLC (incorporated by reference to Exhibit 99.1 to the Company's Quarterly Report on Form 10-Q filed with the SEC on May 7, 2020).
10.17*	Third Amendment to Collaboration Agreement, dated June 22, 2020, by and between the Company, Celgene Corporation and Celgene Alpine Investment Co. LLC. (incorporated by reference to Exhibit 10.2 to the Company's Quarterly Report on Form 10-Q filed with the SEC on August 5, 2020).
10.18*	Letter Agreement, effective April 20, 2021, by and between the Company and Celgene Corporation and Celgene Alpine Investment Co. LLC. (incorporated by reference to Exhibit 99.4 to the Company's Quarterly Report on Form 10-Q filed with the SEC on August 4, 2021).
10.19*	Fourth Amendment to Collaboration Agreement, dated August 4, 2021, by and between the Company, Celgene Corporation and Celgene Alpine Investment Co. LLC (incorporated by reference to Exhibit 99.1 to the Company's Quarterly Report on Form 10-Q filed with the SEC on November 3, 2021).
10.20†	Collaboration and License Agreement, effective as of December 1, 2015, by and between the Company and GlaxoSmithKline Intellectual Property Development Limited (incorporated by reference to Exhibit 10.23 to the Company's Registration Statement on Form F-1 (File No. 333-217100), originally filed with the SEC on April 3, 2017).
10.21†	Side Letter Agreement effective as of January 11, 2019, by and between the Company and GlaxoSmithKline Intellectual Property Development Limited (incorporated by reference to Exhibit 99.2 to the Company's 2018 Annual Report on Form 10-K (File No. 001-38068), originally filed with the SEC on March 6, 2019).
10.22*	First Amendment to Collaboration and License Agreement, effective as of April 30, 2019, by and between the Company and GlaxoSmithKline Intellectual Property Development Limited (incorporated by reference to Exhibit 99.4 to the Company's Annual Report on Form 10-K (File No. 001-38068), originally filed with the SEC on March 2, 2020).
10.23*	Side Letter Agreement effective as of September 30, 2019, by and between Company and GlaxoSmithKline Intellectual Property Development Limited. (incorporated by reference to Exhibit 99.5 to the Company's Annual Report on Form 10-K (File No. 001-38068), originally filed with the SEC on March 2, 2020).

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Exhibit No.	Description
10.24*	<u>Side Letter Agreement effective as of February 20, 2020, by and between Company and GlaxoSmithKline Intellectual Property Development Limited. (incorporated by reference to Exhibit 99.6 to the Company's Annual Report on Form 10-K (File No. 001-38068), originally filed with the SEC on March 2, 2020).</u>
10.25*	<u>Fifth Amendment to Collaboration and License Agreement, effective as of March 30, 2020, by and between the Company and GlaxoSmithKline Intellectual Property Development Limited (incorporated by reference to Exhibit 99.11 to the Company's Annual Report on Form 10-K (File No. 001-38068), originally filed with the SEC on February 24, 2021).</u>
10.26†	<u>Platform Technology Transfer and License Agreement, effective as of April 21, 2016, by and between the Company and GlaxoSmithKline Intellectual Property Development Limited (incorporated by reference to Exhibit 10.24 to the Company's Registration Statement on Form F-1 (File No. 333-217100), originally filed with the SEC on April 3, 2017).</u>
10.27*	<u>First Amendment to Platform Technology Transfer and License Agreement between the Company and GlaxoSmithKline Intellectual Property Development Limited, dated May 15, 2019 (incorporated by reference to Exhibit 99.1 to the Company's Current Report on Form 8-K filed with the SEC on May 17, 2019).</u>
10.28*	<u>Letter Agreement, effective June 4, 2021, by and between the Company and GlaxoSmithKline Intellectual Property Development Limited (incorporated by reference to Exhibit 99.7 to the Company's Quarterly Report on Form 10-Q filed with the SEC on August 4, 2021).</u>
10.29†	<u>Collaboration and Cross License Agreement, effective as of September 26, 2016, by and between the Company and Daiichi Sankyo Co., Ltd (incorporated by reference to Exhibit 10.25 to the Company's Registration Statement on Form F-1 (File No. 333-217100), originally filed with the SEC on April 3, 2017).</u>
10.30†	<u>Side Letter Agreement effective as of September 25, 2018, by and between the Company and Daiichi Sankyo Co., Ltd. (incorporated by reference to Exhibit 99.1 to the Company's 2018 Annual Report on Form 10-K (File No. 001-38068), originally filed with the SEC on March 6, 2019).</u>
10.31*	<u>Second Amendment to Collaboration and Cross License Agreement, effective July 2, 2021, by and between the Company and Daiichi Sankyo Company, Limited (incorporated by reference to Exhibit 99.8 to the Company's Quarterly Report on Form 10-Q filed with the SEC on August 4, 2021).</u>
10.32	<u>Lease of Office Space Agreement dated as of April 6, 2015, by and between Poplar Properties Ltd. and the Company and the Amendment thereto dated August 28, 2015 (incorporated by reference to Exhibit 10.26 to the Company's Registration Statement on Form F-1 (File No. 333-217100), originally filed with the SEC on April 3, 2017).</u>
10.33#	<u>Amended and Restated Employee Stock Purchase Plan (incorporated by reference to Schedule "B" to Exhibit 99.1 to the Company's Current Report on Form 8-K (File No. 001-38068), originally filed with the SEC on May 16, 2018).</u>
10.34†	<u>Collaboration and License Agreement, effective as of November 13, 2017, by and between the Company and Janssen Biotech, Inc., (incorporated by reference to Exhibit 99.1 to a Report of Foreign Private Issuer on Form 6-K (File No. 001-38068), originally furnished to the SEC on November 24, 2017 and deemed filed under the Exchange Act).</u>
10.35†	<u>First Amendment to the Collaboration and License Agreement, effective as of January 14, 2019, by and between the Company and Janssen Biotech, Inc. (incorporated by reference to Exhibit 99.3 to the Company's 2018 Annual Report on Form 10-K (File No. 001-38068), originally filed with the SEC on March 6, 2019).</u>
10.36†	<u>License Agreement, effective as of May 14, 2018, by and between the Company and Daiichi Sankyo Company, Limited (incorporated by reference to Exhibit 99.1 to the Company's Current Report on Form 8-K (File No. 001-38068), originally filed with the SEC on May 18, 2018).</u>
10.37†	<u>Research and License Agreement, effective as of October 23, 2018, by and between the Company and LEO Pharma A/S (incorporated by reference to Exhibit 99.1 to the Company's Current Report on Form 8-K (File No. 001-38068), originally filed with the SEC on October 26, 2018).</u>
10.38†	<u>License and Collaboration Agreement, effective as of November 26, 2018, by and between the Company and BeiGene Ltd. (incorporated by reference to Exhibit 99.1 to the Company's Current Report on Form 8-K (File No. 001-38068), originally filed with the SEC on December 6, 2018).</u>
10.39*	<u>First Amendment to Collaboration Agreement, effective March 29, 2021, by and between the Company and BeiGene, Ltd. (incorporated by reference to Exhibit 99.2 to the Company's Quarterly Report on Form 10-Q filed with the SEC on May 5, 2021).</u>

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Exhibit No.	Description
10.40*	Letter Agreement, effective October 7, 2020, by and between the Company and BeiGene, Ltd. (incorporated by reference to Exhibit 99.1 to the Company's Quarterly Report on Form 10-Q filed with the SEC on August 4, 2021).
10.41*	Second Amendment to License and Collaboration Agreement, dated August 10, 2021, by and between the Company and BeiGene Ltd. (incorporated by reference to Exhibit 99.2 to the Company's Quarterly Report on Form 10-Q filed with the SEC on November 3, 2021).
10.42†	License and Collaboration Agreement, effective as of November 26, 2018, by and between the Company and BeiGene Ltd. (incorporated by reference to Exhibit 99.2 to the Company's Current Report on Form 8-K (File No. 001-38068), originally filed with the SEC on December 6, 2018).
10.43*	First Amendment to Collaboration Agreement, dated May 25, 2020, by and between the Company and BeiGene, Ltd. (incorporated by reference to Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q filed with the SEC on August 5, 2020).
10.44*	Second Amendment to License and Collaboration Agreement, effective June 2, 2021, by and between the Company and BeiGene, Ltd. (incorporated by reference to Exhibit 99.6 to the Company's Quarterly Report on Form 10-Q filed with the SEC on August 4, 2021).
10.45*	Letter Agreement, effective October 7, 2020, by and between the Company and BeiGene, Ltd. (incorporated by reference to Exhibit 99.2 to the Company's Quarterly Report on Form 10-Q filed with the SEC on August 4, 2021).
10.46†	Research and License Agreement, effective as of November 26, 2018, by and between the Company and BeiGene Ltd. (incorporated by reference to Exhibit 99.3 to the Company's Current Report on Form 8-K (File No. 001-38068), originally filed with the SEC on December 6, 2018).
10.47*	Letter Agreement, effective October 7, 2020, by and between the Company and BeiGene, Ltd. (incorporated by reference to Exhibit 99.3 to the Company's Quarterly Report on Form 10-Q filed with the SEC on August 4, 2021).
10.48	Indenture of Lease dated as of January 25, 2019, by and between 5th & Main Partnership and the Company (incorporated by reference to Exhibit 10.29 to the Company's 2018 Annual Report on Form 10-K (File No. 001-38068), originally filed with the SEC on March 6, 2019).
10.49	Notice and Acknowledgement of Exercise of Expansion Option under Lease, dated as of June 27, 2019, by and between 5th & Main Partnership and the Company (incorporated by reference to Exhibit 99.2 to the Company's Quarterly Report on Form 10-Q filed with the SEC on May 7, 2020).
10.50	Lease Expansion and Modification Agreement, dated as of April 16, 2020, by and between 5th & Main Partnership and the Company (incorporated by reference to Exhibit 99.3 to the Company's Quarterly Report on Form 10-Q filed with the SEC on May 7, 2020).
10.51	Third Lease Modification Agreement, dated February 17, 2021, by and between the Company and 5th & Main Partnership (incorporated by reference to Exhibit 99.1 to the Company's Quarterly Report on Form 10-Q filed with the SEC on May 5, 2021).
10.52	Fourth Lease Modification Agreement, dated May 7, 2021, by and between the Company and 5th and Main Partnership (incorporated by reference to Exhibit 99.5 to the Company's Quarterly Report on Form 10-Q filed with the SEC on August 4, 2021).
10.53#	Employment Agreement effective September 17, 2018, by and between the Company and Anthony Polverino (incorporated by reference to Exhibit 10.30 to the Company's 2018 Annual Report on Form 10-K (File No. 001-38068), originally filed with the SEC on March 6, 2019).
10.54*	License Agreement between the Company and Iconic Therapeutics, Inc., dated May 13, 2019 (incorporated by reference to Exhibit 99.1 to the Company's Current Report on Form 8-K filed with the SEC on May 15, 2019).
10.55*	Amendment No. 1 to License Agreement effective as of February 26, 2020, by and between the Company and Iconic Therapeutics, Inc. (incorporated by reference to Exhibit 99.7 to the Company's Annual Report on Form 10-K (File No. 001-38068), originally filed with the SEC on March 2, 2020).
10.56	Amendment No. 2 to License Agreement effective as of December 10, 2020, by and between the Company and Iconic Therapeutics, Inc. (incorporated by reference to Exhibit 99.12 to the Company's Annual Report on Form 10-K (File No. 001-38068), originally filed with the SEC on February 24, 2021).

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Exhibit No.	Description
10.57#	<u>Employment Agreement effective October 14, 2019, by and between the Company and Kathryn O'Driscoll (incorporated by reference to Exhibit 10.33 to the Company's Annual Report on Form 10-K (File No. 001-38068), originally filed with the SEC on March 2, 2020).</u>
10.58	<u>Open Market Sale AgreementSM, dated November 5, 2019, between the Company and Jefferies LLC (incorporated by reference to Exhibit 1.1 to the Company's Current Report on Form 8-K filed with the SEC on November 6, 2019).</u>
10.59	<u>Amendment No. 1 to the Open Market Sale AgreementSM, dated October 1, 2021, by and between the Company and Jefferies LLC (incorporated by reference to Exhibit 1.1 to the Company's Current Report on Form 8-K filed with the SEC on October 1, 2021).</u>
10.60#	<u>Amended and Restated Stock Option and Equity Compensation Plan (incorporated by reference to Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q filed with the SEC on May 7, 2020).</u>
10.61#	<u>Employment Agreement, effective April 1, 2020, by and between the Company and James Priour (incorporated by reference to Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q filed with the SEC on May 5, 2021).</u>
10.62#	<u>Letter, dated March 3, 2021, from the Company to James Priour (incorporated by reference to Exhibit 10.2 to the Company's Quarterly Report on Form 10-Q filed with the SEC on May 5, 2021).</u>
10.63#	<u>Separation and Release Agreement by and between the Company and James Priour, dated February 4, 2022.</u>
10.64#	<u>Employment Agreement, effective April 29, 2019, by and between the Company and Neil Josephson (incorporated by reference to Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q filed with the SEC on August 4, 2021).</u>
10.65#	<u>Letter, dated May 16, 2021, from the Company to Neil Josephson (incorporated by reference to Exhibit 10.2 to the Company's Quarterly Report on Form 10-Q filed with the SEC on August 4, 2021).</u>
10.66#	<u>Letter, dated November 9, 2021, from the Company to Neil Josephson.</u>
10.67#	<u>Employment Agreement by and between the Company and Kenneth Galbraith, dated January 5, 2022 (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K originally filed with the SEC on January 5, 2022).</u>
10.68#	<u>Inducement Stock Option and Equity Compensation Plan (incorporated by reference to Exhibit 10.4 to the Company's Current Report on Form 8-K originally filed with the SEC on January 5, 2022).</u>
21.1	<u>Subsidiaries of the Company.</u>
23.1	<u>Consent of KPMG LLP, an Independent Registered Public Accounting Firm.</u>
31.1	<u>Certification of Chief Executive Officer pursuant to Rule 13a-14(a) or 15d-14(a) of the Securities Exchange Act of 1934.</u>
31.2	<u>Certification of Chief Financial Officer pursuant to Rule 13a-14(a) or 15d-14(a) of the Securities Exchange Act of 1934.</u>
32.1	<u>Certification of the Chief Executive Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.</u>
32.2	<u>Certification of the Chief Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.</u>
101	The following materials from the Company's Annual Report on Form 10-K for the year ended December 31, 2021, formatted in Inline XBRL (Inline eXtensible Business Reporting Language): (i) Consolidated Balance Sheets as at December 31, 2021 and 2020, (ii) Consolidated Statements of Loss and Comprehensive Loss for the years ended December 31, 2021, 2020 and 2019, (iii) Consolidated Statements of Changes in Shareholders' Equity for the years ended December 31, 2021, 2020 and 2019, (iv) Consolidated Statements of Cash Flows for the years ended December 31, 2021, 2020 and 2019 and (vi) Notes to Consolidated Financial Statements.
104	Cover Page Interactive Data File (formatted as Inline XBRL and contained in Exhibit 101).

† The Company has omitted portions of the referenced exhibit pursuant to a request for confidential treatment under Rule 24b-2 promulgated under the Securities Exchange Act.

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- * Certain portions of this exhibit (indicated by “[...***...]”) have been omitted in accordance with Item 601(b)(10) of Regulation S-K because the omitted information is not material and the Company customarily and actually treats such omitted information as private or confidential.
- # Indicates management contract or compensatory plan.

Item 16. Form 10-K Summary

Not applicable.

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SIGNATURES

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

Dated: February 24, 2022

ZYMEWORKS INC.

By: /s/ Kenneth Galbraith

Name: Kenneth Galbraith

Title: Chair of the Board of Directors, Chief Executive Officer and President (Principal Executive Officer)

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Kenneth Galbraith and Neil Klompas, and each one of them, as his or her true and lawful attorneys-in-fact and agents, with full power of substitution and resubstitution, for him or her and in their name, place and stead, in any and all capacities, to sign any amendments to this Annual Report on Form 10-K and to file the same, with Exhibits thereto and other documents in connection therewith with the Securities and Exchange Commission, hereby ratifying and confirming all that each of said attorneys-in-fact, or substitute or substitutes may do or cause to be done by virtue hereof.

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

Signature	Title	Date
<u>/s/ Kenneth Galbraith</u> Kenneth Galbraith	Chair of the Board of Directors, Chief Executive Officer and President (Principal Executive Officer)	February 24, 2022
<u>/s/ Neil Klompas</u> Neil Klompas	Chief Operating Officer and Chief Financial Officer (Principal Financial Officer and Principal Accounting Officer)	February 24, 2022
<u>/s/ Troy M. Cox</u> Troy M. Cox	Director	February 24, 2022
<u>/s/ Kenneth Hillan</u> Kenneth Hillan	Director	February 24, 2022
<u>/s/ Susan Mahony</u> Susan Mahony	Director	February 24, 2022
<u>/s/ Kelvin Neu</u> Kelvin Neu	Director	February 24, 2022
<u>/s/ Hollings C. Renton</u> Hollings C. Renton	Director	February 24, 2022
<u>/s/ Natalie Sacks</u> Natalie Sacks	Director	February 24, 2022
<u>/s/ Lota Zoth</u> Lota Zoth	Director	February 24, 2022