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

Form 10-Q

(Mark One)

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

For the quarterly period ended September 30, 2018

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 001-36510

ZAFGEN, INC.

(Exact name of registrant as specified in its charter)

Delaware	**20-3857670**
(State or other jurisdiction of incorporation or organization)	**(IRS Employer Identification No.)**

Zafgen, Inc.
175 Portland Street, 4th Floor
Boston, Massachusetts 02114
(Address of principal executive offices, including zip code)

Registrant's Telephone Number, Including Area Code: (617) 622-4003

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	☐	Emerging growth company	☒
Smaller reporting company	☒		

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

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

As of October 31, 2018, there were 36,870,780 shares of the registrant's Common Stock, $0.001 par value per share, outstanding.

FORWARD-LOOKING STATEMENTS

This Quarterly Report on Form 10-Q Report, or Quarterly Report, contains forward-looking statements that involve risks and uncertainties. We make such forward-looking statements pursuant to the safe harbor provisions of the Private Securities Litigation Reform Act of 1995 and other federal securities laws. All statements other than statements of historical facts contained in this Quarterly Report are forward-looking statements. In some cases, you can identify forward-looking statements by terminology such as “may,” “will,” “should,” “expects,” “intends,” “plans,” “anticipates,” “believes,” “estimates,” “predicts,” “potential,” “continue” or the negative of these terms or other comparable terminology. These forward-looking statements include, but are not limited to, statements about:

- the accuracy of our estimates regarding expenses, future revenues, cash forecasts and capital requirements;
- our ability to successfully file and have our investigational new drug application, or IND, for ZGN-1258 and/or ZGN-1061 go into effect;
- our ability to successfully advance ZGN-1258 and/or ZGN-1061 into and through all clinical trials to enable submission of a new drug application, or NDA;
- our ability to gain regulatory approval and to successfully commercialize ZGN-1258;
- our ability to develop supportive clinical and nonclinical data for partnering and to successfully partner ZGN-1061 before commencing Phase 3 clinical development;
- our ability to advance through nonclinical studies and the IND enabling process an oral methionine aminopeptidase 2, or MetAP2, inhibitor;
- our ability to advance an oral MetAP2 inhibitor into Phase 1 trials;
- our ability to dissociate effects of MetAP2 inhibitors from pro-thrombotic effects or other adverse events observed in clinical development of our first-generation compound, beloranib;
- our ability to distinguish ZGN-1061, ZGN-1258 and other novel MetAP2 inhibitors relative to our first-generation compound;
- regulatory and political developments in the United States and foreign countries;
- the performance of our third-party contract manufacturers and clinical research organizations;
- our ability to obtain and maintain intellectual property protection for our proprietary assets;
- the size of the potential markets for our product candidates and our ability to serve those markets;
- the rate and degree of market acceptance of our product candidates for any indication once approved;
- our ability to obtain additional financing when needed;
- the success of competing products that are or become available for the indications that we are pursuing;
- the loss of our executive, medical and development teams; and
- other risks and uncertainties, including those listed under Part I, Item 1A. Risk Factors.

Any forward-looking statements in this Quarterly Report reflect our current views with respect to future events or to our future financial performance and involve known and unknown risks, uncertainties and other factors that may cause our actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by these forward-looking statements. Factors that may cause actual results to differ materially from current expectations include, among other things, those listed under Part II, Item 1A. Risk Factors and elsewhere in this Quarterly Report. Given these uncertainties, you should not place undue reliance on these forward-looking statements. Except as required by law, we assume no obligation to update or revise these forward-looking statements for any reason, even if new information becomes available in the future.

This Quarterly Report also contains estimates, projections and other information concerning our industry, our business, and the markets for certain diseases, including data regarding the estimated size of those markets, and the incidence and prevalence of certain medical conditions. Information that is based on estimates, forecasts, projections, market research or similar methodologies is inherently subject to uncertainties and actual events or circumstances may differ materially from events and circumstances reflected in this information. Unless otherwise expressly stated, we obtained this industry, business, market and other data from reports, research surveys, studies and similar data prepared by market research firms and other third parties, industry, medical and general publications, government data and similar sources.

Zafgen, Inc.

INDEX

PART I—FINANCIAL INFORMATION

Item 1. Financial Statements

ZAFGEN, INC.

CONDENSED CONSOLIDATED BALANCE SHEETS
(In thousands, except share and per share data)
(Unaudited)

	September 30, 2018	December 31, 2017
Assets		
Current assets:		
Cash and cash equivalents	$ 45,141	$ 40,777
Marketable securities	82,691	61,275
Tax incentive receivable	1,245	946
Prepaid expenses and other current assets	2,392	1,927
Total current assets	131,469	104,925
Property and equipment, net	419	528
Other assets	57	57
Total assets	$ 131,945	$ 105,510
Liabilities and Stockholders' Equity		
Current liabilities:		
Accounts payable	$ 2,627	$ 3,020
Accrued expenses	4,901	4,273
Notes payable, current	3,636	—
Total current liabilities	11,164	7,293
Notes payable, long-term	16,844	20,000
Total liabilities	28,008	27,293
Commitments and contingencies (Note 7)		
Stockholders' equity:		
Preferred stock; $0.001 par value per share; 5,000,000 shares authorized as of September 30, 2018 and December 31, 2017; no shares issued and outstanding as of September 30, 2018 and December 31, 2017	—	—
Common stock, $0.001 par value per share; 115,000,000 shares authorized as of September 30, 2018 and December 31, 2017; 36,865,817 and 27,489,457 shares issued and outstanding as of September 30, 2018 and December 31, 2017, respectively	37	27
Additional paid-in capital	440,303	367,825
Accumulated deficit	(336,375)	(289,577)
Accumulated other comprehensive loss	(28)	(58)
Total stockholders' equity	103,937	78,217
Total liabilities and stockholders' equity	$ 131,945	$ 105,510

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

ZAFGEN, INC.

CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS AND COMPREHENSIVE LOSS
(In thousands, except share and per share data)

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2018	2017	2018	2017
Revenue	$ —	$ —	$ —	$ —
Operating expenses:				
Research and development	11,830	9,723	36,472	29,928
General and administrative	3,339	3,117	9,959	9,713
Total operating expenses	15,169	12,840	46,431	39,641
Loss from operations	(15,169)	(12,840)	(46,431)	(39,641)
Other income (expense):				
Interest income	623	266	1,214	740
Interest expense	(475)	(31)	(1,399)	(157)
Foreign currency transaction (losses) gains, net	(46)	20	(182)	115
Total other income (expense), net	102	255	(367)	698
Net loss	$ (15,067)	$ (12,585)	$ (46,798)	$ (38,943)
Net loss per share, basic and diluted	$ (0.41)	$ (0.46)	$ (1.53)	$ (1.42)
Weighted average common shares outstanding, basic and diluted	36,619,575	27,483,550	30,608,664	27,414,314
Comprehensive loss:				
Net loss	$ (15,067)	$ (12,585)	$ (46,798)	$ (38,943)
Other comprehensive loss:				
Unrealized (loss) gain on marketable securities	(22)	13	30	52
Total other comprehensive (loss) income	(22)	13	30	52
Total comprehensive loss	$ (15,089)	$ (12,572)	$ (46,768)	$ (38,891)

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

ZAFGEN, INC.

CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS
(In thousands)

	Nine Months Ended September 30,	
	2018	2017
Cash flows from operating activities:		
Net loss	$ (46,798)	$ (38,943)
Adjustments to reconcile net loss to net cash used in operating activities		
Stock-based compensation expense	7,337	6,199
Non-cash interest expense	—	13
Depreciation expense	209	138
Unrealized foreign currency transaction losses (gains)	45	(31)
Premium on marketable securities, net	(3)	(297)
Amortization of (discount) premium on marketable securities	(345)	219
Changes in operating assets and liabilities:		
Prepaid expenses and other current assets	(465)	(649)
Tax incentive receivable	(344)	(91)
Accounts payable	(397)	104
Accrued expenses	1,108	(610)
Net cash used in operating activities	(39,653)	(33,948)
Cash flows from investing activities:		
Proceeds from sales and maturities of marketable securities	84,938	112,164
Purchases of marketable securities	(105,976)	(89,179)
Purchases of property and equipment	(96)	(28)
Net cash (used in) provided by investing activities	(21,134)	22,957
Cash flows from financing activities:		
Proceeds from public offering, net of issuance costs	64,560	—
Repayments of notes payable	—	(2,363)
Proceeds from exercise of common stock options and employee stock purchase plan	591	195
Net cash provided by (used in) financing activities	65,151	(2,168)
Net increase (decrease) in cash and cash equivalents	4,364	(13,159)
Cash and cash equivalents at beginning of period	40,777	32,352
Cash and cash equivalents at end of period	$ 45,141	$ 19,193
Supplemental disclosure of non-cash investing and financing activities:		
Property and equipment included in accounts payable	$ 4	$ —
Supplemental disclosure of cash flow information:		
Cash paid for interest	$ 819	$ 130

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

1. Nature of the Business and Basis of Presentation

Zafgen, Inc., or the Company, was incorporated on November 22, 2005 under the laws of the State of Delaware. The Company is a clinical-stage biopharmaceutical company leveraging its proprietary methionine aminopeptidase 2 ("MetAP2") biology platform to develop novel therapies for patients affected by complex metabolic diseases. Zafgen has pioneered the study of MetAP2 inhibitors in both common and rare metabolic disorders, and is currently advancing programs for type 2 diabetes, Prader-Willi syndrome ("PWS") and liver diseases. The Company's lead product candidate, ZGN-1061, a MetAP2 inhibitor with unique properties that maximize impact on metabolic parameters relevant to the treatment of type 2 diabetes and other related metabolic disorders, is in Phase 2 clinical development. In the second quarter of 2018 the initial part of the ZGN-1061 Phase 2 clinical trial met all of its primary endpoints at the 0.9 mg dose and 12-week data demonstrated a favorable safety and tolerability profile, with no treatment-related serious adverse events and no cardiovascular safety signals observed. The Company has opted to explore the higher end of the therapeutic range of ZGN-1061 by adding a 1.8 mg dose arm to the trial, which began in the second quarter of 2018. In January 2018, the Company announced advancement of its highly optimized MetAP2 development candidate ZGN-1258, and in the first quarter of 2018, initiated investigational new drug ("IND") application enabling nonclinical efforts for evaluation of ZGN-1258 in the treatment of people affected by PWS. The Company is subject to risks common to companies in the biotechnology industry including, but not limited to, new technological innovations, protection of proprietary technology, dependence on key personnel, compliance with government regulations and the need to obtain additional financing. Product candidates currently under development will require significant additional research and development efforts, including extensive nonclinical and clinical testing and regulatory approval, prior to commercialization. These efforts require significant amounts of additional capital, adequate personnel infrastructure, and extensive compliance-reporting capabilities.

The Company's product candidates are all in the research and development stage. There can be no assurance that the Company's research and development will be successfully completed, that adequate protection for the Company's intellectual property will be obtained, that any product candidates developed will obtain necessary government regulatory approval or that any approved products will be commercially viable. Even if the Company's product development efforts are successful, it is uncertain when, if ever, the Company will generate significant revenue from product sales. The Company operates in an environment of rapid change in technology and substantial competition from pharmaceutical and biotechnology companies. In addition, the Company is dependent upon the services of its employees and consultants.

The Company has incurred losses and negative cash flows from operations since its inception. As of September 30, 2018, the Company had an accumulated deficit of $336.4 million. From its inception through September 30, 2018, the Company received net proceeds of $397.9 million from the sales of redeemable convertible preferred stock, the issuance of convertible promissory notes, the proceeds from its initial public offering ("IPO") in June 2014 and its follow-on offerings in January 2015 and July 2018. On July 2, 2018, the Company completed a public offering of its common stock, which resulted in the sale of 9,200,000 shares at a price of $7.50 per share, resulting in net proceeds of approximately $64.6 million after deducting underwriting discounts and commissions, as well as offering costs. As disclosed in Note 5 to the condensed consolidated financial statements, the Company has a term loan with an aggregate principal balance of $20.0 million as of September 30, 2018 (the "Term Loan"). The loan agreement requires that the Company maintain certain minimum liquidity at all times, which as of September 30, 2018, was approximately $21.0 million. If the minimum liquidity covenant is not met, the Company may be required to repay the loan prior to scheduled maturity dates. Until such time, if ever, as the Company can generate substantial product revenue, the Company expects to finance its cash needs through a combination of equity offerings, debt financings, collaborations, strategic alliances, licensing arrangements and other sources of funding.

Based on its current operating plans, the Company believes its cash, cash equivalents and marketable securities of $127.8 million as of September 30, 2018 will be sufficient to fund its anticipated level of operations, capital expenditures and satisfy debt repayments and minimum liquidity requirements for a period of at least one year from the issuance date of this Quarterly Report. If the Company is unable to raise additional funds through equity or debt financings, the Company may be required to delay, limit, reduce or terminate product development or future commercialization efforts or grant rights to develop and market products or product candidates that the Company would otherwise prefer to develop and market itself.

The condensed consolidated financial statements include the accounts of the Company and its wholly owned subsidiaries Zafgen Securities Corporation, Zafgen Australia Pty Limited, and Zafgen Animal Health, LLC. All intercompany balances and transactions have been eliminated.

Unaudited Interim Financial Information

The condensed consolidated balance sheet as of December 31, 2017 was derived from the Company's audited financial statements, but does not include all disclosures required by accounting principles generally accepted in the United States of America ("GAAP"). The accompanying unaudited condensed consolidated financial statements as of September 30, 2018 and for the three and nine months ended September 30, 2018 and 2017, have been prepared by the Company, pursuant to the rules and regulations of the Securities and Exchange Commission ("SEC"), for interim financial statements. Certain information and footnote disclosures normally included in financial statements prepared in accordance with GAAP have been condensed or omitted pursuant to such rules and regulations. However, the Company believes that the disclosures are adequate to make the information presented not misleading. These condensed consolidated financial statements should be read in conjunction with the Company's audited consolidated financial statements and the notes thereto for the year ended December 31, 2017, included in the Company's Annual Report on Form 10-K, for the year ended December 31, 2017, on file with the SEC. In the opinion of management, all adjustments, consisting only of normal recurring adjustments necessary for a fair statement of the Company's condensed consolidated financial position as of September 30, 2018 and condensed consolidated results of operations and cash flows for the three and nine months ended September 30, 2018 and 2017 have been made. The results of operations for the three and nine months ended September 30, 2018 are not necessarily indicative of the results of operations that may be expected for the year ending December 31, 2018.

2. Summary of Significant Accounting Policies

Use of Estimates

The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, the disclosure of contingent assets and liabilities as of the date of the condensed consolidated financial statements, and the reported amounts of expenses during the reporting periods. Significant estimates and assumptions reflected in these condensed consolidated financial statements include, but are not limited to, the accrual of research and development expenses and the valuation of stock-based awards. Estimates are periodically reviewed in light of changes in circumstances, facts and experience. Actual results could differ from the Company's estimates.

Marketable securities

Marketable securities consist of investments with original maturities greater than ninety days. The Company has classified its investments with maturities beyond one year as short term, based on their highly liquid nature and because such marketable securities represent the investment of cash that is available for current operations. The Company considers its investment portfolio of investments as available-for-sale. Accordingly, these investments are recorded at fair value, which is based on quoted market prices. Unrealized gains and losses are reported as a component of accumulated other comprehensive loss in stockholders' equity. Realized gains and losses and declines in value judged to be other than temporary are included as a component of other income (expense), net based on the specific identification method. When determining whether a decline in value is other than temporary, the Company considers various factors, including whether the Company has the intent to sell the security, and whether it is more likely than not that the Company will be required to sell the security prior to recovery of its amortized cost basis. Fair value is determined based on quoted market prices.

Net Loss Per Share

Basic net loss per share is computed by dividing the net loss attributable to common stockholders by the weighted average number of common shares outstanding for the period. Diluted net loss per share attributable to common stockholders is computed by dividing the diluted net loss attributable to common stockholders by the weighted average number of common shares, including potential dilutive common shares assuming the dilutive effect of outstanding stock options and unvested restricted common shares, as determined using the treasury stock method. For periods in which the Company has reported net losses, diluted net loss per common share attributable to common stockholders is the same as basic net loss per common share attributable to common stockholders, since dilutive common shares are not assumed to have been issued if their effect is antidilutive.

The Company excluded the following common stock equivalents, outstanding as of September 30, 2018 and 2017, from the computation of diluted net loss per share for the three and nine months ended September 30, 2018 and 2017 because they had an anti-dilutive impact due to the net loss incurred for the periods:

	As of September 30,	
	2018	2017
Options to purchase common stock	5,676,861	3,963,480
Unvested restricted common stock	4,465	5,533
	5,681,326	3,969,013

Recently Issued and Adopted Accounting Pronouncements

In February 2016, the Financial Accounting Standards Board (the "FASB") issued ASU No. 2016-02, *Leases*. This guidance will require that lease arrangements longer than 12 months result in an entity recognizing an asset and liability equal to the present value of the lease payments in the statement of financial position. This guidance is effective for annual periods beginning after December 15, 2018, and interim periods therein. This standard requires a modified retrospective transition approach for all leases existing at, or entered into after, the date of initial application, with an option to use certain transition relief. Early adoption is permitted. The Company is evaluating the effect that this guidance will have on its consolidated financial statements.

In August 2016, the FASB issued ASU No. 2016-15, *Statement of Cash Flows: Classification of Certain Cash Receipts and Cash Payments*. This guidance addresses the presentation and classification of certain cash receipts and cash payments in the statement of cash flows. This standard was effective for the Company in 2018. The adoption of this guidance had no impact on the Company's condensed consolidated financial statements as of and for the three and nine months ended September 30, 2018.

In May 2017, the FASB issued ASU No. 2017-09, *Compensation – Stock Compensation: Scope of Modification Accounting*. This guidance addresses which changes to the terms or conditions of a share-based payment award require an entity to apply modification accounting. This standard was effective for the Company in 2018. The adoption of this guidance had no impact on the Company's condensed consolidated financial statements as of and for the three and nine months ended September 30, 2018.

In June 2018, the FASB issued ASU No. 2018-07, *Compensation—Stock Compensation (Topic 718): Improvements to Nonemployee Share-Based Payment Accounting*. This ASU is intended to simplify aspects of share-based compensation issued to non-employees by making the guidance consistent accounting for employee share-based compensation. ASU 2018-07 is effective for annual periods beginning after December 15, 2018 and interim periods within those annual periods, with early adoption permitted. The Company is evaluating the effect that this guidance will have on its consolidated financial statements.

3. Fair Value Measurements and Marketable Securities

Fair Value Measurements

The following tables present information about the Company's financial assets that have been measured at fair value as of September 30, 2018 and December 31, 2017 and indicate the fair value of the hierarchy of the valuation inputs utilized to determine such fair value. In general, fair values determined by Level 1 inputs utilize quoted prices (unadjusted) in active markets for identical assets or liabilities. Fair value determined by Level 2 inputs utilize observable inputs other than Level 1 prices, such as quoted prices, for similar assets or liabilities, quoted market prices in markets that are not active or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the related assets or liabilities. Fair values determined by Level 3 inputs are unobservable data points for the asset or liability, and include situations where there is little, if any, market activity for the asset or liability. During the three and nine months ended September 30, 2018 and the year ended December 31, 2017, there were no transfers between Level 1 and Level 2 financial assets.

The following tables summarize the Company's cash equivalents and marketable securities as of September 30, 2018 and December 31, 2017:

	September 30, 2018			
	Total	Quoted Prices in Active Markets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
	(in thousands)			
Cash equivalents:				
Money market funds	$ 33,018	$ 33,018	$ —	$ —
Commercial paper	5,095	—	5,095	—
Corporate bonds	2,554	—	2,554	—
Total cash equivalents	40,667	33,018	7,649	—
Marketable securities:				
Corporate bonds	24,885	—	24,885	—
Commercial paper	47,862	—	47,862	—
U.S. government securities	9,944	—	9,944	—
Total marketable securities	82,691	—	82,691	—
Total cash equivalents and marketable securities	$ 123,358	$ 33,018	$ 90,340	$ —

	December 31, 2017			
	Total	Quoted Prices in Active Markets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
	(in thousands)			
Cash equivalents:				
Money market funds	$ 15,802	$ 15,802	$ —	$ —
Commercial paper	998	—	998	—
Corporate bonds	549	—	549	—
Total cash equivalents	17,349	15,802	1,547	—
Marketable securities:				
Corporate bonds	50,844	—	50,844	—
Commercial paper	9,951	—	9,951	—
Certificates of deposit	480	—	480	—
Total marketable securities	61,275	—	61,275	—
Total cash equivalents and marketable securities	$ 78,624	$ 15,802	$ 62,822	$ —

The carrying amounts reflected in the condensed consolidated balance sheets for tax incentive receivable, accounts payable, and accrued expenses approximate fair value due to their short-term maturities. The carrying value of the Company's outstanding notes payable approximates fair value (a Level 2 fair value measurement), reflecting interest rates currently available to the Company.

Marketable Securities

The following tables summarize the Company's marketable securities as of September 30, 2018 and December 31, 2017:

	September 30, 2018			
	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value
	(in thousands)			
Assets:				
Corporate bonds (due within 1 year)	$ 24,897	$ —	$ (12)	$ 24,885
Commercial paper (due within 1 year)	47,874	—	(12)	47,862
U.S. government securities (due within 1 year)	9,948	—	(4)	9,944
	$ 82,719	$ —	$ (28)	$ 82,691

	December 31, 2017			
	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value
	(in thousands)			
Assets:				
Corporate bonds (due within 1 year)	$ 50,892	$ —	$ (48)	$ 50,844
Commercial paper (due within 1 year)	9,961	—	(10)	9,951
Certificates of deposit (due within 1 year)	480	—	—	480
	$ 61,333	$ —	$ (58)	$ 61,275

4. Accrued Expenses

Accrued expenses consisted of the following as of September 30, 2018 and December 31, 2017:

	September 30, 2018	December 31, 2017
	(in thousands)	
Accrued research and development expenses	$ 2,780	$ 1,647
Accrued payroll and related expenses	1,651	2,229
Accrued professional fees	290	292
Accrued other	180	105
	$ 4,901	$ 4,273

5. Notes Payable

On December 29, 2017, the Company entered into a loan and security agreement with Silicon Valley Bank (the "Term Loan"). The Term Loan provided for borrowings of $20.0 million. On December 29, 2017, the Company received proceeds of $20.0 million from the issuance of a promissory note. The promissory note issued under the Term Loan is collateralized by substantially all of the Company's personal property, other than its intellectual property.

Upon entering into this Term Loan, the Company is obligated to make monthly, interest-only payments until March 29, 2019 and, thereafter, to pay 33 consecutive, equal monthly installments of principal and interest from April 1, 2019 through December 1, 2021. The outstanding Term Loan bears a variable interest at an annual rate of 1.25% above the prime rate, which at September 30, 2018 was 5.25%. In addition, a final payment equal to 8.0% of the Term Loan is due upon the earlier of the maturity date, acceleration of the Term Loan or prepayment of all or part of the Term Loan. The Company accrues the final payment amount of $1.6 million, to outstanding debt by charges to interest expense using the effective-interest method from the date of issuance through the maturity date.

Additionally, the Company, as the borrower, is required to maintain a minimum cash, cash equivalents and marketable securities balance at Silicon Valley Bank of no less than 105% of the total outstanding principal balance of the Term Loan, which was $21.0 million as of September 30, 2018 and December 31, 2017.

Further, as of 45 days after the Term Loan was entered in, the Company met its obligation to maintain a balance of unrestricted cash, cash equivalents and marketable securities at Silicon Valley Bank in an amount not less than the greater of (i) $55.0 million and (ii) sixty-five percent (65%) of all the Company's cash, cash equivalents and marketable securities. If the Company does not meet this requirement it will not be considered an event of default provided it immediately secures 87.5% of the principal balance in a restricted cash account.

There are negative covenants restricting the Company's activities, including limitations on dispositions, mergers or acquisitions; encumbering or granting a security interest in its intellectual property; incurring indebtedness or liens; paying dividends; making certain investments; permit the aggregate value of cash maintained by its Australian subsidiary not to exceed $4.0 million and certain other business transactions.

The Term Loan also includes events of default, the occurrence and continuation of any of which provides the lenders the right to exercise remedies against the Company and the collateral securing the amounts due under the Term Loan, including cash in the amount of the outstanding balance. These events of default include, among other things, failure to pay any amounts due under the Term Loan, insolvency, the occurrence of a material adverse event, the occurrence of any default under certain other indebtedness and a final judgment against the Company in an amount greater than $0.3 million.

As of September 30, 2018 and December 31, 2017, notes payable was $20.5 million and $20.0 million, respectively. The September 30, 2018 balance consisted of $20.0 million of principal and $0.5 million of accrued interest associated with the final payment, whereas the December 31, 2017 balance consisted of $20.0 million of principal.

As of September 30, 2018, the estimated future principal payments due are as follows:

Year Ending December 31, (in thousands)	
2018	$ —
2019	5,454
2020	7,273
2021	7,273
Total	$ 20,000

During the three and nine months ended September 30, 2018, the Company recognized $0.5 million and $1.4 million, respectively, of interest expense related to the Term Loan. The effective annual interest rate as of September 30, 2018 on the outstanding debt under the Term Loan is approximately 9.7%.

During both the three and nine months ended September 30, 2017, the Company recognized $0.1 million, of interest expense related to borrowings under the loan and security agreement with Oxford Finance LLC and Midcap Financial (the "2014 Credit Facility"), which was repaid in full in December 2017. The effective annual interest rate of the debt under the 2014 Credit Facility was approximately 10.8%.

6. Stock-Based Awards

The Company's 2014 Stock Option and Incentive Plan, as amended (the "2014 Plan") provides for the grant of stock options, stock appreciation rights, restricted stock awards, restricted stock units, unrestricted stock awards, performance-share awards, cash-based awards and dividend equivalent rights to employees, members of the board of directors and consultants of the Company. The Company has outstanding stock-based awards under its Amended and Restated 2006 Stock Option Plan but is no longer granting awards under this plan. The Company also issues common stock under its 2014 Employee Stock Purchase Plan (the "ESPP"). As of September 30, 2018, 2,263,902 shares are available for grant under the 2014 Plan, including 1,099,578 shares automatically added to the 2014 Plan on January 1, 2018, and 129,844 shares are available for issuance to participating employees under the ESPP.

The Company recorded stock-based compensation expense related to stock options, restricted common stock and the ESPP in the following expense categories within its condensed consolidated statements of operations for the three and six months ended September 30, 2018 and 2017 as follows:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2018	2017	2018	2017
	(in thousands)			
Research and development	$ 1,027	$ 896	$ 4,263	$ 2,629
General and administrative	1,173	1,200	3,074	3,570
	$ 2,200	$ 2,096	$ 7,337	$ 6,199

7. Commitments and Contingencies

Leases

The Company has a lease for office space in Boston, Massachusetts, effective as of July 28, 2014, with a term expiring July 31, 2020. In March 2015, the Company entered into an operating lease for additional office space in Boston, Massachusetts, effective as of April 15, 2015, with a term expiring on July 31, 2020, and an option to extend this lease for three additional years. In addition, with the landlord's consent, the Company has subleased 2,976 square feet of office space in Boston, Massachusetts to an unrelated third party beginning on January 1, 2017 and expiring on June 30, 2019, and the Company expects to receive approximately $0.3 million in sublease rental income. In October 2015, the Company entered into an operating lease for office space in San Diego, California, effective as of October 1, 2015, with a term expiring on September 30, 2019, and an option to extend this lease for five additional years.

Future minimum lease payments for its operating leases as of September 30, 2018 were as follows:

Year Ending December 31, (in thousands)		
2018 (October - December)	$	122
2019		464
2020		226
2021		—
	$	812

During the three months ended September 30, 2018 and 2017, the Company recognized $0.1 million of rental expense related to office space. During the nine months ended September 30, 2018 and 2017, the Company recognized $0.3 million of rental expense related to office space.

Intellectual Property Licenses

The Company has acquired exclusive rights to develop patented compounds and related know-how for beloranib under two licensing agreements with two third parties in the course of its research and development activities. The licensing rights obligate the Company to make payments to the licensors for license fees, milestones, license maintenance fees and royalties. The Company is also responsible for patent prosecution costs.

As of September 30, 2018, the Company is obligated to make additional milestone payments of up to $12.3 million upon reaching certain pre-commercialization milestones, such as clinical trials and government approvals (including the U.S. Food and Drug Administration, or FDA, approval of a New Drug application, or NDA), and up to $12.5 million upon reaching certain product commercialization milestones related to the development of beloranib. Under one of the license agreements, the Company is also obligated to pay up to $1.3 million with respect to each subsequent licensed product, if any, that is a new chemical entity. In addition, the Company will owe single-digit royalties on sales of commercial products developed using these licensed technologies, if any.

There were no milestones achieved during the three and nine months ended September 30, 2018 and 2017 and the development related to this technology is no longer active. The Company is also obligated to pay to the licensors a percentage of fees received if and when the Company sublicenses the technology. As of September 30, 2018, the Company has not yet developed a commercial product using the licensed technologies and it has not entered into any sublicense agreements for the technologies.

Indemnification Agreements

In the ordinary course of business, the Company may provide indemnification of varying scope and terms to vendors, lessors, business partners, and other parties with respect to certain matters including, but not limited to, losses arising out of breach of such agreements or from intellectual property infringement claims made by third parties. In addition, the Company has entered into indemnification agreements with members of its management team and its board of directors that will require the Company, among other things, to indemnify them against certain liabilities that may arise by reason of their status or service as directors or officers. The maximum potential amount of future payments the Company could be required to make under these indemnification agreements is, in many cases, unlimited. To date, the Company has not incurred any material costs as a result of such indemnifications. The Company does not believe that the outcome of any claims under indemnification arrangements will have a material effect on its financial position, results of operations or cash flows, and it has not accrued any liabilities related to such obligations in its condensed consolidated financial statements as of September 30, 2018.

Legal Proceedings

The Company accrues a liability for legal contingencies when it believes that it is both probable that a liability has been incurred and that the Company can reasonably estimate the amount of the loss. The Company reviews these accruals and adjusts them to reflect ongoing negotiations, settlements, rulings, advice of legal counsel and other relevant information. To the extent new information is obtained and the views on the probable outcomes of claims, suits, assessments, investigations or legal proceedings change, changes in the Company's accrued liabilities would be recorded in the period in which such determination is made. In addition, in accordance with the relevant authoritative guidance, for any matters in which the likelihood of material loss is at least reasonably possible, the Company will provide disclosure of the possible loss or range of loss. If a reasonable estimate cannot be made, however, the Company will provide disclosure to that effect. The Company expenses legal costs as they are incurred.

The Company may periodically become subject to other legal proceedings and claims arising in connection with ongoing business activities, including claims or disputes related to patents that have been issued or that are pending in the field of research on which the Company is focused. The Company is not aware of any material claims as of September 30, 2018.

8. Retirement Plan

Effective January 1, 2018, the Company adopted a 401(k) plan for its employees. Under the terms of the plan, the Company contributes 3% of an employee's annual base salary, up to a maximum of the annual Internal Revenue Service compensation limits, for all full-time employees. The Company terminated its Savings Incentive Match Plan, or SIMPLE IRA as of December 31, 2017.

During the three and nine months ended September 30, 2018, the Company recognized less than $0.1 million and $0.2 million, respectively, of expense related to its contributions to the 401(k) plan.

During the three and nine months ended September 30, 2017, the Company recognized less than $0.1 million and $0.1 million, respectively, of expense related to its contributions to the SIMPLE IRA plan.

9. Australia Research and Development Tax Incentive

The Company's wholly owned subsidiary, Zafgen Australia Pty Limited, which conducts core research and development activities on behalf of the Company, is eligible to receive a 43.5% refundable tax incentive for qualified research and development activities. For the three months ended September 30, 2018 and 2017, $0.3 million and $0.2 million, respectively, were recorded as a reduction to research and development expenses in the condensed consolidated statements of operations. For the nine months ended September 30, 2018 and September 30, 2017, $1.3 million and $0.5 million, respectively, were recorded as a reduction to research and development expenses in the condensed consolidated statements of operations. These amounts represented 43.5% of the Company's qualified research and development spending in Australia. The refund is denominated in Australian dollars and, therefore, the related receivable is re-measured into U.S. dollars as of each reporting date. For the three months ended September 30, 2018 and 2017, the Company recorded in its condensed consolidated statements of operations unrealized foreign currency exchange losses of less than $0.1 million and gains of less than $0.1, respectively, related to this tax incentive receivable. For the nine months ended September 30, 2018 and 2017, the Company recorded in its condensed consolidated statements of operations unrealized foreign currency exchange losses of $0.1 million and gains of less than $0.1 million, respectively, related to this tax incentive receivable. As of September 30, 2018 and December 31, 2017, the Company's tax incentive receivable from the Australian government was $1.2 million and $0.9 million, respectively.

Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations

The following discussion and analysis of our financial condition and results of operations should be read in conjunction with our condensed consolidated financial statements and related notes appearing elsewhere in this Quarterly Report on Form 10-Q, or Quarterly Report, and the audited consolidated financial statements and notes thereto and management's discussion and analysis of financial condition and results of operations for the year ended December 31, 2017 included in our Annual Report on Form 10-K for the year ended December 31, 2017, or Annual Report. Some of the information contained in this discussion and analysis or set forth elsewhere in this Quarterly Report, including information with respect to our plans and strategy for our business, includes forward-looking statements that involve risks and uncertainties. As a result of many factors, including those factors set forth in the "Risk Factors" section of this Quarterly Report and in our Annual Report, our actual results could differ materially from the results described, in or implied, by these forward-looking statements.

Our actual results and timing of certain events may differ materially from the results discussed, projected, anticipated, or indicated in any forward-looking statements. We caution you that forward-looking statements are not guarantees of future performance and that our actual results of operations, financial condition and liquidity, and the development of the industry in which we operate may differ materially from the forward-looking statements contained in this Quarterly Report. In addition, even if our results of operations, financial condition and liquidity, and the development of the industry in which we operate are consistent with the forward-looking statements contained in this Quarterly Report, they may not be predictive of results or developments in future periods.

The following information and any forward-looking statements should be considered in light of factors discussed elsewhere in this Quarterly Report, including those risks identified under the "Risk Factors" section and in our Annual Report.

We caution readers not to place undue reliance on any forward-looking statements made by us, which speak only as of the date they are made. We disclaim any obligation, except as specifically required by law and the rules of the SEC, to publicly update or revise any such statements to reflect any change in our expectations or in events, conditions or circumstances on which any such statements may be based, or that may affect the likelihood that actual results will differ from those set forth in the forward-looking statements.

Overview

We are a clinical-stage biopharmaceutical company leveraging our proprietary methionine aminopeptidase 2, or MetAP2, biology platform to develop novel therapies for patients affected by complex metabolic diseases. We have pioneered the study of MetAP2 inhibitors in both common and rare metabolic disorders and we are currently advancing programs for type 2 diabetes, Prader-Willi syndrome, or PWS, and liver diseases.

Our lead product candidate is ZGN-1061, a novel fumagillin-class MetAP2 inhibitor administered by subcutaneous injection, which is currently being profiled for its utility in the treatment of type 2 diabetes. Type 2 diabetes is a prevalent, chronic, progressive, multifactorial disorder that leads to increased microvascular and macrovascular disease, and as such increases risk of death from cardiovascular disease, stroke, and kidney failure. Type 2 diabetes is also a leading cause of lower-limb amputation and blindness. Existing agents, while effective in reducing blood glucose levels, fail to reduce progression of the disease, which is driven by loss of function of insulin-producing beta cells and by loss of sensitivity to insulin action. It is estimated that approximately one-third of patients progress to needing insulin (recently estimated to be a $20 billion market based on annual sales). New therapies are needed to improve glycemic control and reduce comorbidities of type 2 diabetes.

We have also initiated development of a second, highly-optimized MetAP2 development candidate, ZGN-1258, which is administered by subcutaneous injection. We expect that our initial target indication for ZGN-1258 will be PWS. PWS is a rare and complex genetic disorder characterized by physiologic, cognitive and behavioral symptoms including hyperphagia, uncontrollable hunger and its related behaviors, and obesity. Published population studies estimate that the prevalence of PWS in the United States and in the European Union ranges from 1 in 8,000 to 1 in 50,000. The physiological drive to eat in patients with PWS is so powerful that they will go to great lengths to eat large quantities of food, even if it is spoiled, indigestible or unpalatable to others. Unsupervised patients will often eat to the point that it causes serious physical harm or death. As a result, caregivers are often forced to place locks and alarms on refrigerators and pantries that contain food. Despite attempts to control the access to food, the typical adult patient with PWS is morbidly obese and, based on evaluation of published survival data, has an average life expectancy of 32 years of age. Unfortunately, neither dietary intervention nor currently available pharmaceutical therapies bring meaningful benefits to patients with PWS and, as a result, they experience severe and life-threatening consequences of their condition. Furthermore, existing surgical techniques such as bariatric surgery are contraindicated in PWS, as patients with PWS often overeat to a point whereby they can rupture their stomachs, which is frequently a cause of death in this patient population.

With respect to ZGN-1258, we initiated investigational new drug application, or IND, enabling nonclinical activities in the first quarter of 2018, in preparation for filing an IND with the U.S. Food and Drug Administration, or FDA, and plan to begin Phase 1 clinical development by the end of the first quarter of 2019. We anticipate our Phase 1 clinical program of ZGN-1258 will be focused on evaluation of drug exposure, safety and tolerability following single doses in healthy subjects, and understanding the dose-responsiveness of changes following repeat dosing for circulating biomarkers of drug effect, body weight change, and changes in hunger-related parameters in overweight or obese but otherwise healthy subjects. Provided the results of the Phase 1 clinical program are supportive of further development, subsequent clinical trials are anticipated to evaluate the effects of treatment with ZGN-1258 on core therapeutic endpoints in PWS such as improvement of hyperphagia-related behaviors. We have launched a co-sponsored four-year natural history study to advance understanding of the medical history of and medical events in people with PWS. The study is a non-interventional, observational study to evaluate occurrences of serious medical events in PWS, intended to inform development and clinical trial design for potential new treatments for PWS, including ZGN-1258.

Both ZGN-1061 and ZGN-1258 were discovered by our researchers as part of a multi-year campaign to identify highly potent and novel compounds with nonclinical safety profiles supportive of continued development. One core element of focus for optimization was to reduce or eliminate the potential for pro-thrombotic effects, a limiting factor that led to termination of development of our first-generation compound. To date, both new compounds have similar intrinsic potency against the MetAP2 pathway and display appropriate activity in animal models of type 2 diabetes and obesity. Both compounds display improved safety profiles relative to beloranib for effects on thrombosis.

ZGN-1061 and ZGN-1258 are differentiated from each other with respect to their tissue distribution and predominant sites of action in animal models. While treatment with both compounds leads to target engagement and MetAP2 inhibition in key organs of relevance to the treatment of type 2 diabetes and obesity, ZGN-1258 also displays enhanced uptake into the brain and displays greater potency and activity in animal models of hyperphagic behaviors than does ZGN-1061. These differences support the development of ZGN-1061 for treatment of type 2 diabetes, in which metabolic effects related to liver, adipose tissue, and muscle effects are likely to be important, and ZGN-1258 in higher need indications such as PWS, in which brain activity is likely to be more important for therapeutic effects.

We completed a Phase 1 clinical trial of ZGN-1061 in the Netherlands, which demonstrated rapid drug absorption and clearance in line with pre-specified criteria established for the molecule. In addition, ZGN-1061 was well-tolerated, with no evidence of pro-thrombotic effects or other safety signals. We are also conducting a Phase 2 clinical trial of ZGN-1061 in Australia and New Zealand, which is designed to demonstrate proof-of-concept efficacy and safety in patients with type 2 diabetes and establish minimally effective doses. The initial part of the Phase 2 clinical trial has met its primary objectives at a 0.9 mg dose as compared to placebo and 12-week data has demonstrated a favorable safety and tolerability profile, with no treatment-related serious adverse events and no cardiovascular safety signals observed. ZGN-1061 was generally safe and well-tolerated, with primarily mild to moderate adverse events and an overall high study completion rate (95%). We expect to report the results of an additional cohort arm dosing up to 1.8 mg early in 2019.

In addition to the Phase 2 clinical data for ZGN-1061, nonclinical data on treatment with both ZGN-1061 and liraglutide suggest that combination therapy with these glucose-lowering agents may yield additive improvement in glycemic control and weight loss than either agent alone in patients with type 2 diabetes, demonstrating the potential effect of two complementary mechanisms – MetAP2 and glucose-dependent insulinotropic peptide, or GLP-1. From nonclinical data in a nonalcoholic steatohepatitis, or NASH, model, we further observed that ZGN-1061 markedly reduced liver weight, NAS score and markers of liver damage (ALT and AST). These NASH-related data, combined with previous gene expression data and clinical liver fat content data from Zafgen's first-generation MetAP2 inhibitor, suggest potential clinical value in treating liver-specific metabolic conditions. We anticipate that treatment with ZGN-1061 could improve multiple aspects of NASH, and we will evaluate the potential utility of ZGN-1061 as a NASH therapy in the setting of type 2 diabetes.

Since our inception in November 2005, we have devoted substantially all of our resources to developing ZGN-1061, ZGN-1258, beloranib, ZGN-839 and additional MetAP2 inhibitors, building our intellectual property portfolio, developing manufacturing capabilities, business planning, raising capital, and providing general and administrative support for such operations. From our inception through our initial public offering, or IPO, in June 2014, we received gross proceeds of $104.0 million from sales of redeemable convertible preferred stock and, to a lesser extent, through the issuances of convertible promissory notes. In June 2014, we completed our IPO with net proceeds of $102.7 million after deducting underwriting discounts and commissions paid by us. In January 2015, we completed a follow-on offering of our common stock, with net proceeds of $130.0 million after deducting underwriting discounts and commissions paid by us. On July 2, 2018, we completed a public offering of our common stock, which resulted in the sale of 9,200,000 shares at a price of $7.50 per share, resulting in net proceeds of approximately $64.6 million after deducting underwriting discounts and commissions, as well as offering costs paid by us.

We have never generated any revenue and have incurred net losses in each year since our inception. We have an accumulated deficit of $336.4 million as of September 30, 2018. Our net loss was $46.8 million for the nine months ended September 30, 2018 and $52.0 million for the year ended December 31, 2017. These losses have resulted principally from costs incurred in connection with in-licensing of technology, research and development activities and general and administrative costs associated with our operations. We expect to incur significant expenses and operating losses for the foreseeable future.

We expect to continue to incur expenses in connection with our ongoing activities, if and as we:

- advance the development of ZGN-1061 through Phase 2 clinical trials;
- advance the development of ZGN-1258 through nonclinical development and into clinical trials;
- seek to identify and advance development of additional product candidates into clinical development and indications for our product candidates;
- seek to obtain regulatory approvals for our product candidates;
- add operational, financial and management information systems;
- add personnel, including personnel to support our product development and future commercialization; and
- maintain, leverage and expand our intellectual property portfolio.

As a result, we will need additional financing to support our continuing operations. Until such time that we can generate significant revenue from product sales, if ever, we expect to finance our operations through a combination of public, private equity, debt financings, or other sources, which may include collaborations with third parties. Arrangements with collaborators or others may require us to relinquish rights to certain of our technologies or product candidates. In addition, we may never successfully complete development of any of our product candidates, obtain adequate patent protection for our technology, obtain necessary regulatory approval for our product candidates or achieve commercial viability for any approved product candidates. Adequate additional financing may not be available to us on acceptable terms, or at all. Our failure to raise capital as and when needed would have a negative impact on our financial condition and our ability to pursue our business strategy. We will need to generate significant revenue to achieve profitability, and we may never do so.

We expect that our existing cash, cash equivalents and marketable securities as of September 30, 2018 will enable us to fund our operating expenses, capital expenditure requirements and minimum liquidity requirements associated with our debt facility for a period of at least one year from the issuance date of this Quarterly Report. See "—Liquidity and Capital Resources."

Financial Operations Overview

Revenue

We have not generated any revenue from product sales since our inception, and do not expect to generate any revenue from the sale of products in the near future. If our development efforts result in clinical success and regulatory approval or collaboration agreements with third parties for our product candidates, we may generate revenue from those product candidates or collaborations.

Operating Expenses

The majority of our operating expenses since inception have consisted primarily of research and development activities, and general and administrative costs.

Research and Development Expenses

Research and development expenses, which consist primarily of costs associated with our product research and development efforts, are expensed as incurred. Research and development expenses consist primarily of:

- personnel costs, including salaries, related benefits and stock-based compensation for employees engaged in scientific research and development functions;
- third-party contract costs relating to research, formulation, manufacturing, nonclinical studies and clinical trial activities;
- external costs of outside consultants;
- payments made under our third-party licensing agreements;

- sponsored research agreements;
- laboratory consumables; and
- allocated facility-related costs.

Currently, we are primarily focused on developing ZGN-1061 and ZGN-1258, and are conducting other early research activities. We typically use our employee, consultant and infrastructure resources across our research and development programs. We track outsourced research and development costs by product candidate or development program, but we do not allocate personnel costs, external consultant costs, payments made under our licensing agreements or other internal costs to specific development programs or product candidates unless the payments are specifically identifiable to a development program or product candidate. We record our research and development expenses net of any research and development tax incentives we are entitled to receive from government authorities.

Research and development activities are central to our business. Product candidates in later stages of clinical development generally have higher development costs than those in earlier stages of clinical development, primarily due to the increased size and duration of later-stage clinical trials. We expect that our research and development expenses will increase in the foreseeable future as we pursue later stages of clinical development of our product candidates.

We cannot determine with certainty the duration and completion costs of the current or future clinical trials 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 scope, rate of progress, and expense of clinical trials and other research and development activities;
- clinical trial results;
- uncertainties in clinical trial enrollment rate or design;
- significant and changing government regulation;
- the timing and receipt of any regulatory approvals; and
- the FDA's or other regulatory authority's influence on clinical trial design.

A change in the outcome of any of these variables with respect to the development of a product candidate could mean a significant change in the costs and timing associated with the development of that product candidate. For example, if the FDA, or another regulatory authority were to require us to conduct clinical trials beyond those that we currently anticipate will be required for the completion of clinical development of a product candidate, or if we experience significant delays in enrollment in any of our clinical trials, we could be required to expend significant additional financial resources and time on the completion of clinical development.

General and Administrative Expenses

General and administrative expenses consist primarily of personnel costs, consisting of salaries, related benefits and stock-based compensation, of our executive, finance, business and corporate development and other administrative functions. General and administrative expenses also include travel expenses, allocated facility-related costs not otherwise included in research and development expenses, insurance expenses, and professional fees for auditing, tax and legal services, including legal expenses to pursue patent protection of our intellectual property. We expect that general and administrative expenses will remain relatively consistent during 2018 as compared to 2017.

Other Income (Expense)

Interest income. Interest income consists of interest earned on our cash equivalents and marketable securities. Our interest income has not been significant due to low interest earned on invested balances. Our interest income increased following the July 2, 2018 public offering of our common stock and we anticipate that it will subsequently decrease as we continue to incur operating losses.

Interest expense. Interest expense during the three and nine months ended September 30, 2018 relates to the loan and security agreement with Silicon Valley Bank, or the Term Loan, of $20.0 million, which closed on December 29, 2017. It bears a variable interest at an annual rate of 1.25% above the prime rate, as well as a final payment equal to 8.0% of the Term Loan, which is being recorded as interest expense over the term through the maturity date using the effective-interest method.

Interest expense during the three and nine months ended September 30, 2017, relates to outstanding borrowings under the loan and security agreement with Oxford Finance LLC and Midcap Financial, or the 2014 Credit Facility, consisting of the stated interest of 8.1% per year due on outstanding borrowings, a final payment of 6% of amounts drawn down that was recorded as interest expense over the term through the maturity date using the effective-interest method, the amortization of deferred financing costs and the accretion of debt discounts relating to the 2014 Credit Facility, which was repaid in full in December 2017.

Foreign currency gains (losses), net. Foreign currency transaction gains (losses), net consists of the realized and unrealized gains and losses from foreign currency-denominated cash balances, vendor payables and tax-related receivables from the Australian government. We currently do not engage in hedging activities related to our foreign currency-denominated receivables and payables; as such, we cannot predict the impact of future foreign currency transaction gains and losses on our operating results. See "—Quantitative and Qualitative Disclosures about Market Risk."

Income Taxes

Since our inception in 2005, we have not recorded any U.S. federal or state income tax benefits for the net losses we have incurred in each year or our earned tax credits, due to our uncertainty of realizing a benefit from those items. As of December 31, 2017, we had net operating loss carryforwards for federal and state income tax purposes of $54.0 million and $39.6 million, respectively, which begin to expire in 2026 and 2030, respectively. As of December 31, 2017, we also had available tax credit carryforwards for federal and state income tax purposes of $14.8 million and $2.4 million, respectively, which begin to expire in 2026 and 2021, respectively.

On December 22, 2017, the Tax Cuts and Jobs Act, or the TCJA, was signed into United States law. The TCJA includes a number of changes to existing tax law, including, among other things, a permanent reduction in the federal corporate income tax rate from a top marginal rate of 34% down to a flat rate of 21%, effective as of January 1, 2018, as well as limitation of the deduction for net operating losses to 80% of annual taxable income and elimination of net operating loss carrybacks, in each case, for losses arising in taxable years beginning after December 31, 2017 (though any such net operating losses may be carried forward indefinitely). The tax rate change resulted in a reduction in the gross amount of our deferred tax assets recorded as of December 31, 2017 with an offsetting reduction in the related valuation allowance, resulting in no income tax expense or benefit being recognized as of the enactment date of the TCJA. In accordance with guidance in SEC Staff Accounting Bulletin No. 118, the final determination of the remeasurement of our deferred assets and liabilities will be completed as additional information becomes available, but no later than one year from the date of enactment of the 2017 Tax Act.

Results of Operations

Comparison of three and nine months ended September 30, 2018 and 2017

The following table summarizes our results of operations for the three months ended September 30, 2018 and 2017:

	Three Months Ended September 30,		
	2018	2017	Increase (Decrease)
	(in thousands)		
Statement of Operations Data:			
Revenue	$ —	$ —	$ —
Operating expenses:			
Research and development	11,830	9,723	2,107
General and administrative	3,339	3,117	222
Total operating expenses	15,169	12,840	2,329
Loss from operations	(15,169)	(12,840)	(2,329)
Other income (expense):			
Interest income	623	266	357
Interest expense	(475)	(31)	(444)
Foreign currency transaction gains (losses), net	(46)	20	(66)
Total other income (expense), net	102	255	(153)
Net loss	$ (15,067)	$ (12,585)	$ (2,482)

Research and development expenses

	Three Months Ended September 30,		
	2018	2017	Increase (Decrease)
	(in thousands)		
Direct research and development expenses by program:			
ZGN-1061:			
Nonclinical and manufacturing	$ 760	$ 2,827	$ (2,067)
Clinical trials	1,139	1,152	(13)
Subtotal	1,899	3,979	(2,080)
ZGN-1258	3,877	—	3,877
Discovery and screening	1,677	1,887	(210)
Subtotal	7,453	5,866	1,587
Unallocated expenses:			
Personnel related	2,009	1,822	187
Non-cash stock-based compensation	1,027	896	131
Consultants	639	638	1
Other	702	501	201
Subtotal	4,377	3,857	520
Total research and development expenses	$ 11,830	$ 9,723	$ 2,107

Research and development expenses for the three months ended September 30, 2018 increased $2.1 million compared to the three months ended September 30, 2017. The increase was primarily due to an increase of $3.9 million related to our ZGN-1258 program, as well as an increase in our unallocated expenses of $0.5 million, partially offset by decreased costs of $2.1 million associated with our ZGN-1061 program and $0.2 million associated with discovery and screening.

Costs associated with our ZGN-1258 program for the three months ended September 30, 2018 are due to our advancement of the program in January 2018, and in the first quarter of 2018 our initiation of IND enabling nonclinical efforts for evaluation of ZGN-1258 initially in the treatment of people affected by PWS. Our discovery and screening costs have decreased slightly by $0.2 million from the three months ended September 30, 2018 as compared to the three months ended September 30, 2017 due to the timing of expenses. Based on our experience in MetAP2 inhibitor development, we are now exploring new chemical approaches to identify new molecules targeting the liver for treatment of metabolic liver diseases.

Unallocated expenses increased to $4.4 million for the three months ended September 30, 2018 compared to $3.9 million for the same period of 2017 primarily due to an increase of $0.1 million in non-cash stock-based compensation, as well as an increase in personnel related costs of $0.2 million. Non-cash stock-based compensation has increased for the three months ended September 30, 2018 primarily due to personnel transfers between functional areas and new hire grants. Personnel related expenses increased primarily due to the hiring of a new employee and personnel transfers between functional areas.

Costs associated with our ZGN-1061 program decreased to $1.9 million for the three months ended September 30, 2018 compared to $4.0 million for the same period of 2017, or $2.1 million, primarily due to a decrease in nonclinical and manufacturing costs of $2.1 million. During the 2017 period, costs included additional nonclinical studies and drug product and drug substance activities, as we were planning for our Phase 2 clinical trial which commenced in September 2017 in both Australia and New Zealand, for which we enrolled 137 patients in a 12 week clinical trial. In addition, costs associated with our clinical trials for our ZGN-1061 program decreased less than $0.1 million. The majority of the expenses during the three months ended September 30, 2017 were for the Phase 2 clinical trial of ZGN-1061 in Australia and New Zealand, while the expenses during the three months ended September 30, 2018 are for the additional 1.8 mg dose of the Phase 2 clinical trial that was announced in the second quarter of 2018.

General and administrative expenses

	Three Months Ended September 30,		
	2018	2017	Increase (Decrease)
	(in thousands)		
Personnel related	$ 795	$ 548	$ 247
Non-cash stock-based compensation	1,173	1,200	(27)
Professional fees	848	929	(81)
Other	523	440	83
Total general and administrative expenses	$ 3,339	$ 3,117	$ 222

General and administrative expenses for the three months ended September 30, 2018 increased $0.2 million compared to the three months ended September 30, 2017. The increase was due to an increase in personnel related costs of $0.2 million and other costs of $0.1 million. Personnel related costs increased as a result of hiring new employees. These increases were partially offset by decreases in professional fees of $0.1 million and non-cash stock-based compensation expense of less than $0.1 million. Professional fees decreased primarily due to market research that was conducted in the third quarter of 2017. Non-cash stock-based compensation expense decreased mainly due to personnel transfers between functional areas.

Other income (expense), net

Interest expense. Interest expense for the three months ended September 30, 2018 and 2017 was $0.5 million and less than $0.1 million, respectively. The increase in interest expense for the three months ended September 30, 2018 is primarily due to the Term Loan of $20.0 million, which closed on December 29, 2017. The Term Loan has a variable annual interest rate of 1.25% above the prime rate, as well as a final payment equal to 8.0% of the Term Loan, which is recorded as interest expense over the term of the loan through the maturity date using the effective-interest method. The interest expense for the three months ended September 30, 2017 relates to the 2014 Credit Facility, which was repaid in full in December 2017.

Interest income. Interest income of $0.6 million and $0.3 million for the three months ended September 30, 2018 and 2017, respectively, was related to interest earned on our marketable securities balances.

Foreign currency transaction gains (losses), net. We had foreign currency transaction gains (losses) of less than $(0.1) million and less than $0.1 million for the three months ended September 30, 2018 and 2017, respectively. Foreign currency transaction gains and losses consisted of the realized and unrealized gains and losses from foreign currency-denominated cash balances, vendor payables and tax-related receivables from the Australian government, generally reflecting the fluctuation of the Australian dollar relative to the U.S. dollar.

Results of Operations

Comparison of the nine months ended September 30, 2018 and 2017

The following table summarizes our results of operations for the nine months ended September 30, 2018 and 2017:

	Nine Months Ended September 30,		
	2018	2017	Increase (Decrease)
	(in thousands)		
Statement of Operations Data:			
Revenue	$ —	$ —	$ —
Operating expenses:			
Research and development	36,472	29,928	6,544
General and administrative	9,959	9,713	246
Total operating expenses	46,431	39,641	6,790
Loss from operations	(46,431)	(39,641)	(6,790)
Other income (expense):			
Interest income	1,214	740	474
Interest expense	(1,399)	(157)	(1,242)
Foreign currency transaction gains (losses), net	(182)	115	(297)
Total other income (expense), net	(367)	698	(1,065)
Net loss	$ (46,798)	$ (38,943)	$ (7,855)

Research and development expenses

	For the Nine Months Ended September 30,		
	2018	2017	Increase (Decrease)
	(in thousands)		
Direct research and development expenses by program:			
ZGN-1061:			
Nonclinical and manufacturing	$ 3,626	$ 10,695	$ (7,069)
Clinical trials	5,053	3,581	1,472
Subtotal	8,679	14,276	(5,597)
ZGN-1258	8,359	—	8,359
Discovery and screening	5,148	3,956	1,192
Subtotal	22,186	18,232	3,954
Unallocated expenses:			
Personnel related	6,606	5,525	1,081
Non-cash stock-based compensation	4,263	2,629	1,634
Consultants	1,746	1,675	71
Other	1,671	1,867	(196)
Subtotal	14,286	11,696	2,590
Total research and development expenses	$ 36,472	$ 29,928	$ 6,544

Research and development expenses for the nine months ended September 30, 2018 increased $6.5 million compared to the nine months ended September 30, 2017. The increase was primarily due to an increase of $8.4 million related to our ZGN-1258 program, an increase in discovery and screening expenses of $1.2 million, as well as an increase in our unallocated expenses of $2.6 million, partially offset by decreased costs of $5.6 million associated with our ZGN-1061 program.

Costs associated with our ZGN-1258 program for the nine months ended September 30, 2018 are due to our advancement of this program in January 2018, and in the first quarter of 2018 our commencement of IND enabling nonclinical efforts for evaluation of ZGN-1258 initially in the treatment of people affected by PWS. Our discovery and screening costs have increased period over period. Based on our experience in MetAP2 inhibitor development, we are now exploring new chemical approaches to identify new molecules targeting the liver for treatment of metabolic liver diseases.

Unallocated expenses increased period over period primarily due to an increase of $1.6 million in non-cash stock-based compensation, as well as an increase in personnel related costs of $1.1 million. Non-cash stock-based compensation has increased primarily due to personnel transfers between functional areas. Personnel related expenses increased primarily due to the hiring of new employees and personnel transfers between functional areas.

Costs associated with our ZGN-1061 program decreased period over period by $5.6 million, primarily due to a decrease in nonclinical and manufacturing costs of $7.1 million. During the 2017 period, costs increased primarily as a result of additional nonclinical studies and drug product and drug substance activities, as we were planning for our Phase 2 clinical trial which commenced in the third quarter of 2017 in both Australia and New Zealand, for which we enrolled 137 patients in a 12 week clinical trial. Partially offsetting the decrease in nonclinical and manufacturing costs of our ZGN-1061 program was an increase in costs associated with our clinical trials for our ZGN-1061 program of $1.5 million. The expenses during the 2017 period were for final costs for a Phase 1 clinical trial of ZGN-1061 in the Netherlands, which was comprised of 39 patients in a single ascending dose, or SAD, portion and 29 patients in a multiple ascending dose, or MAD, portion, while the expenses during the 2018 period are for the larger Phase 2 clinical trial and an extension to the trial that was announced in the second quarter of 2018.

General and administrative expenses

	Nine Months Ended September 30,		
	2018	2017	Increase (Decrease)
	(in thousands)		
Personnel related	$ 2,181	$ 1,761	$ 420
Non-cash stock-based compensation	3,074	3,570	(496)
Professional fees	3,175	3,048	127
Other	1,529	1,334	195
Total general and administrative expenses	$ 9,959	$ 9,713	$ 246

General and administrative expenses for the nine months ended September 30, 2018 increased $0.2 million compared to the nine months ended September 30, 2017. The increase was due to an increase in personnel related costs of $0.4 million, professional fees of $0.1 million and other costs of $0.2 million. Personnel related costs increased as a result of hiring new employees. Professional fees increased primarily due to recruiting expenses for new key employees and legal expenses associated with the filing of multi-country patents. These increases were offset by a decrease in non-cash stock-based compensation of $0.5 million. Non-cash stock-based compensation expense decreased due mainly to personnel transfers between functional areas.

Other income (expense), net

Interest expense. Interest expense for the nine months ended September 30, 2018 and 2017 was $1.4 million and $0.2 million, respectively. The 2018 period relates to the Term Loan of $20.0 million, which closed on December 29, 2017. It bears a variable interest at an annual rate of 1.25% above the prime rate, as well as a final payment equal to 8.0% of the Term Loan, which is being recorded as interest expense over the term through the maturity date using the effective-interest method. The 2017 period relates to borrowings under the 2014 Credit Facility, which was repaid in full in December 2017.

Interest income. Interest income of $1.2 million and $0.7 million for the nine months ended September 30, 2018 and 2017, respectively, was related to interest earned on our marketable securities balances.

Foreign currency transaction gains (losses), net. We had foreign currency transaction gains (losses) of $(0.2) million and $0.1 million for the nine months ended September 30, 2018 and 2017, respectively. Foreign currency transaction gains and losses consisted of the realized and unrealized gains and losses from foreign currency-denominated cash balances, vendor payables and tax-related receivables from the Australian government, generally reflecting the fluctuation of the Australian dollar relative to the U.S. dollar.

Liquidity and Capital Resources

As of September 30, 2018, we had cash, cash equivalents and marketable securities totaling $127.8 million and outstanding debt of $20.5 million. We invest our cash in money market funds, commercial paper, corporate bonds and U.S. government securities, with the primary objectives to preserve principal, provide liquidity and maximize income without significantly increasing risk.

Since our inception in November 2005, we have not generated any revenue and have incurred recurring net losses. As of September 30, 2018, we had an accumulated deficit of $336.4 million. Prior to our IPO in June 2014, we funded our operations primarily through sales of redeemable convertible preferred stock and, to a lesser extent, through the issuances of convertible promissory notes and a loan security agreement. From our inception through our IPO in June 2014, we received gross proceeds of $104.0 million from such transactions. In June 2014, we completed our IPO with net proceeds of $102.7 million after deducting underwriting discounts and commissions paid by us. We also incurred offering costs of $2.5 million related to the IPO. In January 2015, we completed a follow-on offering of our common stock, which resulted in the sale of 3,942,200 shares at a price of $35.00 per share. We received net proceeds from the follow-on offering of $130.0 million based upon the price of $35.00 per share and after deducting underwriting discounts and commissions paid by us. We also incurred offering costs of $0.5 million related to the follow-on offering. On July 2, 2018, we completed a public offering of our common stock, which resulted in the sale of 9,200,000 shares at a price of $7.50 per share, resulting in net proceeds of approximately $64.6 million after deducting underwriting discounts and commissions, as well as offering costs paid by us.

As of December 31, 2017, we had fully repaid all outstanding amounts due under the 2014 Credit Facility, which we had entered into in March 2014.

On December 29, 2017, we entered into the Term Loan, which provided for borrowings of $20.0 million. On December 29, 2017, we received proceeds of $20.0 million from the issuance of a promissory note. The promissory note issued under the Term Loan is collateralized by substantially all of our personal property, other than our intellectual property.

Upon entering into this Term Loan, we became obligated to make monthly, interest-only payments until March 29, 2019 and, thereafter, to pay 33 consecutive, equal monthly installments of principal and interest from April 1, 2019 through December 1, 2021. The outstanding Term Loan bears a variable interest at an annual rate of 1.25% above the prime rate, which was 5.25% as of September 30, 2018. In addition, a final payment equal to 8.0% of the Term Loan is due upon the earlier of the maturity date, acceleration of the Term Loan or prepayment of all or part of the Term Loan. We accrue the final payment amount of $1.6 million, to outstanding debt by charges to interest expense using the effective-interest method from the date of issuance through the maturity date.

Additionally, we, as the borrower, are required to maintain a minimum unrestricted cash, cash equivalents and marketable securities balance at Silicon Valley Bank of no less than 105% of the total outstanding principal balance of the Term Loan, which as of September 30, 2018 and December 31, 2017 was $21.0 million.

Further, as of 45 days after the Term Loan was entered in, we met the obligation to maintain a balance of unrestricted cash, cash equivalents and marketable securities at Silicon Valley Bank in an amount not less than the greater of (i) $55.0 million and (ii) sixty-five percent (65%) of all of our cash, cash equivalents and marketable securities. If we do not meet this requirement it will not be considered an event of default provided we immediately secure 87.5% of the principal balance in a restricted cash account.

There are negative covenants restricting our activities, including limitations on dispositions, mergers or acquisitions, encumbering or granting a security interest in our intellectual property, incurring indebtedness or liens, paying dividends, making certain investments, permit the aggregate value of cash maintained by our Australian subsidiary not to exceed $4.0 million and certain other business transactions.

The Term Loan also includes events of default, the occurrence and continuation of any of which provides the lenders the right to exercise remedies against us and the collateral securing the amounts due under the Term Loan, including cash in the amount of the outstanding balance. These events of default include, among other things, failure to pay any amounts due under the Term Loan, insolvency, the occurrence of a material adverse event, the occurrence of any default under certain other indebtedness and a final judgment against us in an amount greater than $0.3 million.

The following table summarizes our sources and uses of cash for each of the periods presented below:

	Nine Months Ended September 30,	
	2018	2017
	(in thousands)	
Cash used in operating activities	$ (39,653)	$ (33,948)
Cash (used in) provided by investing activities	(21,134)	22,957
Cash provided by (used in) financing activities	65,151	(2,168)
Net increase (decrease) in cash and cash equivalents	$ 4,364	$ (13,159)

Net cash used in operating activities

During the nine months ended September 30, 2018, operating activities used $39.7 million of cash, resulting from our net loss of $46.8 million, partially offset by non-cash charges of $7.2 million and changes in our operating assets and liabilities of $(0.1) million. Our net loss was primarily attributed to research and development activities related to our ZGN-1061 program, our ZGN-1258 program, discovery and screening and our general and administrative expenses. Our net non-cash charges during the nine months ended September 30, 2018, consisted primarily of stock-based compensation expense of $7.3 million. Net cash used in changes in our operating assets and liabilities during the nine months ended September 30, 2018, consisted primarily of a $0.5 million increase in prepaids and other current assets, $0.4 million decrease in accounts payable and $0.3 million increase in tax incentive receivable, partially offset by a $1.1 million increase in accrued expenses.

During the nine months ended September 30, 2017 operating activities used $33.9 million of cash, resulting from our net loss of $38.9 million, partially offset by changes in our operating assets and liabilities of $1.2 million and non-cash charges of $6.2 million. Our net loss was primarily attributed to research and development activities related to our ZGN-1061 program and our general and administrative expenses. Our net non-cash charges during the nine months ended September 30, 2017, consisted primarily of stock-based compensation expense of $6.2 million. Net cash used in changes in our operating assets and liabilities during the nine months ended September 30, 2017, consisted primarily of a $0.6 million decrease in accrued expenses as well as an increase in prepaid expenses and other current assets of $0.6 million.

Net cash (used in) provided by investing activities

During the nine months ended September 30, 2018, investing activities used $21.1 million of cash resulting from the purchases of marketable securities of $106.0 million, offset by the proceeds from sales and maturities of marketable securities of $84.9 million.

During the nine months ended September 30, 2017, investing activities provided $23.0 million of cash resulting from proceeds from sales and maturities of marketable securities of $112.2 million, offset primarily by the use of cash for purchases of marketable securities of $89.2 million.

Net cash provided by (used in) financing activities

During the nine months ended September 30, 2018, net cash provided by financing activities of $65.2 million was the result of net proceeds of $64.6 million from our July 2, 2018 public offering of common stock and $0.6 million relating to the exercise of common stock options and common stock purchased under our 2014 Employee Stock Purchase Plan.

During the nine months ended September 30, 2017, financing activities used $2.4 million for payments related to our notes payable, partially offset by $0.2 million received from proceeds relating to the exercise of common stock options and common stock purchased under our 2014 Employee Stock Purchase Plan.

Operating Capital Requirements and Liquidity

ZGN-1061 is currently in Phase 2 clinical development and ZGN-1258 is in nonclinical development, therefore we expect to continue to incur significant expenses and operating losses for the foreseeable future. We anticipate that we will continue to incur expenses, if and as we:

- advance the development of ZGN-1061 through Phase 2 clinical trials;
- advance the development of ZGN-1258 through nonclinical development and into clinical trials;
- seek to identify and advance development of additional product candidates into clinical development and indications for our product candidates;
- seek to obtain regulatory approvals for our product candidates;
- add operational, financial and management information systems;
- add personnel, including personnel to support our product development and future commercialization; and
- maintain, leverage and expand our intellectual property portfolio.

We expect that our existing cash, cash equivalents and marketable securities as of September 30, 2018, will enable us to fund our operating expenses and capital expenditure requirements for a period of at least one year from the issuance date of this Quarterly Report. We have based this estimate on assumptions that may prove to be wrong, and we may use our available capital resources sooner than we currently expect. Because of the numerous risks and uncertainties associated with the development ZGN-1061 and ZGN-1258 and because the extent to which we may enter into collaborations with third parties for the development of these product candidates is unknown, we are unable to estimate the amounts of increased capital outlays and operating expenses associated with completing the research and development of our product candidates. Our future capital requirements for ZGN-1061 and ZGN-1258 will depend on many factors, including:

- the costs, timing and outcome of regulatory review;
- the costs of future research and development activities, including clinical trials;
- the costs of preparing, filing and prosecuting patent applications, maintaining and enforcing our intellectual property rights and defending intellectual property-related claims;
- the extent to which we acquire or in-license other products, product candidates, or technologies; and
- our ability to establish any future collaboration arrangements on favorable terms, if at all.

Until such time, if ever, as we can generate substantial product revenue, we expect to finance our cash needs through a combination of equity offerings, debt financings, collaborations, strategic alliances and licensing arrangements. To the extent that we raise additional capital through the sale of equity or convertible debt securities, the ownership interest of our stockholders will be diluted, and the terms of these securities may include liquidation or other preferences that adversely affect the rights of our common stockholders. Debt financing, if available, 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 and may require the issuance of warrants, which could potentially dilute their ownership interest. If we raise additional funds through collaborations, strategic alliances or licensing arrangements with third parties, we may have to relinquish valuable rights to our technologies, future revenue streams, research programs or grant licenses on terms that may not be favorable to us. If we are unable to raise additional funds through equity or debt financings when needed, we may be required to delay, limit, reduce or terminate our product development or future commercialization efforts or grant rights to develop and market our product candidates that we would otherwise prefer to develop and market ourselves.

Since our inception in 2005, we have not recorded any U.S. federal or state income tax benefits for the net losses we have incurred in each year or our earned tax credits, due to our uncertainty of realizing a benefit from those items. As of December 31, 2017, we had net operating loss carryforwards for federal and state income tax purposes of $54.0 million and $39.6 million, respectively, which begin to expire in 2026 and 2030, respectively. As of December 31, 2017, we also had available tax credit carryforwards for federal and state income tax purposes of $14.8 million and $2.4 million, respectively, which begin to expire in 2026 and 2021, respectively We have not completed a study to assess whether an ownership change, generally defined as a greater than 50% change (by value) in the equity ownership of our corporate entity over a three-year period, has occurred or whether there have been multiple ownership changes since our inception, due to the significant costs and complexities associated with such studies. Accordingly, our ability to utilize our tax carryforwards may be limited. Additionally, U.S. tax laws limit the time during which these carryforwards may be utilized against future taxes. As a result, we may not be able to take full advantage of these carryforwards for federal and state tax purposes.

Contractual Obligations and Commitments

During the nine months ended September 30, 2018, there have been no material changes to our contractual obligations and commitments outside the ordinary course of business from those described under the heading “Management’s Discussion and Analysis of Financial Condition and Results of Operations—Contractual Obligations and Commitments” in our Annual Report and in our Quarterly Report on Form 10-Q for the period ended June 30, 2018, as filed with the Securities and Exchange Commission, or SEC, on August 9, 2018.

Off-Balance Sheet Arrangements

During the periods presented we did not have and we currently do not have, any off-balance sheet arrangements, as defined under SEC rules, such as relationships with unconsolidated entities or financial partnerships, which are often referred to as structured finance or special purpose entities, established for the purpose of facilitating financing transactions that are not required to be reflected on our balance sheets.

Application of Critical Accounting Policies

Our condensed consolidated financial statements are prepared in accordance with accounting principles generally accepted in the United Sated, or GAAP. The preparation of our financial statements and related disclosures requires us to make estimates, assumptions and judgments that affect the reported amount of assets, liabilities, revenue, costs and expenses, and related disclosures. We believe that of our critical accounting policies which are described under the heading “Management’s Discussion and Analysis of Financial Condition and Results of Operations—Critical Accounting Policies and Significant Judgments and Estimates” in our Annual Report, the following accounting policies involve the most judgment and complexity:

- accrued research and development costs; and
- stock-based compensation.

Accordingly, we believe the policies set forth above are critical to fully understanding and evaluating our financial condition and results of operations. If actual results or events differ materially from the estimates, judgments and assumptions used by us in applying these policies, our reported financial condition and results of operations could be materially affected. There have been no material changes to our critical accounting policies since December 31, 2017.

Recently Issued Accounting Pronouncements

Please read Note 2 to our condensed consolidated financial statements included in Part I Item 1 of this Quarterly Report for a description of recent accounting pronouncements applicable to our business.

Item 3. Quantitative and Qualitative Disclosures about Market Risk

Interest Rate Fluctuation Risk

Our cash, cash equivalents, and marketable securities as of September 30, 2018 consisted of cash, corporate bonds, commercial paper, U.S. government securities and money market accounts. The primary objectives of our investment activities are to preserve principal, provide liquidity and maximize income without significantly increasing risk. Our primary exposure to market risk is interest income sensitivity, which is affected by changes in the general level of U.S. interest rates. If market interest rates were to increase immediately and uniformly by 50 basis points, or one-half of a percentage point, from levels as of September 30, 2018, the net fair value of our interest-sensitive financial instruments would have resulted in a hypothetical decline of $0.2 million.

Foreign Currency Exchange Risk

Foreign currency transaction exposure results primarily from transactions with our contract research organizations, or CROs, and other providers related to our clinical trials that are denominated in currencies other than the functional currency of the legal entity in which the transaction is recorded by us, primarily the Australian dollar. Any transaction gains or losses resulting from currency fluctuations is recorded on a separate line in our condensed consolidated statement of operations. Net foreign currency transaction gains (losses) of less than $(0.1) million and less than $0.1 million were recorded for the three months ended September 30, 2018 and 2017, respectively. Net foreign currency transaction gains (losses) of $(0.2) million and $0.1 million were recorded for the nine months ended September 30, 2018 and 2017, respectively.

Currently, our largest foreign currency exposures are those with respect to the Australian dollar. Relative to foreign currency exposures existing as of September 30, 2018, a 10% unfavorable movement in foreign currency exchange rates would expose us to an increased net loss. For the nine months ended September 30, 2018, we estimated that a 10% unfavorable movement in foreign currency exchange rates would have increased our net loss by $0.1 million. This amount is based on a sensitivity analysis performed on our financial position as of September 30, 2018. We have experienced and will continue to experience fluctuations in our net loss as a result of revaluing our assets and liabilities that are not denominated in the functional currency of the entity that recorded the asset or liability. At this time, we do not hedge our foreign currency risk.

Item 4. Management’s Evaluation of our Disclosure Controls and Procedures

We maintain disclosure controls and procedures (as defined in Rules 13a-15(e) or 15d-15(e) under the Securities Exchange Act of 1934, as amended, or the Exchange Act) that are designed to ensure that information required to be disclosed in reports that we file or submit under the Exchange Act is (1) recorded, processed, summarized, and reported within the time periods specified in the SEC’s rules and forms and (2) accumulated and communicated to our management, including our principal executive officer and principal financial officer, as appropriate, to allow timely decisions regarding required disclosure.

Based on this evaluation, our management, with the participation of our principal executive officer and principal financial officer, evaluated the effectiveness of our disclosure controls and procedures as of the end of the period covered by this report. In designing and evaluating our disclosure controls and procedures, our 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. Our principal executive officer and principal financial officer have concluded based upon the evaluation described above that, as of September 30, 2018, our disclosure controls and procedures were effective at the reasonable assurance level.

We continue to review and document our disclosure controls and procedures, including our internal controls and procedures for financial reporting, and may from time to time make changes aimed at enhancing their effectiveness and to ensure that our systems evolve with our business in accordance with the Exchange Act.

Changes in Internal Control Over Financial Reporting

During the nine months ended September 30, 2018, there have been no changes in our internal control over financial reporting (as defined in Rules 13a-15(f) or 15d-15(d) under the Exchange Act) that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

PART II – OTHER INFORMATION

Item 1. Legal Proceedings

We are not currently party to any material litigation or other material legal proceedings.

Item 1A. Risk Factors

Investing in our common stock involves a high degree of risk. You should carefully consider the risks described below, as well as the other information in this Quarterly Report on Form 10-Q, or Quarterly Report, and in our other public filings before making an investment decision. Our business, prospects, financial condition, or operating results could be harmed by any of these risks, as well as other risks not currently known to us or that we currently consider immaterial. If any such risks or uncertainties actually occur, our business, financial condition or operating results could differ materially from the plans, projections and other forward-looking statements included in the section titled "Management's Discussion and Analysis of Financial Condition and Results of Operations" and elsewhere in this Quarterly Report and in our other public filings. The trading price of our common stock could decline due to any of these risks, and as a result, you may lose all or part of your investment.

Risks Related to Product Development, Regulatory Approval and Commercialization

We currently depend primarily on the success of one product candidate, ZGN-1061, which has completed Phase 1 and is currently in Phase 2 clinical development. We cannot be certain that we will be able to obtain regulatory approval for ZGN-1061, or successfully commercialize ZGN-1061 if approved.

We currently have only one product candidate in clinical development, ZGN-1061, which has completed Phase 1 clinical development in the Netherlands and is in Phase 2 clinical development in Australia and New Zealand, and our business currently depends primarily on its successful clinical development, regulatory approval and commercialization. We currently have no drug products for sale and may never be able to develop marketable drug products. In order to conduct clinical trials in the United States we need to file an Investigational New Drug, or IND, application with the U.S. Food and Drug Administration, or FDA. Because our business is primarily dependent upon this one product candidate, any setback in our pursuit of regulatory approval for ZGN-1061 would have a material adverse effect on our business and prospects. The clinical trials of our product candidates are, and the manufacturing and marketing of our product candidates will be, subject to extensive and rigorous review and regulation by numerous government authorities in the United States and in other countries where we intend to test and, if approved, market any product candidate. Before obtaining regulatory approvals for the commercial sale of any product candidate, we must demonstrate through nonclinical testing and clinical trials that the product candidate is safe and effective for use in each target indication. This process can take many years and will likely include post-marketing studies, or PMS, post-marketing requirements, or PMRs, and surveillance such as Risk Evaluation and Mitigation Strategies, or REMS, which will require the expenditure of substantial resources beyond the proceeds we currently have on hand.

Furthermore, we are not permitted to market ZGN-1061 in the United States until we receive approval of a New Drug Application, or NDA, from the FDA, or in any foreign countries until we receive the requisite marketing approval from such countries. Development of diabetes drugs requires approximately 2,500 subjects randomized to active doses of the product with 1,300 to 1,500 subjects exposed for a year and 300 to 500 subjects exposed for 18 months in order to estimate the safety of the drug in an NDA. In addition, it is anticipated that the FDA may require that their guidance for assessment of cardiovascular risk with diabetes products be followed which may require testing of 5,000 to 10,000 subjects. Meeting the requirements of the FDA or certain European regulatory authorities may require that we conduct additional pivotal clinical trials. Accordingly, obtaining approval of an NDA or Marketing Authorization Application, or MAA, is a complex, lengthy, expensive and uncertain process.

The FDA and certain European regulatory authorities may delay, limit or deny approval of ZGN-1061 for many reasons, including, among others:

- the FDA may not accept our IND application for ZGN-1061 or may put it on clinical hold;
- we may not be able to demonstrate that ZGN-1061 is safe and effective to the satisfaction of the FDA and the European Medicines Agency, or EMA;
- the results of our clinical trials may not meet the level of statistical or clinical significance required by the FDA and EMA for marketing approval;
- the FDA and EMA may disagree with the number, design, size, duration, conduct or implementation of our clinical trials;
- the FDA and EMA may require that we conduct additional clinical trials or nonclinical studies;

- the FDA and EMA may not approve the formulation, labeling or specifications of ZGN-1061;
- the contract research organizations, or CROs, that we retain to conduct our clinical trials may take actions outside of our control that materially adversely impact our clinical trials;
- the FDA and EMA may find the data from nonclinical studies and clinical trials insufficient to demonstrate that ZGN-1061's clinical and other benefits outweigh its safety risks;
- the FDA and EMA may disagree with our interpretation of data from our nonclinical studies and clinical trials;
- the FDA and EMA may not accept data generated at our clinical trial sites;
- if and when our NDA is submitted and is determined to require an FDA advisory committee assessment, or the advisory committee may recommend against approval of our application or may recommend that the FDA require, as a condition of approval, additional nonclinical studies or clinical trials, limitations on approved labeling or distribution and use restrictions;
- the FDA could require development of a REMS as a condition of approval or post-approval, or may not agree with our proposed REMS, or may impose additional requirements that limit the promotion, advertising, distribution, or sales of ZGN-1061;
- the FDA and EMA may find deficiencies with or not approve the manufacturing processes or facilities of third-party manufacturers with which we contract; or
- the FDA and EMA may change their approval policies or adopt new regulations.

Any of these factors, many of which are beyond our control, could jeopardize our ability to obtain and/or maintain regulatory approval for and successfully market ZGN-1061. Of the large number of drugs in development in the United States, only a small percentage will successfully complete the FDA regulatory approval process and be commercialized. Accordingly, even if we are able to obtain the requisite financing to continue to fund our development and clinical trials, we cannot assure you that ZGN-1061 or any other of our product candidates will be successfully developed or commercialized.

We cannot be certain that we will be able to successfully complete clinical trials for our product candidates, obtain regulatory approval for our product candidates or successfully commercialize our product candidates, if approved.

We currently have only one product candidate in clinical development, ZGN-1061, which has completed Phase 1 clinical development in the Netherlands and is in Phase 2 clinical development in Australia and New Zealand, and our business currently depends primarily on its successful clinical development, regulatory approval and commercialization. At the beginning of 2018 we announced a new product candidate, ZGN-1258, which is in nonclinical development. We expect to initially develop ZGN-1258 as a treatment for Prader-Willi syndrome, or PWS. Before our product candidates can be marketed, our IND application or other comparable regulatory approvals must go into effect permitting the conduct of clinical trials, and we must then successfully complete human testing. The FDA and other comparable foreign regulatory agencies must approve our NDA or comparable regulatory submissions. Even after successful completion of clinical testing, there is a risk that the FDA or other regulatory agencies may request further information from us, disagree with our findings or otherwise undertake a lengthy review of our submission. Even if the FDA approves our NDA, we may be unable to successfully commercialize our product candidates.

It is possible, that the FDA or other regulatory agencies will not approve any application that we may submit. It is possible that our product candidates may not obtain appropriate regulatory approvals necessary for us to commence clinical trials for our product candidates. Any delay or failure in obtaining required approvals could have a material adverse effect on our business. This process can take many years and will likely require the expenditure of substantial resources beyond the proceeds we currently have on hand.

Favorable results from nonclinical studies, our Phase 1 clinical trial of ZGN-1061 and the analysis of our Phase 2 clinical trial data to date of ZGN-1061 are not necessarily predictive of the results of additional nonclinical studies or later-stage clinical trials of ZGN-1061. Given the thrombosis findings in humans treated with beloranib, development costs for ZGN-1061 may be higher and we may be unable to successfully develop, obtain regulatory approval for and commercialize ZGN-1061.

Favorable results from our nonclinical studies of ZGN-1061, our Phase 1 clinical trial and analysis of our Phase 2 clinical trial of ZGN-1061 to date, may not necessarily be predictive of the results from ongoing and later-stage clinical trials. Toxicology studies in multiple species have shown that ZGN-1061 is not exhibiting any testicular safety signals or activation of thrombosis-related biochemical markers, and displays an appreciable margin for embryofetal toxicity, testicular toxicity, pro-thrombotic effects and other previously observed issues for MetAP2 inhibitors such as hematological and neuronal toxicities with a small therapeutic margin and no margin for embryofetal toxicity. Further in our Phase 1 clinical trial, ZGN-1061 demonstrated rapid drug absorption and clearance in line with criteria established in advance for the molecule and has a favorable tolerability profile with no safety signals identified,

including no evidence of pro-thrombotic effects. The data show that ZGN-1061 improves multiple metabolic measures consistent with MetAP2 inhibition, and patients in the clinical trial experienced mean weight loss of up to approximately one pound per week. In addition, data from the analysis of the Phase 2 clinical trial to date of ZGN-1061 demonstrated a favorable glycated hemoglobin A1C, or A1C, effect at the 0.9 mg dose of ZGN-1061. However, we can provide no assurance that the results of our nonclinical studies, Phase 1 clinical trial of ZGN-1061 and the analysis of our Phase 2 clinical trial to date of ZGN-1061 will be replicated in ongoing or later-stage clinical trials of ZGN-1061 or other nonclinical studies.

Many companies in the pharmaceutical and biotechnology industries have suffered significant setbacks in clinical trials after achieving positive results in nonclinical and early-stage clinical development. In particular, we have suffered significant setbacks in later-stage clinical trials of our former lead product candidate, beloranib, after achieving positive results in nonclinical and clinical development, and we cannot be certain that we will not face similar setbacks in our development of ZGN-1061. The setbacks in later-stage clinical development have been caused by, among other things, nonclinical findings made while clinical trials were underway or safety or efficacy observations made in clinical trials, including previously unreported or understood adverse events. Moreover, nonclinical and clinical data are often susceptible to varying interpretations and analyses, and many companies that believed their product candidates performed satisfactorily in nonclinical studies and clinical trials nonetheless failed to obtain FDA and/or EMA approval. If we fail to produce positive results in our later-stage clinical trials of ZGN-1061, the development timeline and regulatory approval and commercialization prospects for our lead product candidate, and, correspondingly, our business and financial prospects, would be materially adversely affected.

Our product candidates may cause undesirable side effects that could delay or prevent their regulatory approval, limit the commercial profile of an approved label, or result in significant negative consequences following marketing approval, if any.

Undesirable side effects caused by our product candidates could cause us or regulatory authorities such as the FDA to interrupt, delay or halt clinical trials and could result in a more restrictive label or the delay or denial of regulatory approval by the FDA or other regulatory authorities. For example, common adverse events observed in patients treated with our first-generation MetAP2 inhibitor, beloranib, versus placebo included diarrhea, injection site bruising, dizziness, decreased appetite, anxiety and sleep disturbances (insomnia principally manifested as delayed onset of sleep and abnormal dreams), among others. In addition, an imbalance in the number of thrombotic events observed in patients treated with beloranib as compared to patients on placebo in our clinical trials was observed. We may see similar adverse events with ZGN-1061 or ZGN-1258 as we saw with beloranib, and therefore, we are studying these parameters in nonclinical and clinical development of ZGN-1061 and ZGN-1258. In our Phase 1 clinical trial of ZGN-1061, the most common adverse events reported were mild gastrointestinal issues (comparable between ZGN-1061 and placebo groups), headache and procedural-related irritation. Data from the initial part of the Phase 2 clinical trial indicated that ZGN-1061 was generally safe and well-tolerated, with primarily mild to moderate adverse events (AEs). The most frequent AEs were injection site bruising, upper respiratory infection, and diarrhea that was mild and self-limiting; no treatment-related serious adverse events and no cardiovascular safety signals were observed. In addition, data from the initial part of the Phase 2 clinical trial of ZGN-1061 demonstrated a beneficial decrease in A1C in the 0.9 mg group up to 12 weeks, and it is unknown whether this effect would continue beyond 12 weeks or at a higher dose.

Further, if ZGN-1061 or ZGN-1258 receive marketing approval and we or others identify undesirable side effects caused by the product (or any other similar product) after the approval, a number of potentially significant negative consequences could result, including:

- regulatory authorities may request that we withdraw the product from the market or may limit their approval of the product through labeling or other means;
- regulatory authorities may require the addition of labeling statements, such as a “black box” warning or a contraindication or a precaution;
- we may be required to change the way the product is distributed or administered, conduct additional clinical trials or change the labeling of the product;
- we may decide to remove the product from the marketplace;
- we could be sued and held liable for injury caused to individuals exposed to or taking our product candidates; and
- our reputation may suffer.

Any of these events could prevent us from achieving or maintaining market acceptance of the affected product candidate and could substantially increase the costs of commercializing our product candidates and significantly impact our ability to successfully commercialize our product candidates and generate revenues.

Failures or delays in the commencement or completion of our planned clinical trials of ZGN-1061 or ZGN-1258 could result in increased costs to us and could delay, prevent or limit our ability to generate revenue and continue our business.

ZGN-1061 has completed Phase 1 clinical development in the Netherlands and is in Phase 2 clinical development in Australia and New Zealand and will require substantial further clinical development before we can submit an NDA to the FDA or an MAA to the EMA for its marketing approval. ZGN-1258 is still in nonclinical development, and additional nonclinical work must be completed prior to filing the IND application with the FDA.

Despite the guidance we may receive from the FDA, the EMA, or other applicable regulatory authorities including Australia and New Zealand, any of these regulatory authorities can change their positions on the acceptability of our clinical trial designs or the clinical endpoints selected, which may require us to complete additional clinical trials or impose stricter approval conditions than we currently expect. Successful completion of such clinical trials is a prerequisite to submitting an NDA to the FDA and an MAA to the EMA and, consequently, the ultimate approval and commercial marketing of ZGN-1061 or ZGN-1258. We do not know whether any clinical trials for ZGN-1061 or ZGN-1258 will begin or be completed on schedule, if at all, as the commencement and completion of clinical trials can be delayed or prevented for a number of reasons, including, among others:

- the FDA, EMA or other governing bodies in Europe or Australia and New Zealand may deny permission to begin or continue clinical trials, including for certain indications, we want to conduct;
- delays in regulatory filings or receiving regulatory authorizations of IND applications, or clinical trial authorization applications, or CTAs, that may be required;
- unfavorable results from our nonclinical studies, thus the FDA, the EMA or the applicable regulatory authorities in Australia or New Zealand, may require additional nonclinical studies;
- delays in reaching or failing to reach agreement on acceptable terms with prospective CROs and clinical trial sites, the terms of which can be subject to extensive negotiation and may vary significantly among different CROs and trial sites;
- inadequate quantity or quality of a product candidate or other materials necessary to conduct clinical trials, for example delays in the manufacturing of sufficient supply of finished drug product;
- difficulties obtaining Institutional Review Board, or IRB, and/or ethics committee approval to conduct a clinical trial at a prospective site or sites in the United States, the European Union, Australia or New Zealand;
- challenges in recruiting and enrolling patients to participate in clinical trials, including the size and nature of the patient population, the proximity of patients to clinical trial sites, eligibility criteria for the clinical trial, the nature of the clinical trial protocol, the availability of approved effective treatments for the relevant disease and competition from other clinical trial programs for similar indications;
- difficulties in retaining or recruiting clinical investigators and/or patients in our ongoing or future clinical trials;
- difficulties retaining patients who have enrolled in a clinical trial but may be prone to withdraw due to rigors of the clinical trial, lack of efficacy, side effects, screening and monitoring measures, personal issues or loss of interest;
- severe or unexpected drug-related side effects experienced by patients in a clinical trial, including side effects previously identified in our previous clinical trials for beloranib;
- the FDA, the EMA, or the applicable regulatory authorities in Australia and New Zealand may disagree with our clinical trial designs, our interpretation of data from clinical trials, or may change the requirements for approval even after it has reviewed and commented on the design for our clinical trials; and
- reports from nonclinical or clinical testing of other therapies that raise safety or efficacy concerns.

Clinical trials may also be delayed or terminated as a result of ambiguous or negative interim results. In addition, a clinical trial may be suspended or terminated by us, the FDA, other regulatory authorities, the IRBs or ethics committees, at the sites where the IRBs or ethics committees are overseeing a clinical trial, a data monitoring committee, or DMC, overseeing the clinical trial at issue or other regulatory authorities due to a number of factors, including, among others:

- failure to conduct the clinical trial in accordance with regulatory requirements or our clinical protocols;
- inspection of the clinical trial operations or trial sites by the FDA, the EMA, or the applicable regulatory authorities in Australia and New Zealand that reveals deficiencies or violations that require us to undertake corrective action, including the imposition of a partial clinical hold or a full clinical hold;

- unforeseen safety issues, including any that could be identified in our nonclinical studies, adverse side effects or lack of effectiveness;
- changes in government regulations or administrative actions;
- problems with clinical supply materials; and
- lack of adequate funding to continue the clinical trial.

Changes in regulatory requirements, FDA guidance or guidance from EMA, Australia or New Zealand or unanticipated events during our clinical trials of ZGN-1061 or ZGN-1258, may occur, which may result in changes to clinical trial protocols or additional clinical trial requirements, which could result in increased costs to us and could delay our development timeline.

Changes in regulatory requirements, FDA guidance or guidance from EMA or unanticipated events during our clinical trials may force us to adjust our clinical program. The FDA, the EMA, or the applicable regulatory authorities in Australia and New Zealand may impose additional clinical trial and/or nonclinical study requirements. For instance, the FDA issued draft guidance on developing products for weight management in February 2007 and issued draft guidance on developing products for the treatment of diabetes in February 2008 but these guidance documents may be revised at any time. In December 2008, FDA established guidance on evaluating cardiovascular risk of new therapies for the treatment of type 2 diabetes. Amendments to our clinical trial protocols would require resubmission to the FDA, the EMA, or the applicable regulatory authorities in Australia and New Zealand as well as IRBs and ethics committees for review and approval, which may adversely impact the cost, timing or successful completion of a clinical trial. If we experience delays completing, or if we terminate, any of our clinical trials, or if we are required to conduct additional clinical trials and/or nonclinical studies, the commercial prospects for ZGN-1061 or ZGN-1258 may be harmed and our ability to generate product revenue will be delayed.

We rely, and expect that we will continue to rely, on third parties to conduct any future clinical trials for ZGN-1061 and ZGN-1258. If these third parties do not successfully carry out their contractual duties or meet expected deadlines, we may not be able to develop and obtain regulatory approval for or commercialize ZGN-1061 or ZGN-1258, and our business could be substantially harmed.

We enter into agreements with third-party CROs to provide monitors for and to manage data for our ongoing clinical trials. We rely heavily on these parties for execution of clinical trials for ZGN-1061 and will continue to rely on these parties for clinical trials for ZGN-1258, but we only control certain aspects of their activities. As a result, we have less direct control over the conduct, timing and completion of these clinical trials and the management of data developed through the clinical trials than would be the case if we were relying entirely upon our own staff. Communicating with outside parties can also be challenging, potentially leading to mistakes as well as difficulties in coordinating activities. Outside parties may:

- have staffing difficulties;
- fail to comply with contractual obligations;
- experience regulatory compliance issues;
- undergo changes in priorities or become financially distressed; or
- form relationships with other entities, some of which may be our competitors.

These factors may materially adversely affect the willingness or ability of third parties to conduct our clinical trials and may subject us to unexpected cost increases that are beyond our control. Nevertheless, we are responsible for ensuring that each of our clinical trials is conducted in accordance with the applicable protocol, legal and regulatory requirements and scientific standards, and our reliance on CROs does not relieve us of our regulatory responsibilities. We and our CROs are required to comply with requirements for Good Clinical Practice, or GCPs, which are legal requirements enforced by the FDA, the Competent Authorities of the Member States of the European Economic Area and comparable foreign regulatory authorities for any products in clinical development. The FDA enforces these GCP regulations through periodic inspections of clinical trial sponsors, principal investigators and clinical trial sites, IRBs, and other vendors that may be involved in the clinical development of new products. If we or our investigators or CROs fail to comply with applicable GCPs, the clinical data generated in our clinical trials may be deemed unreliable and the FDA or comparable foreign regulatory authorities may require us to perform additional clinical trials before approving our marketing applications. We cannot assure you that, upon inspection, the FDA will determine that any of our clinical trials comply with GCPs. In addition, our clinical trials must be conducted with products produced under current Good Manufacturing Practices, or cGMPs' regulations, to assure the identity, strength, quality, and purity of our drug product candidates being used in the clinical trials, as well as the to-be-marketed formulation and product. Our failure or the failure of our CROs and/or contract manufacturing organizations, or CMOs, to comply with these regulations may require us to repeat clinical trials, which would delay the regulatory approval process and could also subject us to enforcement action, up to and including, civil and criminal penalties.

Although we design our clinical trials, investigators and CROs conduct all of the clinical trials. As a result, many important aspects of our drug development programs are outside of our direct control. In addition, the investigators or CROs may not perform all of their obligations under arrangements with us or in compliance with regulatory requirements, but we remain responsible and are subject to enforcement action that may include civil penalties up to and including criminal prosecution for any violations of FDA laws and regulations during the conduct of our clinical trials. If the investigators or CROs do not perform clinical trials in a satisfactory manner, breach their obligations to us, or fail to comply with regulatory requirements, the development and commercialization of ZGN-1061 or ZGN-1258 may be delayed or our development program materially and irreversibly harmed. We cannot control the amount and timing of resources these investigators or CROs devote to our program, ZGN-1061, or will devote to ZGN-1258. If we are unable to rely on clinical data collected by our investigators or CROs, we could be required to repeat, extend the duration of, or increase the size of our clinical trials and this could significantly delay commercialization and require significantly greater expenditures.

If any of our relationships with these third-party investigators or CROs terminate, we may not be able to enter into arrangements with alternative investigators or CROs in a timely manner, or at all. If investigators or CROs do not successfully carry out their contractual duties or obligations or meet expected deadlines, if they need to be replaced or if the quality or accuracy of the clinical data they obtain is compromised due to the failure to adhere to our clinical protocols, regulatory requirements or for other reasons, any such clinical trials may be extended, delayed or terminated, and we may not be able to obtain regulatory approval for or successfully commercialize ZGN-1061 or ZGN-1258. As a result, our financial results and the commercial prospects for ZGN-1061 or ZGN-1258 in the subject indications would be harmed, our costs could increase and our ability to generate revenue could be delayed.

The number of patients suffering from PWS is small and has not been established with precision. If the actual number of patients with this condition is smaller than we estimate or if any approval that we obtain is based on a narrower definition of this patient population, our revenue and ability to achieve profitability for ZGN-1258 will be adversely affected, possibly materially.

There is no current comprehensive patient registry or other method of establishing with precision the actual number of patients with PWS in any geography. Published population studies estimate that the prevalence of PWS in the United States and in the European Union, or EU, ranges from 1 in 8,000 to 1 in 50,000. If the actual number of patients with PWS is lower than we believe or if any approval that we obtain is based on a narrower definition of these patient populations, then the potential market for ZGN-1258 for these indications will be smaller than we anticipate. If our IND goes into effect, our inability to enroll a sufficient number of patients for our clinical trials could result in significant delays or may require us to abandon one or more clinical trials altogether. Enrollment delays in our clinical trials may result in increased development costs for ZGN-1258, delay or halt the development of and approval processes for our product candidates and jeopardize our ability to achieve our clinical development timeline and goals, including the dates by which we will commence, complete and receive results from clinical trials. Enrollment delays in our clinical trials may also jeopardize our ability to commence sales of and generate revenues from our product candidates, which could cause the value of our company to decline and limit our ability to obtain additional financing, if needed.

We rely completely on third-party suppliers to manufacture our clinical drug supplies for ZGN-1061 and ZGN-1258, and to the extent we elect to commercialize ZGN-1061 or ZGN-1258 on our own, we intend to rely on third parties to produce commercial supplies of such products, and nonclinical, clinical and commercial supplies of any future product candidate.

We do not currently have, nor do we currently plan to acquire, the infrastructure or capability to internally manufacture our clinical drug supply of ZGN-1061, ZGN-1258, or any future product candidates, for use in the conduct of our nonclinical studies and clinical trials, and we lack the internal resources and the capability to manufacture any product candidates on a clinical or commercial scale. The CMOs used to manufacture the active drug substance and final drug product must be approved by our quality assurance unit and inspected by the FDA and other comparable foreign regulatory agencies.

We rely on our CMOs to comply with cGMPs for manufacture of raw materials, active drug substance and finished drug products. If our CMOs cannot successfully manufacture material that conforms to our specifications and the regulatory requirements of the FDA or applicable foreign regulatory agencies, the CMOs will not be able to secure and/or maintain regulatory approval for their manufacturing facilities or regulatory agencies may find deficiencies with their facilities and refuse to approve our marketing applications. While we manage our quality expectations through an audit program for our vendors and suppliers, we have no direct control over our CMOs' ability to maintain adequate quality control, quality assurance and qualified personnel. Furthermore, our CMOs are engaged with third party vendors to supply and/or manufacture starting materials or components for them, which exposes our CMOs to regulatory risks for the production of such materials and components. As a result, failure to satisfy the regulatory requirements for the production of those materials and components may affect supply. If the FDA or an applicable foreign regulatory agency finds deficiencies with or does not approve these facilities for the manufacture of our product candidates or if it withdraws its approval in the future, we may need to find alternative manufacturing facilities, which would adversely impact our ability to develop, obtain regulatory approval for or market our product candidates.

We rely completely on third-party suppliers to manufacture our nonclinical and clinical drug supplies for ZGN-1061 and our nonclinical drug supplies and future clinical drug supplies for ZGN-1258. Currently each batch of ZGN-1061 and ZGN-1258 is individually contracted under a work order, which is governed by a quality and service agreement. There is sufficient supply of ZGN-1061 and ZGN-1258 drug substance to support ongoing Phase 2 clinical trial of ZGN-1061 and upcoming clinical trials of ZGN-1258 through Phase 2. At later stages of development, the drug substance manufacturing process for both programs may be further optimized to support advanced clinical development and commercialization. A new formulation with longer shelf life has been developed and manufactured to support Phase 2 clinical development for ZGN-1061.

Even if we receive marketing approval for a product candidate in the United States, we may never receive regulatory approval to market such product candidate outside of the United States.

We may pursue marketing approval for certain of our product candidates in the United States, the EU and in other countries worldwide. In order to market any product outside of the United States, we must establish and comply with the numerous and varying safety, efficacy and other regulatory requirements of other countries, including potential additional clinical trials and/or nonclinical studies. Approval procedures vary among countries and can involve additional product candidate testing and additional administrative review periods. The time required to obtain approvals in other countries might differ from that required to obtain FDA approval. The marketing approval processes in other countries may implicate all of the risks detailed above regarding FDA approval in the United States as well as other risks. In particular, in many countries outside of the United States, products must receive pricing and reimbursement approval before the product can be commercialized. Obtaining this approval can result in substantial delays in bringing products to market in such countries. In addition, on March 20, 2017, the United Kingdom government started the process to leave the EU by April 2019, or Brexit. The effects of Brexit will depend on any agreements the United Kingdom makes to retain access to EU markets either during a transitional period or more permanently. Brexit could lead to legal uncertainty and potentially divergent national laws and regulation as the United Kingdom determines which EU laws to replace or replicate. Marketing approval in one country does not necessarily ensure marketing approval in another, but a failure or delay in obtaining marketing approval in one country may have a negative effect on the regulatory process or commercial activities in others. Failure to obtain marketing approval in other countries or any delay or other setback in obtaining such approval would impair our ability to market a product candidate in such foreign markets. Any such impairment would reduce the size of our potential market, which could have a material adverse impact on our business, results of operations and prospects.

Even if we receive marketing approval for a product candidate, it may not achieve broad market acceptance, which would limit the revenue that we generate from its sales.

The commercial success of a product candidate, if developed and approved for marketing by the FDA or EMA or other applicable regulatory authorities, will depend upon the awareness and acceptance of our product candidates among the medical community, including physicians, patients, advocacy groups and healthcare payors. Market acceptance of a product candidate, if approved, will depend on a number of factors, including, among others:

- the relative convenience and ease of subcutaneous injections as the necessary method of administration of our product candidates;
- the prevalence and severity of any adverse side effects associated with a product candidate;
- limitations or warnings contained in the labeling approved for a product candidate by the FDA, EMA, or other regulatory authorities, such as a “black box” warning;
- availability of alternative treatments, including a number of competitive type 2 diabetes therapies already approved or expected to be commercially launched in the near future;
- the willingness of the target patient population to try new therapies and of physicians to prescribe these therapies;
- the strength of marketing and distribution support and timing of market introduction of competitive products;
- publicity concerning our products or competing products and treatments;
- pricing;
- the effectiveness of our sales and marketing strategies;
- our ability to increase awareness of a product candidate through marketing efforts;
- our ability to obtain sufficient third-party coverage or reimbursement;

- the willingness of patients to pay out-of-pocket in the absence of third-party coverage; and
- the likelihood that the FDA may require development of a REMS, as a condition of approval or post-approval or may not agree with our proposed REMS or may impose additional requirements that limit the promotion, advertising, distribution or sales of our product candidates.

If a product candidate is approved but does not achieve an adequate level of acceptance by patients, advocacy groups, physicians and payors, we may not generate sufficient revenue from a product candidate to become or remain profitable. Before granting reimbursement approval, healthcare payors may require us to demonstrate that, in addition to treating type 2 diabetes in patients, a product candidate also provides incremental health benefits to patients. Our efforts to educate the medical community and third-party payors about the benefits of a product candidate may require significant resources and may never be successful.

If we are unable to establish sales and marketing capabilities or enter into agreements with third parties to market and sell a product candidate, we may not be able to generate any revenue.

We do not currently have an established infrastructure for the sales, marketing and distribution of pharmaceutical products. In order to market a product candidate, if approved by the FDA or any other regulatory body, we must build our sales, marketing, managerial and other non-technical capabilities or make arrangements with third parties to perform these services. If we are unable to establish adequate sales, marketing and distribution capabilities, whether independently or with third parties, or if we are unable to do so on commercially reasonable terms, our business, results of operations, financial condition and prospects will be materially adversely affected.

Even if we receive marketing approval for a product candidate, we may still face future development and regulatory difficulties.

Even if we receive marketing approval for a product candidate, regulatory authorities may still impose significant restrictions on our product candidates' indicated uses or marketing or impose ongoing requirements for potentially costly post-approval studies. A product candidate will also be subject to ongoing FDA and EMA requirements governing the labeling, packaging, storage and promotion of the product and recordkeeping and submission of safety and other post-market information. The FDA has significant post-market authority, including, for example, the authority to require labeling changes based on new safety information and to require post-market studies or clinical trials to evaluate serious safety risks related to the use of a drug. The FDA also has the authority to require, as part of an NDA or post-approval, the submission of a REMS. Any REMS required by the FDA may lead to increased costs to assure compliance with new post-approval regulatory requirements and potential requirements or restrictions on the sale of approved products, all of which could lead to lower sales volume and revenue. Additionally, the FDA may require a PMS and/or PMRs, that could represent and result in additional restrictions and/or limitations for the product.

Manufacturers of drug products and their facilities are subject to continual review and periodic inspections by the FDA and other regulatory authorities for compliance with cGMPs and other regulations. If we or a regulatory agency discover problems with a product candidate, such as adverse events of unanticipated severity or frequency, or problems with the facility where a product candidate is manufactured, a regulatory agency may impose restrictions on a product candidate, the manufacturer or us, including requiring withdrawal of a product candidate from the market or suspension of manufacturing. If we or the manufacturing facilities for a product candidate fail to comply with applicable regulatory requirements, a regulatory agency may, among other things:

- issue warning letters or untitled letters;
- seek an injunction or impose civil or criminal penalties or monetary fines;
- suspend or withdraw marketing approval;
- suspend any ongoing clinical trials;
- refuse to approve pending applications or supplements to applications submitted by us;
- suspend or impose restrictions on operations, including costly new manufacturing requirements; or
- seize or detain products, refuse to permit the import or export of products, or request that we initiate a product recall.

Competing technologies could emerge, including devices and surgical procedures, adversely affecting our opportunity to generate revenue from the sale of ZGN-1061 or ZGN-1258.

The biotechnology and pharmaceutical industries are intensely competitive and subject to rapid and significant technological change. We have competitors in a number of jurisdictions, many of which have substantially greater name recognition, commercial infrastructures and financial, technical and personnel resources than we have. Established competitors may invest heavily to quickly discover and develop novel compounds that could make ZGN-1061 or ZGN-1258 obsolete or uneconomical. Any new product that

competes with an approved product may need to demonstrate compelling advantages in efficacy, convenience, tolerability and safety to be commercially successful. Other competitive factors, including generic competition, could force us to lower prices or could result in reduced sales. In addition, new products developed by others could emerge as competitors to ZGN-1061 or ZGN-1258. If we are not able to compete effectively against our current and future competitors, our business will not grow and our financial condition and operations will suffer.

Our future growth depends, in part, on our ability to penetrate foreign markets, where we would be subject to additional regulatory burdens and other risks and uncertainties.

Our future profitability will depend, in part, on our ability to commercialize a product candidate in foreign markets for which we may rely on collaborations with third parties. If we commercialize a product candidate in foreign markets, we would be subject to additional risks and uncertainties, including:

- our customers' ability to obtain reimbursement for a product candidate in foreign markets;
- our inability to directly control commercial activities because we are relying on third parties;
- the burden of complying with complex and changing foreign regulatory, tax, accounting and legal requirements;
- different medical practices and customs in foreign countries affecting acceptance in the marketplace;
- import or export licensing requirements;
- longer accounts receivable collection times;
- longer lead times for shipping;
- language barriers for technical training;
- reduced protection of intellectual property rights in some foreign countries;
- foreign currency exchange rate fluctuations; and
- the interpretation of contractual provisions governed by foreign laws in the event of a contract dispute.

Foreign sales of a product candidate could also be adversely affected by the imposition of governmental controls, political and economic instability, trade restrictions and changes in tariffs.

We are subject to healthcare laws and regulations, and health information privacy and security laws, which could expose us to criminal sanctions, civil penalties, contractual damages, reputational harm and diminished profits and future earnings.

Healthcare providers, physicians and others will play a primary role in the recommendation and prescription of ZGN-1061 or ZGN-1258, if approved. Our future arrangements with third-party payors will expose us to broadly applicable fraud and abuse and other healthcare laws and regulations that may constrain the business or financial arrangements and relationships through which we market, sell and distribute ZGN-1061 or ZGN-1258, if we obtain marketing approval. In addition, we may be subject to patient privacy regulation by both the federal government and the states in which we conduct our business. Restrictions under applicable federal and state healthcare laws and regulations include the following:

- The federal Anti-Kickback Statute prohibits, among other things, persons from knowingly and willfully soliciting, offering, receiving or paying remuneration, 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 healthcare programs such as Medicare and Medicaid.
- The federal false claims laws impose criminal and civil penalties, including those from civil whistleblower or qui tam actions pursuant to the federal False Claims Act, against individuals or entities for knowingly presenting, or causing to be presented, to the federal government, 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.
- The federal Health Insurance Portability and Accountability Act of 1996, or HIPPA, as amended by the Health Information Technology for Economic and Clinical Health Act, imposes criminal and civil liability for executing a scheme to defraud any healthcare benefit program and also imposes obligations, including mandatory contractual terms, with respect to safeguarding the privacy, security and transmission of individually identifiable health information.

- The federal false statements statute prohibits knowingly and willfully falsifying, concealing or covering up a material fact or making any materially false statement in connection with the delivery of or payment for healthcare benefits, items or services.
- The federal transparency requirements, sometimes referred to as the "Sunshine Act," under the Patient Protection and Affordable Care Act, require manufacturers of drugs, devices, biologics, and medical supplies to report to the Department of Health and Human Services information related to physician payments and other transfers of value and physician ownership and investment interests.
- HIPAA, as amended by the Health Information Technology for Economic and Clinical Health Act of 2009, and their respective implementing regulations, which impose requirements on certain covered healthcare providers, health plans, and healthcare clearinghouses as well as their respective business associates that perform services for them that involve the use, or disclosure of, individually identifiable health information, relating to the privacy, security and transmission of individually identifiable health information.
- Federal consumer protection and unfair competition laws, which broadly regulate marketplace activities and activities that potentially harm consumers.
- Analogous state laws and regulations, such as state anti-kickback and false claims laws and transparency laws, may apply to sales or marketing arrangements and claims involving healthcare items or services reimbursed by non-governmental third-party payors, including private insurers, and some state laws require pharmaceutical companies to comply with the pharmaceutical industry's voluntary compliance guidelines and the relevant compliance guidance promulgated by the federal government in addition to requiring drug manufacturers to report information related to payments to physicians and other healthcare providers or marketing expenditures and drug pricing.

Ensuring that our future business arrangements with third parties comply with applicable healthcare laws and regulations could be costly. It is possible that governmental authorities will conclude that our business practices do not comply with current or future statutes, regulations or case law involving applicable fraud and abuse or other healthcare laws and regulations. If our operations, including anticipated activities to be conducted by our sales team, were 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, damages, fines and exclusion from government funded healthcare programs, such as Medicare and Medicaid, any of which could substantially disrupt our operations. If any of the physicians or other providers or entities with whom we expect to do business is found not to be in compliance with applicable laws, they may be subject to criminal, civil or administrative sanctions, including exclusions from government funded healthcare programs.

In addition, regulators globally are also imposing greater monetary fines for privacy violations. For example, in 2016, the EU adopted a new regulation governing data practices and privacy called the General Data Protection Regulation, or GDPR, which became effective on May 25, 2018. The GDPR applies to any company established in the EU as well as to those outside the EU if they collect and use personal data in connection with the offering of goods or services to individuals in the EU or the monitoring of their behavior. The GDPR enhances data protection obligations for processors and controllers of personal data, including, for example, expanded disclosures about how personal information is to be used, limitations on retention of information, mandatory data breach notification requirements and onerous new obligations on service providers. Non-compliance with the GDPR may result in monetary penalties of up to €20 million or 4% of worldwide revenue, whichever is higher. The GDPR and other changes in laws or regulations associated with the enhanced protection of certain types of personal data, such as healthcare data or other sensitive information, could greatly increase our cost of providing our products and services or even prevent us from offering certain services in jurisdictions that we operate.

The FDA and other regulatory agencies actively enforce the laws and regulations prohibiting the promotion of off-label uses. If we are found to have improperly promoted off-label uses, we may become subject to significant liability.

The FDA and other regulatory agencies strictly regulate the promotional claims that may be made about prescription products, such as ZGN-1061 or ZGN-1258, if approved. If we receive marketing approval for ZGN-1061 or ZGN-1258, physicians may prescribe our product candidates to their patients in a manner that is inconsistent with the approved label. If we are found to have promoted such off-label uses, we may become subject to significant liability. The federal government has levied large civil and criminal fines against companies for alleged improper promotion and has enjoined several companies from engaging in off-label promotion and required that they enter into corporate integrity agreements with the Office of Inspector General of the Department of Health and Human Services, or OIG. The FDA has also requested that companies enter into consent decrees or permanent injunctions under which specified promotional conduct is changed or curtailed. If we cannot successfully manage the promotion of ZGN-1061 or ZGN-1258, if approved, we could become subject to significant liability, which would materially adversely affect our business and financial condition.

Even if approved, reimbursement policies could limit our ability to sell product candidates that we elect to sell on our own.

If approved by regulatory authorities, market acceptance and sales of product candidates that we elect to sell on our own will depend on reimbursement policies and may be affected by healthcare reform measures. Government authorities and third-party payors, such as private health insurers and health maintenance organizations, decide which medications they will pay for and establish reimbursement levels for those medications. Cost containment is a primary concern in the U.S. healthcare industry and elsewhere. Government authorities and these third-party payors have attempted to control costs by limiting coverage and the amount of reimbursement for particular medications. We cannot be sure that reimbursement will be available for product candidates that we elect to sell on our own and, if reimbursement is available, the level of such reimbursement. Reimbursement may impact the demand for, or the price of, product candidates that we elect to sell on our own. If reimbursement is not available or is available only at limited levels, we may not be able to successfully commercialize product candidates that we elect to sell on our own.

In some foreign countries, particularly in Canada and European countries, the pricing of prescription pharmaceuticals is subject to strict governmental control. In these countries, pricing negotiations with governmental authorities can take six to 12 months or longer after the receipt of regulatory approval and product launch. To obtain favorable reimbursement for the indications sought or pricing approval in some countries, we may be required to conduct a clinical trial that compares the cost-effectiveness of product candidates that we elect to sell on our own with other available therapies. If reimbursement for product candidates that we elect to sell on our own is unavailable in any country in which we seek reimbursement, if it is limited in scope or amount, if it is conditioned upon our completion of additional clinical trials, or if pricing is set at unsatisfactory levels, our operating results could be materially adversely affected.

Recently enacted and future legislation may increase the difficulty and cost for us to obtain regulatory approval of and commercialize our drug candidates and affect the prices we may obtain.

The Affordable Care Act, or the ACA, has a significant impact on the healthcare industry. The ACA is a sweeping law intended to broaden access to health insurance, reduce or constrain the growth of healthcare spending, enhance remedies against fraud and abuse, add new transparency requirements for the healthcare and health insurance industries, impose new taxes and fees on the health industry and impose additional health policy reforms. The current presidential administration has indicated that enacting changes to the ACA is a legislative priority and has alternatively discussed repealing and replacing the ACA. While Congress has not passed repeal legislation to date, the 2017 Tax Reform Act includes a provision repealing the individual mandate, effective January 1, 2019. Further, on January 20, 2017, President Trump signed an Executive Order directing federal agencies with authorities and responsibilities under the ACA to waive, defer, grant exemptions from, or delay the implementation of any provision of the ACA that would impose a fiscal burden on states or a cost, fee, tax, penalty or regulatory burden on individuals, healthcare providers, health insurers, or manufacturers of pharmaceuticals or medical devices. On October 13, 2017, President Trump signed an Executive Order terminating the cost-sharing subsidies that reimburse insurers under the ACA. In addition, the Centers for Medicare and Medicaid Services, or CMS, has recently proposed regulations that would give states greater flexibility in setting benchmarks for insurers in the individual and small group marketplaces, which may have the effect of relaxing the essential health benefits required under the ACA for plans sold through these marketplaces. Congress will likely consider other legislation to replace elements of the ACA. We do not know at this time what implications these changes and other, proposed changes, if enacted, would have on the ACA's current requirements or on our future business. Changes to the ACA or other existing health care regulations could significantly impact our business and the pharmaceutical industry.

We may seek to obtain orphan drug designation for certain of our product candidates, and we may be unsuccessful.

As part of our business strategy, we may seek to obtain orphan drug designation for certain of our product candidates in the United States and the EU. We may be unsuccessful in obtaining orphan drug designation, and if we do, we may not receive orphan drug exclusivity for these products. In the United States, the company that first obtains FDA approval for a designated orphan drug for the specified rare disease or condition receives orphan drug marketing exclusivity for that drug for a period of seven years. This orphan drug exclusivity prevents the FDA from approving another application, including a full NDA to market the same drug for the same orphan indication, except in very limited circumstances, including when the FDA concludes that the later drug is safer, more effective or makes a major contribution to patient care. For purposes of small molecule drugs, the FDA defines "same drug" as a drug that contains the same active chemical entity and is intended for the same use as the drug in question. A designated orphan drug may not receive orphan drug exclusivity if it is approved for a use that is broader than the indication for which it received orphan designation. Orphan drug exclusive marketing rights in the United States may be lost if the FDA later determines that the request for designation was materially defective or if the manufacturer is unable to assure sufficient quantity of the drug to meet the needs of patients with the rare disease or condition.

In the EU, orphan drug designation also entitles a party to financial incentives such as reduction of fees or fee waivers. In addition, ten years of market exclusivity is granted following drug product approval, meaning that another application for marketing authorization of a later similar medicinal product for the same therapeutic indication will generally not be approved in the EU. This period may be reduced to six years if the orphan drug designation criteria are no longer met, including where it is shown that the product is sufficiently profitable to not justify maintenance of market exclusivity.

Our development programs for our product candidates, which are primarily related to ZGN-1061 and ZGN-1258, may require substantial financial resources and may ultimately be unsuccessful.

Our lead product candidate ZGN-1061 has completed Phase 1 clinical development and is currently in Phase 2 clinical development, and there are a number of FDA and certain European regulatory requirements that we must satisfy before we can commence late-stage clinical trials of ZGN-1061. Satisfaction of these requirements will entail substantial time, effort and financial resources. We may never satisfy these requirements. ZGN-1258 is still in nonclinical development. We believe that our cash, cash equivalents and marketable securities, including the cash from our recent public offering of common stock in July 2018, will be sufficient to fund operations for a period of at least one year from the issuance date of this Quarterly Report, but we will need to raise more funds to continue development and commercialization of ZGN-1061, ZGN-1258 and our other product candidates, which may not be easily available. Furthermore, any time, effort and financial resources we expend on our other early-stage development programs may adversely affect our ability to continue development and commercialization of ZGN-1061 and ZGN-1258, and we may never commence clinical trials of such development programs despite expending significant resources in pursuit of their development. If we do commence clinical trials of our other potential product candidates, such product candidates may never be approved by the FDA or other regulatory authorities.

Risks Related to Our Intellectual Property Rights

If we are unable to adequately protect our proprietary technology or maintain issued patents which are sufficient to protect ZGN-1061, ZGN-1258, or future product candidates, others could compete against us more directly, which would have a material adverse impact on our business, results of operations, financial condition and prospects.

Our commercial success will depend in part on our success in obtaining and maintaining issued patents and other intellectual property rights in the United States and elsewhere and protecting our proprietary technology. If we do not adequately protect our intellectual property and proprietary technology, competitors may be able to use our technologies and erode or negate any competitive advantage we may have, which could harm our business and ability to achieve profitability.

As of October 31, 2018, we own two issued U.S patents, one pending U.S. patent application, with a pending foreign counterpart patent application, one pending Patent Cooperation Treaty, or PCT, patent application, as well as three pending U.S. provisional patent applications that relate to ZGN-1061.

As of October 31, 2018, we own one issued U.S. patent, two pending U.S. patent applications, and related worldwide patent applications, that relate to ZGN-1258.

As of October 31, 2018, we own 19 issued U.S. patents, and 9 pending U.S. patent applications with pending foreign counterpart applications, as well as one pending PCT patent application and three pending U.S. provisional patent applications, all of which relate to our internal efforts to discover novel MetAP2 inhibitors.

We cannot provide any assurances that any of our pending patent applications that mature into issued patents will include claims with a scope sufficient to protect ZGN-1061, ZGN-1258 and our other product candidates. Other parties have developed technologies that may be related or competitive to our approach and may have filed or may file patent applications and may have received or may receive patents that may overlap or conflict with our patent applications, either by claiming the same methods or formulations or by claiming subject matter that could dominate our patent position. The patent positions of biotechnology and pharmaceutical companies, including our patent position, involve complex legal and factual questions, and, therefore, the issuance, scope, validity and enforceability of any patent claims that we may obtain cannot be predicted with certainty. Patents, if issued, may be challenged, deemed unenforceable, invalidated, or circumvented. U.S. patents and patent applications may also be subject to interference proceedings, *ex parte* reexamination, or *inter partes* review proceedings, supplemental examination and challenges in district court. Patents may be subjected to opposition, post-grant review, or comparable proceedings lodged in various foreign, both national and regional, patent offices. These proceedings could result in either loss of the patent or denial of the patent application or loss or reduction in the scope of one or more of the claims of the patent or patent application. In addition, such proceedings may be costly. Thus, any patents that we may own or exclusively license may not provide any protection against competitors. Furthermore, an adverse decision in an interference proceeding can result in a third party receiving the patent right sought by us, which in turn could affect our ability to develop, market or otherwise commercialize ZGN-1061, ZGN-1258 and our other product candidates.

Furthermore, though an issued patent is presumed valid and enforceable, its issuance is not conclusive as to its validity or its enforceability and it may not provide us with adequate proprietary protection or competitive advantages against competitors with similar products. Competitors may also be able to design around our patents. Other parties may develop and obtain patent protection for more effective technologies, designs or methods. The laws of some foreign countries do not protect our proprietary rights to the same extent as the laws of the United States, and we may encounter significant problems in protecting our proprietary rights in these countries. If these developments were to occur, they could have a material adverse effect on our potential future sales.

Our ability to enforce our patent rights depends on our ability to detect infringement. It is difficult to detect infringers who do not advertise the components that are used in their products. Moreover, it may be difficult or impossible to obtain evidence of infringement in a competitor's or potential competitor's product. Any litigation to enforce or defend our patent rights, even if we were to prevail, could be costly and time-consuming and would divert the attention of our management and key personnel from our business operations. We may not prevail in any lawsuits that we initiate and the damages or other remedies awarded if we were to prevail may not be commercially meaningful.

In addition, proceedings to enforce or defend our patents could put our patents at risk of being invalidated, held unenforceable, or interpreted narrowly. Such proceedings could also provoke third parties to assert claims against us, including that some or all of the claims in one or more of our patents are invalid or otherwise unenforceable. If any of our patents covering ZGN-1061 or ZGN-1258 are invalidated or found unenforceable, our financial position and results of operations would be materially and adversely impacted. In addition, if a court found that valid, enforceable patents held by third parties covered ZGN-1061 or ZGN-1258, our financial position and results of operations would also be materially and adversely impacted.

The degree of future protection for our proprietary rights is uncertain, and we cannot ensure that:

- any of our patents, or any of our pending patent applications, if issued, will include claims having a scope sufficient to protect ZGN-1061, ZGN-1258 or any other products or product candidates;
- any of our pending patent applications will issue as patents;
- we will be able to successfully develop and commercialize ZGN-1061 or ZGN-1258, if approved, before our relevant patents expire;
- we were the first to make the inventions covered by each of our patents and pending patent applications;
- we were the first to file patent applications for these inventions;
- others will not develop similar or alternative technologies that do not infringe our patents;
- any of our patents will be found to ultimately be valid and enforceable;
- any patents issued to us will provide a basis for an exclusive market for our commercially viable products, will provide us with any competitive advantages or will not be challenged by third parties;
- we will develop additional proprietary technologies or product candidates that are separately patentable; or
- that our commercial activities or products will not infringe upon the patents of others.

We rely upon unpatented trade secrets, unpatented know-how and continuing technological innovation to develop and maintain our competitive position, which we seek to protect, in part, by confidentiality agreements with our employees and our collaborators and consultants. We also have agreements with our employees and selected consultants that obligate them to assign their inventions to us and have non-compete agreements with some, but not all, of our consultants. It is possible that technology relevant to our business will be independently developed by a person that is not a party to such an agreement. Furthermore, if the employees and consultants who are parties to these agreements breach or violate the terms of these agreements, we may not have adequate remedies for any such breach or violation, and we could lose our trade secrets through such breaches or violations. Further, our trade secrets could otherwise become known or be independently discovered by our competitors.

We may infringe the intellectual property rights of others, which may prevent or delay our product development efforts and stop us from commercializing or increase the costs of commercializing ZGN-1061 or ZGN-1258, if approved.

Our success will depend in part on our ability to operate without infringing the intellectual property and proprietary rights of third parties. We cannot assure you that our business, products and methods do not or will not infringe the patents or other intellectual property rights of third parties.

The pharmaceutical industry is characterized by extensive litigation regarding patents and other intellectual property rights. Other parties may allege that ZGN-1061, ZGN-1258, or the use of our technologies infringes patent claims or other intellectual property rights held by them or that we are employing their proprietary technology without authorization. Patent and other types of intellectual property litigation can involve complex factual and legal questions, and their outcome is uncertain. Any claim relating to intellectual property infringement that is successfully asserted against us may require us to pay substantial damages, including treble damages and attorneys' fees if we are found to be willfully infringing another party's patents, for past use of the asserted intellectual property and royalties and other consideration going forward if we are forced to take a license. In addition, if any such claim were successfully asserted against us and we could not obtain such a license, we may be forced to stop or delay developing, manufacturing, selling or otherwise commercializing ZGN-1061 or ZGN-1258.

Even if we are successful in these proceedings, we may incur substantial costs and divert management time and attention in pursuing these proceedings, which could have a material adverse effect on us. If we are unable to avoid infringing the patent rights of others, we may be required to seek a license, defend an infringement action or challenge the validity of the patents in court, or redesign our products. Patent litigation is costly and time consuming. We may not have sufficient resources to bring these actions to a successful conclusion. In addition, intellectual property litigation or claims could force us to do one or more of the following:

- cease developing, selling or otherwise commercializing ZGN-1061;
- cease preparations or developing ZGN-1258;
- pay substantial damages for past use of the asserted intellectual property;
- obtain a license from the holder of the asserted intellectual property, which license may not be available on reasonable terms, if at all; and
- in the case of trademark claims, redesign or rename the trademarks or trade names of our product candidates to avoid infringing the intellectual property rights of third parties, which may not be possible and, even if possible, could be costly and time-consuming.

Any of these risks coming to fruition could have a material adverse effect on our business, results of operations, financial condition and prospects.

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

We may also be subject to claims that former employees, collaborators or other third parties have an ownership interest in our patents or other intellectual property. Litigation may be necessary to defend against these and other claims challenging inventorship or ownership. If we fail in defending any such claims, in addition to paying monetary damages, we may lose valuable intellectual property rights, such as exclusive ownership of, or right to use, valuable intellectual property. Such an outcome could have a material adverse effect on our business. Even if we are successful in defending against such claims, litigation could result in substantial costs and be a distraction to management and other employees.

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

The U.S. Patent and Trademark Office, or U.S. PTO, and various foreign governmental patent agencies require compliance with a number of procedural, documentary, fee payment and other provisions during the patent process. There are situations in which noncompliance can result in abandonment or lapse of a patent or patent application, resulting in partial or complete loss of patent rights in the relevant jurisdiction. In such an event, competitors might be able to enter the market earlier than would otherwise have been the case.

We may be involved in lawsuits to protect or enforce our patents or the patents of our licensors, which could be expensive, time-consuming and unsuccessful.

Competitors may infringe our patents or the patents of our licensors. To counter infringement or unauthorized use, we may be required to file infringement claims, which can be expensive and time-consuming. In addition, in an infringement proceeding, a court may decide that a patent of ours or our licensors is not valid, is unenforceable and/or is not infringed, or may refuse to stop the other party from using the technology at issue on the grounds that our patents do not cover the technology in question. An adverse result in any litigation or defense proceedings could put one or more of our patents at risk of being invalidated or interpreted narrowly and could put our patent applications at risk of not issuing.

Interference proceedings provoked by third parties or brought by us may be necessary to determine the priority of inventions with respect to our patents or patent applications or those of our licensors. An unfavorable outcome could require us to cease using the related technology or to attempt to license rights to it from the prevailing party. Our business could be harmed if the prevailing party does not offer us a license on commercially reasonable terms. Our defense of litigation or interference proceedings may fail and, even if successful, may result in substantial costs and distract our management and other employees. We may not be able to prevent, alone or with our licensors, misappropriation of our intellectual property rights, particularly in countries where the laws may not protect those rights as fully as in the United States.

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 a material adverse effect on the price of our common stock.

Issued patents covering our product candidates could be found invalid or unenforceable if challenged in court.

If we or one of our licensing partners initiated legal proceedings against a third party to enforce a patent covering our product candidate, the defendant could counterclaim that the patent covering our product candidate is invalid and/or unenforceable. In patent litigation in the United States, defendant counterclaims alleging invalidity and/or unenforceability are commonplace. Grounds for a validity challenge include alleged failures to meet any of several statutory requirements, including lack of novelty, obviousness or non-enablement. Grounds for unenforceability assertions include allegations that someone connected with prosecution of the patent withheld relevant information from the U.S. PTO, or made a misleading statement, during prosecution. Third parties may also raise similar claims before administrative bodies in the United States or abroad, even outside the context of litigation. Such mechanisms include re-examination, post grant review and equivalent proceedings in foreign jurisdictions, e.g., opposition proceedings. Such proceedings could result in revocation or amendment of our patents in such a way that they no longer cover our product candidates or competitive products. The outcome following legal assertions of invalidity and unenforceability is unpredictable. With respect to validity, for example, we cannot be certain that there is no invalidating prior act, 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 our product candidates. Such a loss of patent protection would have a material adverse impact on our business.

We do not seek to protect our intellectual property rights in all jurisdictions throughout the world and we may not be able to adequately enforce our intellectual property rights even in the jurisdictions where we seek protection.

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

Many companies have encountered significant problems in protecting and defending intellectual property rights in foreign jurisdictions. The legal systems of certain countries, particularly certain developing countries, do not favor the enforcement of patents and other intellectual property protection, particularly those relating to biopharmaceuticals, which could make it difficult for us to stop the infringement of our patents or marketing of competing products in violation of our proprietary rights generally. For example, an April 2014 report from the Office of the United States Trade Representative identified a number of countries, including India and China, where challenges to the procurement and enforcement of patent rights have been reported. Several countries, including India and China, have been listed in the report every year since 1989. 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, could put 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.

We are dependent on licensed intellectual property for certain early-stage product candidates. If we were to lose our rights to licensed intellectual property, we may not be able to continue developing or commercializing such product candidates, if approved.

We have an exclusive license with Children's Medical Center Corporation, pursuant to which we exclusively licensed certain patent rights relating to decreasing the growth of fat tissue, on a worldwide basis. We may enter into additional licenses for third-party intellectual property that are necessary or useful to our business. Current or future licensors may also allege that we have breached our license agreement and may accordingly seek to terminate our license with them. In addition, current or future licensors may decide to terminate our license at will. If successful, this could result in our loss of the right to use the licensed intellectual property, which could materially adversely affect our ability to develop and commercialize a product candidate or product, if approved, as well as harm our competitive business position and our business prospects.

We have not yet registered trademarks for a commercial trade name for ZGN-1061 or ZGN-1258 and failure to secure such registrations could adversely affect our business.

We have not yet registered trademarks for a commercial trade name for ZGN-1061 or ZGN-1258. Any future trademark applications may be rejected during trademark registration proceedings. Although we would be given an opportunity to respond to those rejections, we may be unable to overcome such rejections. In addition, in the U.S. PTO and in comparable agencies in many foreign jurisdictions, third parties are given an opportunity to oppose pending trademark applications and to seek to cancel registered trademarks. Opposition or cancellation proceedings may be filed against our trademarks, and our trademarks may not survive such proceedings. Moreover, any name we propose to use with our product candidates in the United States must be approved by the FDA, regardless of whether we have registered it, or applied to register it, as a trademark. The FDA typically conducts a review of proposed product names, including an evaluation of potential for confusion with other product names. If the FDA objects to any of our proposed proprietary product names, we may be required to expend significant additional resources in an effort to identify a suitable substitute name that would qualify under applicable trademark laws, not infringe the existing rights of third parties and be acceptable to the FDA.

If we do not obtain additional protection under the Hatch-Waxman Amendments and similar foreign legislation by extending the patent terms and obtaining data exclusivity for ZGN-1061, our business may be materially harmed.

Depending upon the timing, duration and specifics of development and FDA marketing approval of ZGN-1061 or ZGN-1258, one or more of our U.S. patents may be eligible for limited patent term restoration under the Drug Price Competition and Patent Term Restoration Act of 1984, referred to as the Hatch-Waxman Amendments. The Hatch-Waxman Amendments permit a patent restoration term of up to five years as compensation for patent term lost during product development and the FDA regulatory review process. However, we may not be granted an extension because of, for example, failing to apply within applicable deadlines, failing to apply prior to expiration of relevant patents or otherwise failing to satisfy applicable requirements. Moreover, the applicable time period or the scope of patent protection afforded could be less than we request. If we are unable to obtain patent term extension or restoration or the term of any such extension is less than we request, our competitors may obtain approval of competing products following our patent expiration, and our ability to generate revenues could be materially adversely affected.

Changes in U.S. patent law could diminish the value of patents in general, thereby impairing our ability to protect our products.

The United States has recently enacted and is currently implementing the America Invents Act of 2011, which is wide-ranging patent reform legislation. Further, the U.S. Supreme Court has ruled on several patent cases in recent years, either narrowing the scope of patent protection available in certain circumstances or weakening the rights of patent owners in certain situations. In addition to increasing uncertainty with regard to our ability to obtain future patents, this combination of events has created uncertainty with respect to the value of patents, once obtained. Depending on decisions by the U.S. Congress, the federal courts and the U.S. PTO, the laws and regulations governing patents could change in unpredictable ways that would weaken our ability to obtain new patents or to enforce our existing patents or future patents.

We may be subject to damages resulting from claims that we or our employees have wrongfully used or disclosed alleged trade secrets of their former employers.

Our employees have been previously employed at other biotechnology or pharmaceutical companies, including our competitors or potential competitors. Although we are not aware of any claims currently pending against us, 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 the former employers of our employees. Litigation may be necessary to defend against these claims. Even if we are successful in defending against these claims, litigation could result in substantial costs and be a distraction to management. If we fail in defending such claims, in addition to paying money claims, we may lose valuable intellectual property rights or personnel. A loss of key personnel or their work product could hamper or prevent our ability to develop and commercialize ZGN-1061 or ZGN-1258 and other product candidates, which would materially adversely affect our business, financial condition and results of operations.

General Company-Related Risks

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

Our success depends upon the principal members of our executive, medical and development teams, the loss of whose services may adversely impact the achievement of our research, development or commercialization objectives. We have entered into a severance and change in control agreement with our executive officers and department vice president level employees, but they may terminate their employment with us at any time. We also do not have any key-man life insurance on any of our executive officers or employees.

With any change in leadership, there is also a risk to retention of employees, as well as the potential for disruption to business operations, initiatives, plans and strategies.

We also rely on consultants and advisors, including scientific and clinical advisors, to assist us in formulating our development and commercialization strategy. Our consultants and advisors may be employed by employers other than us and may have commitments under consulting or advisory contracts with other entities that may limit their availability to us and may not be subject to our standard non-compete agreements. Recruiting and retaining qualified scientific personnel and sales and marketing personnel will also be critical to our success. We may not be able to attract and retain these personnel on acceptable terms given the workforce reduction and competition among numerous pharmaceutical and biotechnology companies for similar personnel. We also experience competition for the hiring of scientific personnel from universities and research institutions. Failure to succeed in clinical trials may make it more challenging to recruit and retain qualified scientific personnel.

Our employees may engage in misconduct or other improper activities, including violating applicable regulatory standards and requirements or engaging in insider trading, which could significantly harm our business.

We are exposed to the risk of employee fraud or other misconduct. Misconduct by employees could include intentional failures to comply with the regulations of the FDA and applicable non-U.S. regulators, provide accurate information to the FDA and applicable non-U.S. regulators, comply with healthcare fraud and abuse laws and regulations in the United States and abroad, report financial information or data accurately or disclose unauthorized activities to us. In particular, sales, marketing and business arrangements in the healthcare industry are subject to extensive laws and regulations intended to prevent fraud, misconduct, kickbacks, self-dealing and other abusive practices. These laws and regulations 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, including trading on, information obtained in the course of clinical trials, which could result in regulatory sanctions and serious harm to our reputation. We have adopted an insider trading policy and a code of conduct, but it is not always possible to identify and deter employee misconduct, and the precautions we take to detect and prevent this activity may be ineffective 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.

We face potential product liability exposure, and, if claims are brought against us, we may incur substantial liability.

The use of ZGN-1061 and ZGN-1258 in clinical trials and the sale of ZGN-1061 and ZGN-1258, if developed and approved, exposes us to the risk of product liability claims. Product liability claims might be brought against us by patients, healthcare providers or others selling or otherwise coming into contact with ZGN-1061 or ZGN-1258. For example, we may be sued if any product we develop allegedly causes injury or death or is found to be otherwise unsuitable during product testing, manufacturing, marketing or sale. Any such product liability claims may include allegations of defects in manufacturing, defects in design, a failure to warn of dangers inherent in the product, including as a result of interactions with alcohol or other drugs, negligence, strict liability and a breach of warranties. Claims could also be asserted under state consumer protection acts. If we become subject to product liability claims and cannot successfully defend ourselves against them, we could incur substantial liabilities. In addition, regardless of merit or eventual outcome, product liability claims may result in, among other things:

- withdrawal of patients from our clinical trials;
- substantial monetary awards to patients or other claimants;
- decreased demand for ZGN-1061, ZGN-1258, or any future product candidates following marketing approval, if obtained;
- damage to our reputation and exposure to adverse publicity;
- increased FDA warnings on product labels;

- litigation costs;
- distraction of management's attention from our primary business;
- loss of revenue; and
- the inability to successfully commercialize ZGN-1061 or any future product candidates, if approved.

We maintain product liability insurance coverage for our clinical trials with a $10.0 million annual aggregate coverage limit. Nevertheless, our insurance coverage may be insufficient to reimburse us for any expenses or losses we may suffer. Moreover, in the future, we may not be able to maintain insurance coverage at a reasonable cost or in sufficient amounts to protect us against losses, including if insurance coverage becomes increasingly expensive. If and when we obtain marketing approval for ZGN-1061 or ZGN-1258, we intend to expand our insurance coverage to include the sale of commercial products; however, we may not be able to obtain this product liability insurance on commercially reasonable terms. Large judgments have been awarded in class action lawsuits based on drugs that had unanticipated side effects. The cost of any product liability litigation or other proceedings, even if resolved in our favor, could be substantial, particularly in light of the size of our business and financial resources. A product liability claim or series of claims brought against us could cause our stock price to decline and, if we are unsuccessful in defending such a claim or claims and the resulting judgments exceed our insurance coverage, our financial condition, business and prospects could be materially adversely affected.

We must maintain effective internal control over financial reporting, and if we are unable to do so, the accuracy and timeliness of our financial reporting may be adversely affected, which could have a material adverse effect on our business and stock price.

We currently are an "emerging growth company," as defined in the Jumpstart our Business Startups Act of 2012, or the JOBS Act, and we have taken advantage of certain exemptions from various reporting requirements that are applicable to other public companies that are not "emerging growth companies" including not being required to comply with the auditor attestation requirements of Section 404(b) of the Sarbanes-Oxley Act.

We must maintain effective internal control over financial reporting in order to accurately and timely report our results of operations and financial condition. In addition, as a public company, the Sarbanes-Oxley Act of 2002, or the Sarbanes-Oxley Act, requires, among other things, that we assess the effectiveness of our disclosure controls and procedures quarterly and the effectiveness of our internal control over financial reporting at the end of each fiscal year.

The rules governing the standards that must be met for our management to assess our internal control over financial reporting pursuant to Section 404 of the Sarbanes-Oxley Act are complex and require significant documentation, testing and possible remediation. These stringent standards require that our audit committee be advised and regularly updated on management's review of internal control over financial reporting. Our management may not be able to effectively and timely implement controls and procedures that adequately respond to the increased regulatory compliance and reporting requirements that are applicable to us as a public company. If we fail to staff our accounting, finance and information technology functions adequately or maintain internal control over financial reporting adequate to meet the demands that will be placed upon us as a public company, including the requirements of the Sarbanes-Oxley Act, our business and reputation may be harmed and our stock price may decline. Furthermore, investor perceptions of us may be adversely affected, which could cause a decline in the market price of our common stock.

Comprehensive Tax Reform Legislation Could Adversely Affect Our Business And Financial Condition.

On December 22, 2017, President Trump signed into law the "Tax Cuts and Jobs Act," or the TCJA, that significantly reforms the Internal Revenue Code of 1986, as amended, or the Code. The TCJA, among other things, contains significant changes to corporate taxation, including reduction of the corporate tax rate, limitation of the tax deduction for interest expense, limitation of the deduction for net operating losses and elimination of net operating loss carrybacks and modifying or repealing many business deductions and credits (including reducing the business tax credit for certain clinical testing expenses incurred in the testing of certain drugs for rare diseases or conditions generally referred to as "orphan drugs"). Our net deferred tax assets and liabilities were revalued at the newly enacted U.S. corporate rate. We continue to examine the impact this tax reform legislation may have on our business. The overall impact of the TCJA is uncertain and our business and financial condition could be adversely affected.

Our ability to use our net operating loss carryforwards and certain tax credit carryforwards may be subject to limitation.

Since our inception in 2005, we have not recorded any U.S. federal or state income tax benefits for the net losses we have incurred in each year or our earned tax credits, due to our uncertainty of realizing a benefit from those items. As of December 31, 2017, we had net operating loss carryforwards for federal and state income tax purposes of $54.0 million and $39.6 million, respectively, which begin to expire in 2026 and 2030, respectively. As of December 31, 2017, we also had available tax credit carryforwards for federal and state income tax purposes of $14.8 million and $2.4 million, respectively, which begin to expire in 2026

and 2021, respectively. Under Section 382 of the Code, changes in our ownership may limit the amount of our net operating loss carryforwards and tax credit carryforwards that could be utilized annually to offset our future taxable income, if any. This limitation would generally apply in the event of a cumulative change in ownership of our company of more than 50% within a three-year period. Any such limitation may significantly reduce our ability to utilize our net operating loss carryforwards and tax credit carryforwards before they expire. Our follow-on public offering, initial public offering, or IPO, private placements and other transactions that have occurred since our inception, may trigger such an ownership change pursuant to Section 382. Any such limitation, whether as the result of our follow-on public offering, IPO, prior private placements, sales of our common stock by our existing stockholders or additional sales of our common stock by us, could have a material adverse effect on our results of operations in future years. We have not completed a study to assess whether an ownership change for purposes of Section 382 has occurred, or whether there have been multiple ownership changes since our inception, due to the significant costs and complexities associated with such study. The reduction of the corporate tax rate under TCJA may cause a reduction in the economic benefit of our net operating loss carryforwards and other deferred tax assets available to us. Under the TCJA, net operating losses generated after December 31, 2017 will not be subject to expiration.

Unfavorable global economic conditions could adversely affect our business, financial condition or results of operations.

Our results of operations could be adversely affected by general conditions in the global economy and in the global financial markets. A severe or prolonged economic downturn could result in a variety of risks to our business, including, weakened demand for our product candidates and our ability to raise additional capital when needed on acceptable terms, if at all. A weak or declining economy could also strain our suppliers, possibly resulting in supply disruption, or cause our customers to delay making payments for our services. Any of the foregoing could harm our business and we cannot anticipate all of the ways in which the current economic climate and financial market conditions could adversely impact our business.

Our internal computer systems, or those of our third-party CROs or other contractors or consultants, may fail or suffer security breaches, which could result in a material disruption of our ZGN-1061, ZGN-1258, or other product candidate development programs.

Despite the implementation of security measures, our internal computer systems and those of our third-party CROs and other contractors and consultants are vulnerable to damage from computer viruses, unauthorized access, natural disasters, terrorism, war and telecommunication and electrical failures. While we have not experienced any material system failure or accident, if such an event were to occur and cause interruptions in our operations, it could result in a material disruption of our programs. For example, the loss of clinical trial data for ZGN-1061 could result in delays in our regulatory approval efforts and significantly increase our costs to recover or reproduce the data. To the extent that any disruption or security breach results in a loss of or damage to our data or applications or other data or applications relating to our technology or product candidates, or inappropriate disclosure of confidential or proprietary information, we could incur liabilities and the further development of ZGN-1061 or ZGN-1258 could be delayed.

We may not be successful in our efforts to identify or discover additional product candidates.

The success of our business depends primarily upon our ability to identify, develop and commercialize products based on our MetAP2 platform. Although some of our product candidates are in nonclinical and clinical development, our research programs may fail to identify other potential product candidates for clinical development for a number of reasons. Our research methodology may be unsuccessful in identifying potential product candidates or our potential product candidates may be shown to have harmful side effects or may have other characteristics that may make the products unmarketable or unlikely to receive marketing approval.

If any of these events occur, we may be forced to abandon our development efforts for a program or programs, which would have a material adverse effect on our business and could potentially cause us to cease operations. Research programs to identify new product candidates require substantial technical, financial and human resources. We may focus our efforts and resources on potential programs or product candidates that ultimately prove to be unsuccessful.

We may seek to establish collaborations and, if we are not able to establish them on commercially reasonable terms, we may have to alter our development and commercialization plans or expand our internal efforts and growth.

Our drug development programs and the potential commercialization of our product candidates will require substantial additional cash to fund expenses. For some of our product candidates, such as ZGN-1061, we may decide to collaborate with pharmaceutical and biotechnology companies for the development and potential commercialization of those product candidates in some or all markets.

We face significant competition in seeking appropriate collaborators. Whether we reach a definitive agreement for a collaboration for ZGN-1061 or our other product candidates will depend, among other things, upon our assessment of the collaborator's resources and expertise, the terms and conditions of the proposed collaboration and the proposed collaborator's evaluation of a number of factors. Those 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 applicable 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 collaborator may also consider alternative product candidates or technologies for similar indications that may be available to collaborate on and whether such collaboration could be more attractive than the one with us for our product candidate. The terms of any collaboration or other arrangements that we may establish may not be favorable to us.

We may also be restricted under existing license agreements from entering into future agreements on certain terms with potential collaborators. Collaborations 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 collaborators.

We may not be able to negotiate collaborations on a timely basis, on acceptable terms, or at all. If we are unable or unwilling to do so, we may have to curtail the development of ZGN-1061 or our other product candidates for which we are seeking to collaborate, reduce or delay its development program or one or more of our other development programs, delay potential commercialization in some or all markets or reduce the scope of any sales or marketing activities, or increase our expenditures and undertake development or commercialization activities at our own expense, including potentially increasing our infrastructure and investment outside the United States. If we elect to increase our expenditures to fund development or commercialization activities on our own, we will need to obtain additional capital, which may not be available to us on acceptable terms or at all. If we do not have sufficient funds, we may not be able to further develop our product candidates or bring them to market and generate product revenue. In addition, such efforts may require diversion of a disproportionate amount of our attention away from other day-to-day activities and require devotion of a substantial amount of our time to managing these expansion activities.

In addition, any future collaborations that we enter into for ZGN-1061 or our other product candidates may not be successful. The success of our collaboration arrangements will depend heavily on the efforts and activities of our collaborators. Collaborators generally have significant discretion in determining the efforts and resources that they will apply to these collaborations. Disagreements between parties to a collaboration arrangement regarding clinical development and commercialization matters can lead to delays in the development process or commercializing the applicable product candidate and, in some cases, termination of the collaboration arrangement. These disagreements can be difficult to resolve if neither of the parties has final decision-making authority. Collaborations with pharmaceutical or biotechnology companies and other third parties often are terminated or allowed to expire by the other party. Any such termination or expiration would adversely affect us financially and could harm our business reputation.

We may acquire businesses or products, or form strategic alliances, in the future, and we may not realize the benefits of such acquisitions or alliances.

We may acquire additional businesses or products, form strategic alliances or create joint ventures with third parties that we believe will complement or augment our existing business. If we acquire businesses with promising markets or technologies, we may not be able to realize the benefit of such transactions if we are unable to successfully integrate such businesses with our existing operations and company culture. We may encounter numerous difficulties in developing, manufacturing and marketing any new products resulting from a strategic alliance or acquisition that delay or prevent us from realizing their expected benefits or enhancing our business. We cannot assure you that, following any such transaction, we will achieve the expected synergies to justify the transaction.

Risks Related to Our Financial Position and Need for Capital

We have not generated any revenue from product sales. We have incurred significant operating losses since our inception and anticipate that we will incur continued losses for the foreseeable future.

Biopharmaceutical product development is a highly speculative undertaking and involves a substantial degree of risk. Our operations to date have been limited primarily to organizing and staffing our company and conducting research and development activities for ZGN-1061, ZGN-1258, beloranib, ZGN-839 and additional MetAP2 inhibitors. We have never generated any revenue from product sales. We have not obtained regulatory approvals for any of our product candidates.

Since our inception and until July 2016, we focused substantially all of our efforts and financial resources on developing beloranib, which was in Phase 3 clinical development for our lead indication of the treatment of hyperphagia and obesity in patients with PWS and Phase 2 clinical development for the treatment of obesity in patients with hypothalamic injury-associated obesity, or HIAO. In December 2015, the FDA put the beloranib IND application on full clinical hold. Due to the uncertainties, costs and risks associated with the development of beloranib, in July 2016, we suspended further development of beloranib and directed our efforts and financial resources to developing ZGN-1061. In October 2016, we suspended our development of ZGN-839 in order to focus all of our resources to developing ZGN-1061 and the discovery and development of novel and highly differentiated MetAP2 inhibitors. In early 2018, we announced that we are returning to the rare metabolic disease space with a second highly optimized MetAP2 development candidate, ZGN-1258, targeting an initial indication of PWS.

We have funded our operations to date through proceeds from sales of redeemable convertible preferred stock, convertible debt and proceeds from our IPO and follow-on public offering, and have incurred losses in each year since our inception. In July 2018, we sold 9,200,000 shares of our common stock at a price of $7.50 per share. Our net losses were $46.8 million for the nine months ended September 30, 2018 and $52.0 million for the year ended December 31, 2017. As of September 30, 2018, we had an accumulated deficit of $336.4 million. Substantially all of our operating losses resulted from costs incurred in connection with our development programs for ZGN-1061, ZGN-1258, beloranib, ZGN-839, early research activities, licensing milestone fees and from general and administrative costs associated with our operations. We expect to incur increasing levels of operating losses over the next several years and for the foreseeable future. Our prior losses, combined with expected future losses, have had and will continue to have an adverse effect on our stockholders' equity and working capital. We expect our research and development expenses will increase over time in connection with our clinical trials of ZGN-1061, and of any other product candidates we may choose to pursue, including ZGN-1258. In addition, if and when we obtain marketing approval for ZGN-1061 or ZGN-1258 we will incur significant sales, marketing and outsourced manufacturing expenses. We will continue to incur additional costs associated with operating as a public company. As a result, we expect to continue to incur significant operating losses that would increase over time for the foreseeable future. Because of the numerous risks and uncertainties associated with developing pharmaceutical products, we are unable to predict the extent of any future losses or when we will become profitable, if at all. Even if we do become profitable, we may not be able to sustain or increase our profitability on a quarterly or annual basis.

Our ability to become profitable depends upon our ability to generate revenue. To date, we have not generated any revenue from any of our product candidates, and we do not know when, or if, we will generate any revenue. We do not expect to generate significant revenue unless and until we obtain marketing approval of, and begin to sell, our product candidates. Our ability to generate revenue depends on a number of factors, including, but not limited to, our ability to:

- initiate and successfully complete clinical trials that meet their clinical endpoints;
- initiate and successfully file IND applications as required to obtain FDA approval for ZGN-1061 and ZGN-1258 clinical trials;
- initiate and successfully complete all safety studies required to obtain U.S. and foreign marketing approval for ZGN-1061 in the indications we are pursuing;
- commercialize our product candidates, if developed and approved, by developing a sales force or entering into collaborations with third parties; and
- achieve market acceptance of our product candidates in the medical community and with third-party payors.

Absent our entering into a collaboration or partnership agreement, we expect to incur significant sales and marketing costs when we prepare to commercialize our product candidates. Even if we initiate and successfully complete our clinical trials of our product candidates, and our product candidates are approved for commercial sale, and despite expending these costs, our product candidates may not be commercially successful drugs. We may not achieve profitability soon after generating product sales, if ever. If we are unable to generate sufficient product revenue, we will not become profitable and may be unable to continue operations without continued funding.

We will need to raise additional funding, which may not be available on acceptable terms, or at all. Failure to obtain this necessary capital when needed may force us to delay, limit or terminate our product development efforts or other operations.

Developing small molecule products is expensive, and we expect our research and development expenses to increase substantially in connection with our ongoing activities, particularly as we advance ZGN-1061 into later stage clinical trials and as we continue our preparations for filing IND applications for ZGN-1061 and ZGN-1258 with the FDA and advance ZGN-1258 into the clinical trial stage. Depending on the status of regulatory approval or, if approved, commercialization of ZGN-1061, ZGN-1258, or any of our other product candidates, as well as the progress we make in selling ZGN-1061, ZGN-1258 or any of our other product candidates, we will require additional capital to fund operating needs thereafter. We may also need to raise additional funds sooner if we choose to pursue additional indications and/or geographies for ZGN-1061, ZGN-1258, or our other product candidates or otherwise expand more rapidly than we presently anticipate.

As of September 30, 2018, our cash, cash equivalents and marketable securities were $127.8 million. We expect that our cash, cash equivalents and marketable securities, will be sufficient to fund our current operations for a period of at least one year from the issuance date of this Quarterly Report. However, our operating plan may change as a result of many factors currently unknown to us, and we may need to seek additional funds sooner than planned, through public or private equity or debt financings, government or other third-party funding, marketing and distribution arrangements and other collaborations, strategic alliances and licensing arrangements or a combination of these approaches. In any event, we will require additional capital to obtain regulatory approval for, and to commercialize, our product candidates. Raising funds in the current economic environment may present additional challenges. Even if we believe we have sufficient funds for our current or future operating plans, we may seek additional capital if market conditions are favorable or if we have specific strategic considerations.

Any additional fundraising efforts may divert our management from their day-to-day activities, which may adversely affect our ability to develop and commercialize our product candidates. In addition, we cannot guarantee that future financing will be available in sufficient amounts or on terms acceptable to us, if at all. Moreover, the terms of any financing may adversely affect the holdings or the rights of our stockholders and the issuance of additional securities, whether equity or debt, by us, or the possibility of such issuance, may cause the market price of our shares to decline. The sale of additional equity or convertible securities would dilute all of our stockholders. The incurrence of indebtedness would result in increased fixed payment obligations and we may be required to agree to certain restrictive covenants, such as limitations on our ability to incur additional debt, limitations on our ability to acquire, sell or license intellectual property rights and other operating restrictions that could adversely impact our ability to conduct our business. We could also be required to seek funds through arrangements with collaborative partners or otherwise at an earlier stage than otherwise would be desirable and we may be required to relinquish rights to some of our technologies or product candidate or otherwise agree to terms unfavorable to us, any of which may have a material adverse effect on our business, operating results and prospects.

If we are unable to obtain funding on a timely basis, we may be required to significantly curtail, delay or discontinue one or more of our research or development programs or the commercialization of any product candidate or be unable to expand our operations or otherwise capitalize on our business opportunities, as desired, which could materially affect our business, financial condition and results of operations.

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

We may seek additional capital through a combination of private and public equity offerings, debt financings, collaborations and strategic and licensing arrangements. On July 2, 2018, we completed a public offering of our common stock, which resulted in the sale of 9,200,000 shares at a price of $7.50 per share, resulting in net proceeds of approximately $64.6 million after deducting underwriting discounts and commissions, as well as offering costs. To the extent that we raise additional capital through the sale of common stock or securities convertible or exchangeable into common stock, a stockholder's ownership interest in our company will be diluted. In addition, the terms of any such securities may include liquidation or other preferences that materially adversely affect the rights of our stockholders. Debt financing, if available, would increase our fixed payment obligations and 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 collaboration, strategic partnerships and licensing arrangements with third parties, we may have to relinquish valuable rights to ZGN-1061, ZGN-1258, or other product candidates, our intellectual property, future revenue streams or grant licenses on terms that are not favorable to us.

Risks Related to Our Common Stock

We expect that our stock price will continue to fluctuate significantly.

The market price of shares of our common stock, similar to the market price of shares of common stock of other biopharmaceutical companies, is subject to wide fluctuations. From January 1, 2018 to September 30, 2018 the daily closing price of our common stock on the NASDAQ Global Market ranged from a high of $12.04 to a low of $4.79 and will continue to be subject to wide fluctuations in response to many risk factors listed in this section, and others beyond our control, including:

- plans for, progress of, or results from nonclinical studies and clinical trials of ZGN-1061, ZGN-1258, and/or other product candidates;
- the failure of the FDA to accept our IND for ZGN-1061 or for ZGN-1258;
- the failure of the FDA or the EMA to approve ZGN-1061 or ZGN-1258;
- our ability to establish an adequate safety margin and profile for ZGN-1061, ZGN-1258, or other product candidates, including risk of serious thromboembolic events;

- announcements of new products, technologies, commercial relationships, acquisitions or other events by us or our competitors;
- the success or failure of other type 2 diabetes or PWS therapies;
- regulatory or legal developments in the United States and other countries;
- failure of ZGN-1061 or ZGN-1258, if successfully developed and approved, to achieve commercial success;
- fluctuations in stock market prices and trading volumes of similar companies;
- general market conditions and overall fluctuations in U.S. equity markets;
- variations in our quarterly operating results;
- changes in our financial guidance or securities analysts' estimates of our financial performance;
- changes in accounting principles;
- our ability to raise additional capital and the terms on which we can raise it;
- sales of large blocks of our common stock, including sales by our executive officers, directors and significant stockholders;
- additions or departures of key personnel;
- discussion of us or our stock price by the press and by online investor communities; and
- other risks and uncertainties described in these risk factors.

These and other market and industry factors may cause the market price and demand for our common stock to fluctuate substantially, regardless of our actual operating performance, which may limit or prevent investors from readily selling their shares of common stock and may otherwise negatively affect the liquidity of our common stock. In addition, the stock market in general, and NASDAQ listed and biopharmaceutical companies in particular, have experienced extreme price and volume fluctuations that have often been unrelated or disproportionate to the operating performance of these companies. In the past, when the market price of a stock has been volatile, holders of that stock have instituted securities class action litigation against the company that issued the stock.

Our executive officers, directors, and principal stockholders exercise significant control over our company.

As of October 31, 2018, the existing holdings of our executive officers, directors, principal stockholders and their affiliates, including investment funds affiliated with Atlas Ventures, or Atlas, entities affiliated with Fidelity Investment (FMR LLC), or Fidelity, and Great Point Partners, LLC, or Great Point, represent beneficial ownership, in the aggregate, of approximately 31.0% of our common stock. As a result, these stockholders, if they act together, are able to influence our management and affairs and control the outcome of matters submitted to our stockholders for approval, including the election of directors and any sale, merger, consolidation, or sale of all or substantially all of our assets. The concentration of voting power among these stockholders may have an adverse effect on the price of our common stock. In addition, this concentration of ownership might adversely affect the market price of our common stock by:

- delaying, deferring or preventing a change of control of us;
- impeding a merger, consolidation, 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.

Future sales of our common stock may cause our stock price to decline.

Sales of a substantial number of shares of our common stock in the public market or the perception that these sales might occur could significantly reduce the market price of our common stock and impair our ability to raise adequate capital through the sale of additional equity securities.

We may be at an increased risk of securities class action litigation.

Historically, securities class action litigation has often been brought against a company following a decline in the market price of its securities. This risk is especially relevant for us because biotechnology and pharmaceutical companies have experienced significant stock price volatility in recent years.

We are an "emerging growth company" and have availed ourselves of reduced disclosure requirements applicable to emerging growth companies, which could make our common stock less attractive to investors.

We are an "emerging growth company," as defined in the JOBS Act, and we have taken advantage of certain exemptions from various reporting requirements that are applicable to other public companies that are not "emerging growth companies" including not being required to comply with the auditor attestation requirements of Section 404(b) of the Sarbanes-Oxley Act, reduced disclosure obligations regarding executive compensation in our periodic reports and proxy statements, and exemptions from the requirements of holding a nonbinding advisory vote on executive compensation and shareholder approval of any golden parachute payments not previously approved. In addition, Section 107 of the JOBS Act also provides that an emerging growth company can take advantage of the extended transition period provided in Section 7(a)(2)(B) of the Securities Act, for complying with new or revised accounting standards. In other words, an emerging growth company can delay the adoption of certain accounting standards until those standards would otherwise apply to private companies. However, we are electing not to take advantage of such extended transition period, and as a result we will comply with new or revised accounting standards on the relevant dates on which adoption of such standards is required for non-emerging growth companies. Section 107 of the JOBS Act provides that our decision to not take advantage of the extended transition period for complying with new or revised accounting standards is irrevocable. We cannot predict if investors will find our common stock less attractive because we may rely on any of the exemptions available under the JOBS Act. If some investors find our common stock less attractive as a result, there may be a less active trading market for our common stock and our stock price may be more volatile. We may take advantage of these reporting exemptions until we are no longer an emerging growth company. We will remain an emerging growth company until the earliest of (i) the last day of the fiscal year in which we have total annual gross revenue of $1.07 billion or more; (ii) December 31, 2019; (iii) the date on which we have issued more than $1.0 billion in nonconvertible debt during the previous three years; and (iv) the date on which we are deemed to be a large accelerated filer under the rules of the SEC.

We have never paid dividends on our common stock and we do not anticipate paying any dividends in the foreseeable future. Consequently, any gains from an investment in our common stock will likely depend on whether the price of our common stock increases.

We have not paid dividends on any of our common stock to date and we currently intend to retain all of our future earnings, if any, to fund the development and growth of our business. As a result, capital appreciation, if any, of our common stock will be the sole source of gains for our common stockholders for the foreseeable future. Consequently, in the foreseeable future, our common stockholders will likely only experience a gain from their investment in our common stock if the price of our common stock increases.

If equity research analysts do not continue to publish research or reports about our business or if they issue unfavorable commentary or downgrade our common stock, the price of our common stock could decline.

The trading market for our common stock relies in part on the research and reports that equity research analysts publish about us and our business. We do not control these analysts. The price of our common stock could decline if one or more equity analysts downgrade our common stock or if analysts issue other unfavorable commentary or cease publishing reports about us or our business.

Anti-takeover provisions contained in our amended and restated certificate of incorporation and amended and restated bylaws, as well as provisions of Delaware law, could impair a takeover attempt.

Our amended and restated certificate of incorporation, amended and restated bylaws and Delaware law contain provisions which could have the effect of rendering more difficult, delaying or preventing an acquisition deemed undesirable by our board of directors. Our corporate governance documents include provisions:

- creating a classified board of directors whose members serve staggered three-year terms;
- authorizing "blank check" preferred stock, which could be issued by our board of directors without stockholder approval and may contain voting, liquidation, dividend, and other rights superior to our common stock;
- limiting the liability of, and providing indemnification to, our directors and officers;
- limiting the ability of our stockholders to call and bring business before special meetings;
- requiring advance notice of stockholder proposals for business to be conducted at meetings of our stockholders and for nominations of candidates for election to our board of directors;
- controlling the procedures for the conduct and scheduling of board of directors and stockholder meetings; and
- providing our board of directors with the express power to postpone previously scheduled annual meetings and to cancel previously scheduled special meetings.

These provisions, alone or together, could delay or prevent hostile takeovers and changes in control or changes in our management.

As a Delaware corporation, we are also subject to provisions of Delaware law, including Section 203 of the Delaware General Corporation law, which prevents some stockholders holding more than 15% of our outstanding common stock from engaging in certain business combinations without approval of the holders of substantially all of our outstanding common stock.

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

Item 6. Exhibits

The exhibits filed as part of this Quarterly Report are set forth on the Exhibit Index, which is incorporated herein by reference.

EXHIBIT INDEX

Exhibit No.	Description
31.1*	Certification of Principal Executive Officer pursuant to Rule 13a-14(a) or Rule 15d-14(a) of the Securities Exchange Act of 1934, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
31.2*	Certification of Principal Financial Officer pursuant to Rule 13a-14(a) or Rule 15d-14(a) of the Securities Exchange Act of 1934, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
32.1**	Certification of Principal Executive Officer and Principal Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
101.INS*	XBRL Instance Document.
101.SCH*	XBRL Taxonomy Extension Schema Document.
101.CAL*	XBRL Taxonomy Extension Calculation Document.
101.DEF*	XBRL Taxonomy Extension Definition Linkbase Document.
101.LAB*	XBRL Taxonomy Extension Labels Linkbase Document.
101.PRE*	XBRL Taxonomy Extension Presentation Link Document.

* Filed herewith.
** Furnished herewith.

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.

ZAFGEN, INC.

Date: November 9, 2018

By: /s/ Jeffrey Hatfield
Jeffrey Hatfield
Chief Executive Officer
(Principal Executive Officer)

Date: November 9, 2018

By: /s/ Patricia L. Allen
Patricia L. Allen
Chief Financial Officer
(Principal Financial and Accounting Officer)

Exhibit 31.1

Certification

I, Jeffrey Hatfield, certify that:

1. I have reviewed this quarterly report on Form 10-Q for the period ended September 30, 2018 of Zafgen, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

(a) designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

(b) designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

(c) evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

(d) disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

(a) all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

(b) any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: November 9, 2018

/s/ Jeffrey Hatfield
Jeffrey Hatfield
Chief Executive Officer
(Principal Executive Officer)

Exhibit 31.2

Certification

I, Patricia Allen, certify that:

1. I have reviewed this quarterly report on Form 10-Q for the period ended September 30, 2018 of Zafgen, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

(a) designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

(b) designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

(c) evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

(d) disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

(a) all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

(b) any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: November 9, 2018

/s/ Patricia Allen
Patricia Allen
Chief Financial Officer
(Principal Financial and Accounting Officer)

Exhibit 32.1

CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Quarterly Report on Form 10-Q of Zafgen, Inc. (the "Company") for the period ended September 30, 2018, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), each of the undersigned officers hereby certify, pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, 18 U.S.C. Section 1350, that to his or her knowledge:

1) the Report which this statement accompanies fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended; and

2) the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Dated: November 9, 2018

/s/ Jeffrey Hatfield
Jeffrey Hatfield
Chief Executive Officer
(Principal Executive Officer)

Dated: November 9, 2018

/s/ Patricia Allen
Patricia Allen
Chief Financial Officer
(Principal Financial and Accounting Officer)