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

FORM 10-Q

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

For the quarterly period ended March 31, 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 001-37880

Novan, Inc.

(Exact name of registrant as specified in its charter)

Delaware	**20-4427682**
(State or other jurisdiction of incorporation or organization	**(I.R.S. Employer Identification No.)**
4105 Hopson Road Morrisville, North Carolina	**27560**
(Address of principal executive offices)	**(zip code)**

(919) 485-8080
(Registrant's telephone number, including area code)

Indicate by check mark whether the registrant: (1) has filed all reports required to be filed by Sections 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days.

Yes ☒ No ☐

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post 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	☐ (Do not check if a smaller reporting company)	Smaller reporting company	☒
Emerging growth company	☒		

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

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

Yes ☐ No ☒

As of May 11, 2018, there were 26,038,742 shares of the registrant's Common Stock outstanding.

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PART I. FINANCIAL INFORMATION

Item 1. Financial Statements

NOVAN, INC.
Condensed Consolidated Balance Sheets
(in thousands, except share and per share amounts)
(unaudited)

	March 31, 2018	December 31, 2017
ASSETS		
Current assets:		
Cash and cash equivalents	$ 28,100	$ 2,524
Prepaid expenses and other current assets	938	1,180
Total current assets	29,038	3,704
Other assets	790	806
Property and equipment, net	16,474	16,624
Total assets	$ 46,302	$ 21,134
LIABILITIES AND STOCKHOLDERS' EQUITY (DEFICIT)		
Current liabilities:		
Accounts payable	$ 828	$ 479
Accrued compensation	977	2,168
Accrued outside research and development services	1,258	1,392
Accrued legal and professional fees	458	504
Other accrued expenses	1,194	1,700
Deferred revenue, current portion	2,638	2,631
Capital lease obligation, current portion	11	11
Total current liabilities	7,364	8,885
Deferred revenue, net of current portion	5,294	5,946
Capital lease obligation, net of current portion	19	21
Warrant liability	14,248	—
Facility financing obligation	7,998	7,998
Total liabilities	34,923	22,850
Commitments and contingencies (Notes 2, 3 and 6)		
Stockholders' equity (deficit)		
Preferred stock $0.0001 par value; 10,000,000 shares designated as of March 31, 2018 and December 31, 2017; 0 shares issued and outstanding as of March 31, 2018 and December 31, 2017	—	—
Common stock $0.0001 par value; 200,000,000 shares authorized as of March 31, 2018 and December 31, 2017; 26,048,242 and 16,014,908 shares issued as of March 31, 2018 and December 31, 2017; 26,038,742 and 16,005,408 shares outstanding as of March 31, 2018 and December 31, 2017	3	2
Additional paid-in capital	176,402	158,091
Treasury stock at cost, 9,500 shares as of March 31, 2018 and December 31, 2017	(155)	(155)
Accumulated deficit	(164,871)	(159,654)
Total stockholders' equity (deficit)	11,379	(1,716)
Total liabilities and stockholders' equity	$ 46,302	$ 21,134

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

NOVAN, INC.
Condensed Consolidated Statements of Operations and Comprehensive Loss
(unaudited)
(in thousands, except share and per share amounts)

	Three Months Ended March 31,	
	2018	2017
License and collaboration revenue	$ 649	$ 324
Research and development services revenue	9	—
Total revenue	658	324
Operating expenses:		
Research and development	6,335	6,946
General and administrative	2,880	4,531
Total operating expenses	9,215	11,477
Operating loss	(8,557)	(11,153)
Other income (expense), net:		
Interest income	44	27
Interest expense	(262)	(262)
Change in fair value of warrant liability	3,558	—
Other income, net	—	5
Total other income (expense), net	3,340	(230)
Net loss and comprehensive loss	$ (5,217)	$ (11,383)
Net loss per share, basic and diluted	$ (0.21)	$ (0.71)
Weighted-average common shares outstanding, basic and diluted	25,026,890	15,967,882

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

NOVAN, INC.
Condensed Consolidated Statements of Cash Flows
(unaudited)
(in thousands)

	Three Months Ended March 31,	
	2018	**2017**
Cash flow from operating activities:		
Net loss	$ (5,217)	$ (11,383)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation and amortization	401	299
Share-based compensation	887	1,252
Decrease in fair value of warrant liability	(3,558)	—
Changes in operating assets and liabilities:		
Prepaid expenses and other current assets	(6)	(71)
Accounts payable	353	(1,022)
Accrued compensation	(1,191)	(697)
Accrued outside research and development services	(134)	(3,022)
Accrued legal and professional fees	67	390
Accrued expenses	(621)	96
Deferred revenue	(645)	10,489
Other	16	(295)
Net cash used in operating activities	(9,648)	(3,964)
Cash flow from investing activities:		
Purchases of property and equipment	(140)	(578)
Net cash used in investing activities	(140)	(578)
Cash flow from financing activities:		
Proceeds from public offering, net of underwriting fees and commissions	35,625	—
Payments related to public offering costs	(296)	—
Proceeds from exercise of stock options	37	21
Payments on capital lease obligation	(2)	(2)
Net cash provided by financing activities	35,364	19
Net increase (decrease) in cash, cash equivalents and restricted cash	25,576	(4,523)
Cash, cash equivalents and restricted cash as of beginning of period	3,063	35,150
Cash, cash equivalents and restricted cash as of end of period	$ 28,639	$ 30,627
Supplemental disclosure of non-cash investing and financing activities:		
Purchases of equipment with accounts payable and accrued expenses	$ 191	$ 397
Non-cash addition to deferred offering costs	$ 25	$ —
Deferred offering costs reclassified to additional paid-in capital	$ 431	$ —
Reconciliation to condensed consolidated balance sheets		
Cash and cash equivalents	$ 28,100	$ 30,088
Restricted cash included in other long-term assets	539	539
Total cash, cash equivalents and restricted cash shown in the statement of cash flows	$ 28,639	$ 30,627

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

Note 1: Organization and Significant Accounting Policies

Business Description and Basis of Presentation

Novan, Inc. ("Novan" and together with its subsidiary, the "Company"), is a North Carolina-based clinical-stage biotechnology company focused on leveraging nitric oxide's natural antiviral and immunomodulatory mechanisms of action to treat dermatological and oncovirus-mediated diseases. Novan was incorporated in January 2006 under the state laws of Delaware and its wholly owned subsidiary, Novan Therapeutics, LLC was organized in 2015 under the state laws of North Carolina.

The accompanying condensed consolidated financial statements of the Company have been prepared in accordance with generally accepted accounting principles in the United States of America ("U.S. GAAP"). The December 31, 2017 year-end condensed balance sheet data was derived from audited financial statements but does not include all disclosures required by U.S. GAAP.

Certain prior period amounts have been condensed to conform to current period presentation. As a result, deferred offering costs were condensed with prepaid expenses and other current assets. Additionally, intangible assets and restricted cash were condensed with other assets. These changes had no effect on total current assets or total assets as previously reported as of December 31, 2017.

Basis of Consolidation

The accompanying condensed consolidated financial statements reflect the operations of the Company and its wholly owned subsidiary. All intercompany accounts and transactions have been eliminated in consolidation.

On December 30, 2015, the Company completed the distribution of 100% of the outstanding member interests of KNOW Bio, LLC ("KNOW Bio"), a former wholly owned subsidiary of the Company, to Novan's stockholders (the "Distribution"), pursuant to which KNOW Bio became an independent privately held company. The Company does not own an equity interest in KNOW Bio, but does have variable interests in KNOW Bio through the following contractual arrangements:

- At the time of the Distribution, the Company entered into exclusive sublicense agreements with KNOW Bio, which were amended in October 2017, as described in Note 3—Collaboration Arrangements. The Company's contingent obligation to pay future milestones or royalties to the University of North Carolina at Chapel Hill ("UNC") and other licensors, including in the event of KNOW Bio non-performance under the sublicense arrangements, creates a variable interest.
- The Company entered into a master development services and clinical supply agreement with KNOW Bio in April 2017 and related statements of work ("SOW") in the second quarter and second half of 2017 (collectively, the "KNOW Bio Services Agreement"). Under the KNOW Bio Services Agreement, the Company is providing certain development and manufacturing services to KNOW Bio's respiratory drug development subsidiary. Pursuant to applicable guidance in FASB Accounting Standards Codification ("ASC") 810-10, *Consolidation,* a service provider arrangement such as the KNOW Bio Services Agreement is deemed a variable interest when a reporting entity has another previously existing variable interest in a legal entity, such as the Company's sublicense arrangements with KNOW Bio, as described above.

Through its portfolio of operating subsidiary companies, KNOW Bio is advancing work in nitric oxide-based therapies in fields where they have exclusive intellectual property rights. The Company determined that KNOW Bio continues to be a variable interest entity based on variable interest entity characteristics, pursuant to FASB ASC 810-10, *Consolidation.* The Company concluded that it is not the primary beneficiary of KNOW Bio and, therefore, does not consolidate KNOW Bio in its condensed consolidated financial statements herein. This conclusion is based on the fact that the Company has no significant power or decision-making authority over KNOW Bio's drug and medical device development activities, which are the activities most significantly impacting KNOW Bio's economic performance. Under the KNOW Bio Services Agreement, the Company is providing certain development and manufacturing services to KNOW Bio on commercial terms. In exchange for these services, KNOW Bio pays service fees for actual time and materials incurred by the Company on a cost-plus basis. The terms of the amendments to the exclusive sublicense agreements with KNOW Bio were evaluated by the Company, with the support of a third-party expert, and were determined to be at fair value and arms-length. As a result, the amendments did not create any ability for Novan to influence KNOW Bio's decision-making.

As of March 31, 2018, the Company has a deferred revenue balance of $43 related to services performed under the KNOW Bio Services Agreement. The Company has no exposure to loss as a result of its involvement with KNOW Bio. The Company's sublicense arrangement with KNOW Bio does expose the Company to potential future risk of loss, whereby the Company is obligated to pay future milestones or royalties to UNC or other licensors in the event of KNOW Bio non-performance under the sublicense arrangement; however, if KNOW Bio failed to pay these obligations, KNOW Bio would be in breach of its agreements with the Company and intellectual property rights would revert back to the Company. See Note 2—Research and Development Agreements for detailed information regarding potential future milestone and royalty payments due to UNC and other licensors. The contractual terms of the KNOW Bio Services Agreement, including upfront payment requirements, cost-plus pricing and timely payment terms, mitigate the current or potential future risk of loss to the Company for services performed under the KNOW Bio Services Agreement.

Liquidity and Ability to Continue as a Going Concern

The Company's condensed consolidated financial statements have been prepared assuming that the Company will continue as a going concern, which contemplates the realization of assets and the settlement of liabilities and commitments in the normal course of business. The accompanying condensed consolidated financial statements do not include any adjustments to reflect the possible future effects on the recoverability and classification of assets or the amounts and classification of liabilities that may result from uncertainty related to the Company's ability to continue as a going concern.

The Company has evaluated principal conditions and events that may raise substantial doubt about its ability to continue as a going concern within one year from the date that these financial statements are issued. The Company identified the following conditions:

- The Company has reported a net loss in all fiscal periods since inception and, as of March 31, 2018, the Company had an accumulated deficit of $164,871.
- The Company's primary use of cash is to fund its operating expenses, which consist principally of research and development expenditures necessary to advance its product candidates. The Company has evaluated its expected, probable future cash flow needs and has determined that it expects to incur substantial losses in the future as it conducts planned operating activities. The Company expects that the amount of cash and cash equivalents on hand as of March 31, 2018 will be sufficient to meet its anticipated cash requirements into the second quarter of 2019.

The Company has concluded that the prevailing conditions and ongoing liquidity risks faced by the Company raise substantial doubt about its ability to continue as a going concern. To mitigate these prevailing conditions and ongoing liquidity risks, the Company needs and intends to raise additional capital in the form of revenues, contributions, grants or other payments from collaborative or licensing partners or from equity or debt financings prior to the full development of the Company's product candidates. There can be no assurance that the Company will be able to obtain additional capital on terms acceptable to the Company, on a timely basis or at all. The failure of the Company to obtain sufficient funds on acceptable terms when needed could cause the Company to alter or reduce its planned operating activities, including but not limited to delaying, reducing, terminating or eliminating planned product candidate development activities, to conserve its cash and cash equivalents. Such actions could delay development timelines and have a material adverse effect on the Company's results of operations, financial condition and market valuation. Additionally, there is no assurance that the Company can achieve its development milestones or that its intellectual property rights will not be challenged.

January 2018 Offering

On January 9, 2018, the Company completed a public offering of its common stock and warrants pursuant to the Company's effective shelf registration statement (the "January 2018 Offering"). The Company sold an aggregate of 10,000,000 shares of common stock and warrants to purchase up to 10,000,000 shares of the Company's common stock at a public offering price of $3.80 per share of common stock and accompanying warrant. The warrant exercise price is $4.66 per share and will expire four years from the date of issuance. Net proceeds from the offering were approximately $35,194 after deducting underwriting discounts and commissions and offering expenses of approximately $2,806. The shares issued as part of the January 2018 Offering increased the number of shares outstanding, which impacts the comparability of the Company's reported net loss per share calculations between 2018 and 2017 periods.

The Company incurred costs directly related to (i) the shelf registration statement filing totaling $110 and (ii) the January 2018 Offering completed in January 2018 totaling $370, all of which were initially capitalized and included in prepaid expenses and other current assets. A pro-rata portion of the shelf registration offering costs and all of the January 2018 Offering costs were reclassified to additional paid-in capital upon completion of the January 2018 Offering.

Use of Estimates

The preparation of financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities at the date of the financial statements and the reported amount of revenues and expenses during the reporting period. Actual results could differ from these estimates.

Unaudited Interim Condensed Consolidated Financial Statements

The accompanying interim condensed consolidated financial statements and the related footnote disclosures are unaudited. These unaudited interim condensed consolidated financial statements have been prepared in accordance with U.S. GAAP on the same basis as the audited consolidated financial statements and in the opinion of management, reflect all adjustments of a normal, recurring nature that are necessary for the fair statement of the Company's financial position as of March 31, 2018 and its results of operations and cash flows for the three months ended March 31, 2018 and 2017. The results of operations for the three months ended March 31, 2018 are not necessarily indicative of the results expected for the full fiscal year or any future period. These interim financial statements should be read in conjunction with the financial statements and notes set forth in the Company's Annual Report on Form 10-K filed with the Securities and Exchange Commission on March 27, 2018.

Leases

The Company leases office space and certain equipment under non-cancelable lease agreements. The leases are reviewed for classification as operating or capital leases. For operating leases, rent is recognized on a straight-line basis over the lease period. For capital leases, the Company records the leased asset with a corresponding liability and amortizes the asset over the lease term. Payments are recorded as reductions to the liability with an appropriate interest charge recorded based on the then-outstanding remaining liability.

The Company considers the nature of the renovations and the Company's involvement during the construction period of newly leased office space to determine if it is considered to be the owner of the construction project during the construction period. If the Company determines that it is the owner of the construction project, it is required to capitalize the fair value of the building as well as the construction costs incurred, including capitalized interest, on its consolidated balance sheet along with a corresponding financing liability ("build-to-suit accounting"). Upon completion of the construction of the facility under a build-to-suit lease, the Company assesses whether the circumstances qualify for sales recognition under the sale-leaseback accounting guidance. If the lease meets the sale-leaseback criteria, the Company will remove the asset and related financial obligation from the balance sheet and evaluate the lease for treatment as a capital or operating lease. If upon completion of construction, the project does not meet the sale-leaseback criteria, the leased property will be treated as an asset financing for financial reporting purposes. The portion of the facility financing obligation representing the principal that will be repaid in the next 12 months will be classified as a current liability in the consolidated balance sheets, with the remaining portion of the obligation classified as a noncurrent liability. See Note 6—Commitments and Contingencies for further discussion of the Company's application of this guidance related to the Company's primary facility lease.

Deferred Offering Costs

Deferred offering costs are included in prepaid expense and other current assets on the accompanying condensed consolidated balance sheets and consist of legal, accounting, filing and other fees directly related to offerings or the Company's shelf registration. These costs are offset against proceeds from each offering as applicable. Offering costs incurred prior to the completion of an offering are initially capitalized as assets, evaluated each period for likelihood of completion and subsequently reclassified to additional paid-in capital upon completion of the offering. Deferred cost associated with the shelf registration will be reclassified to additional paid-in capital on a pro-rata basis in the event the Company completes an offering under the shelf registration, with any remaining deferred offering costs charged to general and administrative expense at the end of the three-year life of the shelf registration.

Revenue Recognition

Effective January 1, 2018, the Company adopted ASC Topic 606, *Revenue from Contracts with Customers*, using the full retrospective transition method. To determine revenue recognition for arrangements that the Company determines are within the scope of Topic 606, the Company performs the following five steps: (i) identify the contracts with a customer; (ii) identify the performance obligations in the contract; (iii) determine the transaction price; (iv) allocate the transaction price to the performance obligations in the contract; and (v) recognize revenue when (or as) the entity satisfies a performance obligation. The Company only applies the five-step model to contracts when it is probable that the entity will collect the consideration it is entitled to in exchange for the goods or services it transfers to the customer.

At contract inception, once the contract is determined to be within the scope of Topic 606, the Company assesses the goods or services promised within each contract and determines those that are performance obligations, and assesses whether each promised good or service is distinct. The Company then recognizes as revenue the amount of the transaction price that is allocated to the respective performance obligation when (or as) the performance obligation is satisfied.

The Company's agreements may contain some or all the following types of provisions or payments:

Licenses of Intellectual Property: If the license of the Company's intellectual property is determined to be distinct from the other performance obligations identified in the arrangement, the Company recognizes revenues from non-refundable, up-front fees allocated to the license when the license is transferred to the customer and the customer is able to use and benefit from the license. For licenses that are bundled with other promises, the Company utilizes judgment to assess the nature of the combined performance obligation to determine whether the combined performance obligation is satisfied over time or at a point in time and, if over time, the estimated performance period and the appropriate method of measuring progress during the performance period for purposes of recognizing revenue. The Company re-evaluates the estimated performance period and measure of progress each reporting period and, if necessary, adjusts related revenue recognition accordingly.

Milestone Payments: At the inception of each arrangement that includes development milestone payments, the Company evaluates whether the milestones are considered probable of being reached and estimates the amount to be included in the transaction price using the most likely amount method. If it is probable that a significant revenue reversal would not occur, the associated milestone value is included in the transaction price. The transaction price is then allocated to each performance obligation on a relative stand-alone selling price basis, for which the Company recognizes revenue as or when the performance obligations under the contract are satisfied. At the end of each subsequent reporting period, the Company re-evaluates the probability of achievement of such development milestones and any related constraint, and if necessary, adjusts its estimate of the overall transaction price. Any such adjustments are recorded on a cumulative catch-up basis, which would affect license and collaboration revenue and earnings in the period of adjustment.

Manufacturing Supply Services: Arrangements that include a promise for future supply of drug substance or drug product for either clinical development or commercial supply at the customer's discretion are generally considered as options. The Company assesses if these options provide a material right to the licensee and if so, they are accounted for as separate performance obligations. If the Company is entitled to additional payments when the customer exercises these options, any additional payments are recorded in license and collaboration revenue when the customer obtains control of the goods, which is upon delivery.

Royalties: For arrangements that include sales-based royalties, including milestone payments based on the level of sales, and the license is deemed to be the predominant item to which the royalties relate, the Company recognizes revenue at the later of (i) when the related sales occur, or (ii) when the performance obligation to which some or all of the royalty has been allocated has been satisfied (or partially satisfied). To date, the Company has not recognized any royalty revenue resulting from any of its licensing arrangements.

See Note 4—Revenue Recognition for further information and accounting considerations related to revenue recognition, including revenue recognition pertaining to licensing arrangements.

Research and Development Expenses

Research and development expenses include all direct and indirect development costs incurred for the development of the Company's drug candidates. These expenses include salaries and related costs, including share-based compensation and travel costs, for research and development personnel, consulting fees, product development, preclinical studies, clinical trial costs, licensing fees and milestone payments under license agreements and other fees and costs related to the development of the drug candidates. The cost of tangible and intangible assets that are acquired for use on a particular research and development project, have no alternative future uses, and are not required to be capitalized in accordance with the Company's capitalization policy, are expensed as research and development costs as incurred.

Accrued Outside Research and Development Services

The Company is required to estimate its expenses resulting from its obligations under contracts with clinical research organizations, clinical site agreements, vendors, and consultants in connection with conducting clinical trials and preclinical development. The financial terms of these contracts are subject to negotiations which vary from contract to contract and may result in payment flows that do not match the periods over which materials or services are provided to the Company under such contracts. The Company's objective is to reflect the appropriate development and clinical trial expenses in its financial statements by matching those expenses with the period in which the services and efforts are expended.

For clinical trials, the Company accounts for these expenses according to the progress of the trial as measured by actual hours expended by contract research organization personnel, investigator performance or completion of specific tasks, patient progression, or timing of various aspects of the trial. During the course of a clinical trial, the Company adjusts its rate of clinical trial expense recognition if actual results differ from its estimates. The Company utilizes judgment and experience to estimate its accrued expenses as of each balance sheet date in its financial statements based on facts and circumstances known at that time. Although the Company does not expect its estimates to be materially different from amounts actually incurred, its understanding of status and timing of services performed relative to the actual status and timing of services performed may vary and may result in increases or decreases in research and development expenses in future periods when the actual results become known.

For preclinical development services performed by outside service providers, the Company determines accrual estimates through financial models, taking into account development progress data received from outside service providers and discussions with applicable Company and service provider personnel.

Fair Value of Financial Instruments

The carrying values of cash equivalents, accounts payable and accrued liabilities as of March 31, 2018 and December 31, 2017 approximated their fair values due to the short-term nature of these items.

For warrants that are issued or modified and there is a deemed possibility that the Company may have to settle them in cash, it records the fair value of the warrants at the initial measurement date, or date of issuance, and each balance sheet date thereafter. Changes in the estimated fair value of the warrants are recognized as a non-cash gain or loss on the condensed consolidated statements of operations and comprehensive loss.

The Company has categorized its financial instruments, based on the priority of the inputs used to value the investments, into a three-level fair value hierarchy. The fair value hierarchy gives the highest priority to quoted prices in active markets for identical assets or liabilities (Level 1) and lowest priority to unobservable inputs (Level 3). If the inputs used to measure the investments fall within different levels of the hierarchy, the categorization is based on the lowest level input that is significant to the fair value measurement of the investment. Financial instruments recorded in the accompanying condensed consolidated balance sheets are categorized based on the inputs to valuation techniques as follows:

Level 1 – Observable inputs that reflect unadjusted quoted market prices for identical assets or liabilities in active markets.

Level 2 – Observable inputs other than Level 1 that are observable, either directly or indirectly, in the marketplace for identical or similar assets and liabilities.

Level 3 – Unobservable inputs that are supported by little or no market data, where values are derived from techniques in which one or more significant inputs are unobservable.

Share-Based Compensation

The Company applies the fair value method of accounting for share-based compensation, which requires all such compensation to employees, including the grant of employee stock options, to be recognized in the statements of operations based on its fair value at the measurement date (generally the grant date). The expense associated with share-based compensation is recognized over the requisite service period of each award. For awards with only service conditions and graded-vesting features, the Company recognizes compensation cost on a straight-line basis over the requisite service period. For awards with performance conditions, once achievement of the performance condition becomes probable, compensation cost is recognized over the expected period from the date the performance condition becomes probable to the date the performance condition is expected to be achieved. The Company will reassess the probability of vesting at each reporting period for performance awards and adjust compensation cost based on its probability assessment. Share-based awards granted to non-employee directors as compensation for serving on the Company's board of directors are accounted for in the same manner as employee share-based compensation awards.

The fair value of each option grant is estimated using a Black-Scholes option-pricing model on the grant date using expected volatility, risk-free interest rate, expected life of options and fair value per share assumptions. Due to limited historical data, the Company estimates stock price volatility based on the actual volatility of comparable publicly traded companies over the expected life of the option. In evaluating similarity, the Company considered factors such as industry, stage of life cycle, financial leverage, size and risk profile.

The Company does not have sufficient stock option exercise history to estimate the expected term of employee stock options and thus continues to calculate expected life based on the mid-point between the vesting date and the contractual term, which is in accordance with the simplified method. The expected term for share-based compensation granted to non-employees is the contractual life. The risk-free rate is based on the U.S. Treasury yield curve during the expected life of the option.

For option grants occurring subsequent to the Company's IPO in September 2016, the fair value of common stock is based upon the closing stock price as of the grant date. For option grants occurring prior to the Company's IPO, the fair value of common stock was estimated by a third-party valuation specialist and approved by the board of directors as of the grant date. For options granted to non-employee directors on September 20, 2016 in conjunction with the pricing of the IPO, pursuant to the non-employee director compensation policy then in effect, the fair value of common stock was equal to the public offering price of $11.00 per share.

Income Taxes

The Company did not record a federal or state income tax benefit for the three months ended March 31, 2018 and 2017 due to its conclusion that a full valuation allowance is required against the Company's deferred tax assets.

Deferred tax assets and liabilities are determined based on the temporary differences between the financial statement carrying amounts and the tax bases of assets and liabilities using the enacted tax rates in effect in the years in which the differences are expected to reverse. In estimating future tax consequences, all expected future events are considered other than enactment of changes in the tax law or rates.

The Company recognizes the tax benefit from an uncertain tax position only if it is more likely than not that the tax position will be sustained on examination by the taxing authorities based on the technical merits of the position.

The Company's policy for recording interest and penalties is to record them as a component of general and administrative expenses. As of March 31, 2018 and December 31, 2017, the Company accrued no interest and penalties related to uncertain tax positions.

Tax years that remain subject to examination by federal and state tax jurisdictions date back to the year ended December 31, 2008. The Company has not been informed by any tax authorities for any jurisdiction that any of its tax years are under examination.

The determination of recording or releasing a tax valuation allowance is made, in part, pursuant to an assessment performed by management regarding the likelihood that the Company will generate future taxable income against which benefits of its deferred tax assets may or may not be realized. This assessment requires management to exercise judgment and make estimates with respect to its ability to generate taxable income in future periods.

(dollar values in thousands, except per share data)

In accordance with Section 382 of the Internal Revenue Code of 1986, as amended, a change in equity ownership of greater than 50% within a three-year period results in an annual limitation on the Company's ability to utilize its net operating loss carryforwards created during the tax periods prior to the change in ownership. The Company has not determined whether ownership changes exceeding this threshold, including the Company's IPO, have occurred. If a change in equity ownership has occurred which exceeds the Section 382 threshold, a portion of the Company's net operating loss carryforwards may be limited.

Net Loss Per Share

Basic net loss per share is calculated by dividing net loss by the weighted average shares outstanding during the period, without consideration for common stock equivalents. Diluted net loss per share is calculated by adjusting weighted average shares outstanding for the dilutive effect of common stock equivalents outstanding for the period. Diluted net loss per share is the same as basic net loss per share, since the effects of potentially dilutive securities are antidilutive for all periods presented.

The following securities, presented on a common stock equivalent basis, have been excluded from the calculation of weighted average common shares outstanding for the three months ended March 31, 2018 and 2017 because the effect is anti-dilutive due to the net loss reported in each of those periods. All share amounts presented in the table below represent the total number outstanding as of the end of each period.

	March 31,	
	2018	2017
Warrants to purchase common stock associated with January 2018 public offering	10,000,000	—
Stock options outstanding	1,560,134	974,712

Segment and Geographic Information

The Company has determined that it operates in one segment. The Company uses its nitric oxide-based technology to develop product candidates. The Chief Executive Officer, who is the Company's chief operating decision maker, reviews financial information on an aggregate basis for purposes of allocating resources and evaluating financial performance. The Company has only had limited revenue since its inception, but all revenue was derived in the United States. All of the Company's long-lived assets are maintained in the United States.

Although all operations are based in the United States, the Company generated revenue from its licensing partner in Japan of $649, or 99% of total revenue during the three months ended March 31, 2018, and $324, or 100% of total revenue during the three months ended March 31, 2017.

Recently Issued Accounting Standards

Accounting Pronouncements Adopted

The Company adopted ASC Topic 606, *Revenue from Contracts with Customers* as of January 1, 2018 and used the full retrospective adoption method, which required the Company to recast each prior reporting period presented. The Company's material revenues are derived from its license agreement with Sato Pharmaceutical Co., Ltd. ("Sato"), which provides for consideration in the form of an upfront payment, milestone payments, and royalties. As the Company adopted Topic 606, it elected to utilize two transition practical expedients provided for in Topic 606: the Company (i) has not restated completed contracts that begin and end in the same annual reporting period and (ii) has not disclosed the amount of the transaction price allocated to the remaining performance obligations and an explanation of when the entity expects to recognize that amount as revenue for the reporting periods presented prior to the initial date of application.

(dollar values in thousands, except per share data)

Adoption of the revenue recognition standard impacted previously reported results as follows:

Condensed Consolidated Statements of Operations and Comprehensive Loss

	Three Months Ended March 31, 2017		
	As Reported	Adjustments	As Adjusted
License and collaboration revenue	$ 100	$ 224	$ 324
Research and development services revenue	—	—	—
Total revenue	100	224	324
Operating expenses:			
Research and development	6,946	—	6,946
General and administrative	4,531	—	4,531
Total operating expenses	11,477	—	11,477
Operating loss	(11,377)	224	(11,153)
Other expense, net	(230)	—	(230)
Net loss and comprehensive loss	$ (11,607)	$ 224	$ (11,383)
Net loss per share, basic and diluted	$ (0.73)	$ 0.02	$ (0.71)
Weighted-average common shares outstanding, basic and diluted	15,967,882	—	15,967,882

Condensed Consolidated Balance Sheets

	December 31, 2017		
	As Reported	Adjustments	As Adjusted
Deferred revenue, current portion	2,164	467	2,631
Deferred revenue, net of current portion	6,919	(973)	5,946
Accumulated deficit	(160,160)	506	(159,654)

In August 2016, the FASB issued ASU No. 2016-15, *Statement of Cash Flows (Topic 230): Classification of Certain Cash Receipts and Cash Payments.* The FASB issued ASU 2016-15 to improve U.S. GAAP by providing guidance on the cash flow statement classification of eight specific areas where there is existing diversity in practice. The FASB expects that the guidance in this ASU will reduce the current and potential future diversity in practice in such areas. This ASU was effective for the Company as of January 1, 2018. The adoption of this new accounting guidance did not have a material impact on its condensed consolidated financial statements.

In November 2016, the FASB issued ASU No. 2016-18, *Statement of Cash Flows (Topic 230): Restricted Cash,* to improve U.S. GAAP by providing guidance on how to classify and present changes in restricted cash or restricted cash equivalents occurring due to transfers between cash, cash equivalents and restricted cash. This ASU was effective for the Company as of January 1, 2018. The Company's condensed consolidated statements of cash flows have been presented in conformance with the requirements in the ASU; however, this presentation did not have a material effect on the Company's condensed consolidated financial statements.

In January 2017, the FASB issued ASU No. 2017-01, *Business Combinations (Topic 805): Clarifying the Definition of a Business*, which clarifies the definition of a business to provide additional guidance with evaluating whether transactions should be accounted for as acquisitions (or disposals) of assets or businesses. This ASU is effective for annual periods beginning after December 15, 2017, including interim periods within those periods. This ASU is effective for the Company as of January 1, 2018. The adoption of this new accounting guidance did not have a material effect on the Company's condensed consolidated financial statements.

In May 2017, the FASB issued ASU No. 2017-09, *Compensation-Stock Compensation (Topic 718): Scope of Modification Accounting,* to clarify and reduce diversity in practice and cost and complexity of applying guidance for modifications in Topic 718. Specifically, this ASU further defines which changes to terms or conditions of share-based awards require application of modification accounting in Topic 718. This ASU is effective for annual periods beginning after December 15, 2017, including interim periods within those periods, with early adoption permitted. This ASU is effective for the Company as of January 1, 2018. The adoption of this new accounting guidance did not have a material effect on the Company's condensed consolidated financial statements.

Accounting Pronouncements Being Evaluated

In February 2016, the FASB issued ASU No. 2016-02, *Leases (Topic 842)*. This guidance revises the accounting related to leases by requiring lessees to recognize a lease liability and a right-of-use asset for all leases. The new lease guidance also simplifies the accounting for sale and leaseback transactions. This ASU is effective for annual reporting periods beginning after December 15, 2018 and early adoption is permitted. The Company is currently evaluating the impact of the adoption of this ASU on its condensed consolidated financial statements.

Note 2: Research and Development Licenses

The Company has entered into various licensing agreements with universities and other research institutions under which the Company receives the rights, and in some cases substantially all of the rights, of the inventors, assignees or co-assignees to produce and market technology protected by certain patents and patent applications. The Company's primary license agreement is with UNC and has been described in further detail within the subsection below. The counterparties to the Company's various other licensing agreements are the University of Akron Research Foundation, Hospital for Special Surgery, Strakan International S.a.r.l., which is a licensee of the University of Aberdeen, KIPAX AB and KNOW Bio. The Company is generally required to make milestone payments based on development milestones and will be required to make royalty payments based on a percentage of future sales of covered products or a percentage of sublicensing revenue. As future royalty payments are directly related to future revenues (either sales or sublicensing), future commitments cannot be determined. No accrual for future payments under these agreements has been recorded, as the Company cannot estimate if, when or in what amount payments may become due.

UNC License Agreement

The Amended, Restated and Consolidated License Agreement dated June 27, 2012, as amended, (the "UNC Agreement") provides the Company with an exclusive license to issued patents and pending applications directed to the Company's library of Nitricil compounds, including patents issued in the U.S., Japan and Australia, with claims intended to cover NVN1000, the new chemical entity ("NCE") for the Company's current product candidates. The UNC Agreement requires the Company to pay UNC up to $425 in regulatory and commercial milestones on a licensed product by licensed product basis and a running royalty percentage in the low single digits on net sales of licensed products. Licensed products include any products being developed by the Company or by its sublicensees, KNOW Bio and Sato, as described further in Note 3—Collaboration Arrangements. Additionally, the Company made a payment to UNC in February 2017 representing the portion of the upfront payment under the Sato Agreement that was estimated to be directly attributable to the UNC intellectual property rights included in the license to Sato. See Note 3—Collaboration Arrangements for the Company's accounting for this February 2017 payment.

Unless earlier terminated by the Company at its election, or if the Company materially breaches the agreement or becomes bankrupt, the UNC Agreement remains in effect on a country by country and licensed product by licensed product basis until the expiration of the last to expire issued patent covering such licensed product in the applicable country.

Note 3: Collaboration Arrangements

KNOW Bio Technology Agreements

In connection with the Distribution, the Company entered into exclusive license agreements and sublicense agreements with KNOW Bio, as described below. The agreements will continue for so long as there is a valid patent claim under the respective agreement, unless earlier terminated, and upon expiration, will continue as perpetual non-exclusive licenses. KNOW Bio has the right to terminate each such agreement, for any reason upon 90 days advance written notice to the Company.

License of existing and potential future intellectual property to KNOW Bio. The Company granted to KNOW Bio exclusive licenses, with the right to sublicense, to certain U.S. and foreign patents and patent applications controlled by the Company as of December 29, 2015 (the "KNOW Bio License Agreement"). The Company also granted to KNOW Bio a non-exclusive license, with the right to sublicense, to any patents and patent applications that may become controlled by the Company during the three years immediately following the agreement's effective date related to nitric oxide-releasing compositions and methods of manufacturing thereof, including methods of manufacturing Nitricil compounds and other nitric oxide-based therapeutics.

Sublicense of UNC and other third party intellectual property to KNOW Bio. The Company also granted to KNOW Bio exclusive sublicenses, with the ability to further sublicense, under certain of the U.S. and foreign patents and patent applications exclusively licensed to the Company from UNC and another third party directed towards nitric oxide-releasing compositions, to develop and commercialize products utilizing the licensed technology (the "KNOW Bio Sublicense Agreements"). Under the exclusive sublicense to the UNC patents and applications, KNOW Bio is subject to the terms and conditions under the UNC License Agreement, including milestone and diligence payment obligations. However, the Company is obligated to pay UNC any future milestones or royalties in the event of KNOW Bio non-performance under the sublicense arrangement. In such an event, KNOW Bio would be in breach of its agreements with the Company and intellectual property rights would revert back to the Company. There were no milestone or royalty payments required during the three months ended March 31, 2018 and 2017.

Amendments to License and Sublicense Agreements with KNOW Bio

The Company and KNOW Bio entered into certain amendments dated October 13, 2017 (the "KNOW Bio Amendments") to the KNOW Bio License Agreement and KNOW Bio Sublicense Agreements (the "Original KNOW Bio Agreements") described above. Pursuant to the terms of the KNOW Bio Amendments, the Company re-acquired from KNOW Bio exclusive, worldwide rights under certain U.S. and foreign patents and patent applications controlled by the Company as of the execution date of the Original KNOW Bio Agreements, and patents and patent applications which may become controlled by the Company during the three years immediately following the execution date of the Original KNOW Bio Agreements, directed towards nitric oxide-releasing compositions and methods of manufacturing thereof, including methods of manufacturing Nitricil compounds, and other nitric oxide-based therapeutics, to develop and commercialize products for all diagnostic, therapeutic, prophylactic and palliative uses for any disease, condition or disorder caused by certain oncoviruses (the "Oncovirus Field"). KNOW Bio also granted to the Company an exclusive license, with the right to sublicense, under any patents and patent applications which may become controlled by KNOW Bio during the three years immediately following the execution date of the Original KNOW Bio Agreements and directed towards nitric oxide-releasing compositions and methods of manufacturing thereof, including methods of manufacturing Nitricil compounds, and other nitric oxide-based therapeutics, but not towards medical devices, to develop and commercialize products for use in the Oncovirus Field. Additionally, KNOW Bio agreed that KNOW Bio will not commercialize any products in the Oncovirus Field during the first three years following the execution date of the Original KNOW Bio Agreements.

The Company is obligated to make the following fixed and contingent payments in exchange for the rights granted to the Company in the Oncovirus Field:

(i) A non-refundable upfront payment of $250 due upon execution of the KNOW Bio Amendments, which was paid in October 2017 and was classified as research and development expense in the consolidated statement of operations for the year ended December 31, 2017.

(ii) For products that incorporate a certain nitric oxide-releasing composition specified in the KNOW Bio Amendments and (i) are covered by KNOW Bio patents or (ii) materially use or incorporate know-how of KNOW Bio or the Company related to such composition that is created during the three years immediately following the execution date of the Original KNOW Bio Agreements ("Covered Products"), the Company must make the following payments to KNOW Bio:

- A milestone payment upon the first time each Covered Product is approved by the U.S. Food and Drug Administration ("FDA") for marketing in the Oncovirus Field;
- A royalty in the low single digits on net sales of Covered Products in the Oncovirus Field until the later of the expiration of the KNOW Bio patents covering the applicable Covered Product or the expiration of regulatory exclusivity on the applicable Covered Product; and
- In the event the Company sublicenses the rights to a Covered Product to a third party in the Oncovirus Field, the Company must pay KNOW Bio a low double-digit percentage of any clinical development or NDA approval milestones the Company receives from the sublicensee for the Covered Product in the Oncovirus Field.

Nitricil is not the nitric oxide-releasing composition specified in the KNOW Bio Amendments as the subject of the foregoing payments. As such, products based on Nitricil are not subject to the foregoing milestone, royalty and sublicensing payment obligations.

The rights granted to the Company in the Oncovirus Field in the KNOW Bio Amendments continue for so long as there is a valid patent claim under the Original KNOW Bio Agreements, and upon expiration continue on a perpetual non-exclusive basis, and are subject to the termination rights of KNOW Bio and the Company that are set forth in the Original KNOW Bio Agreements. In addition, under the KNOW Bio Amendments, KNOW Bio may terminate the rights granted to the Company in the Oncovirus Field if: (i) the Company does not file a first investigational new drug ("IND") application with the FDA for a product in the Oncovirus Field by October 2020; or (ii) the Company does not file a first new drug application ("NDA") with the FDA by October 2025 for a product in the Oncovirus Field and does not otherwise have any active clinical programs related to the Oncovirus Field at such time.

The Company also obtained a three-year exclusive option to include within the Company's rights described above in the Oncovirus Field, the development and commercialization of products for all diagnostic, therapeutic, prophylactic and palliative uses for any disease, condition or disorder caused by up to four other specified oncoviruses (the "Option Field"). If the Company elects to exercise its option, it will pay an exercise fee for each oncovirus for which the option is exercised, and the additional rights included in the Oncovirus Field as a result of the option exercise will be subject to the same payment obligations for Covered Products, conditions, and termination rights as described above for the Oncovirus Field.

The KNOW Bio Amendments also provide a mechanism whereby either party can cause an NCE covered by the Original KNOW Bio Agreements to become exclusive to such party by filing an IND on the NCE. An NCE that becomes exclusive to a party under this provision may not be commercialized by the other party until the later of expiration of patents covering the NCE or regulatory exclusivity covering the NCE. A party who obtains exclusivity for an NCE must advance development of the NCE pursuant to terms of the KNOW Bio Amendments in order to maintain such exclusivity; otherwise, such exclusivity will expire.

The terms of the KNOW Bio Amendments were negotiated at arms-length and do not provide the Company with an ability to significantly influence KNOW Bio or its operations.

Sato License Agreement

On January 12, 2017, the Company entered into a license agreement, and related amendment, with Sato, relating to SB204, its drug candidate for the treatment of acne vulgaris in Japan (the "Sato Agreement"). Pursuant to the Sato Agreement, the Company granted to Sato an exclusive, royalty-bearing, non-transferable right and license under certain of the Company's intellectual property rights, with the right to sublicense with the Company's prior written consent, to develop, use and sell products in Japan that incorporate SB204 in certain topical dosage forms for the treatment of acne vulgaris, and to make the finished form of such products. The Company or its designated contract manufacturer will also supply finished product to Sato for use in the development of SB204 in the licensed territory. The rights granted to Sato do not include the right to manufacture the active pharmaceutical ingredient ("API") of SB204; rather, the parties agreed to negotiate a commercial supply agreement pursuant to which the Company or a third-party contract manufacturer would be the exclusive supplier to Sato of the API for the commercial manufacture of licensed products in the licensed territory. Under the terms of the Sato Agreement, the Company also has exclusive rights to certain intellectual property that may be developed by Sato in the future, which the Company could choose to use for its own development and commercialization of SB204 outside of Japan.

In exchange for the licenses granted to Sato under the Sato Agreement, Sato agreed to pay the Company an upfront payment, as well as additional milestone payments upon achievement of various future development, regulatory and commercial milestones. Pursuant to the terms of the Sato Agreement, Sato was required to pay the Company an upfront payment of 1.25 billion Japanese Yen ("JPY"), which the Company received in January 2017 in the amount of $10,813 when converted to U.S. Dollars (USD). Sato is also required to pay the Company an aggregate of 2.75 billion JPY upon the achievement of various development and regulatory milestones, including a milestone payment of 0.25 billion JPY (approximately $2,162 USD) upon Sato's initiation of a Phase I trial in Japan. Sato also agreed to pay the Company up to an aggregate of 0.9 billion JPY in milestone payments upon the achievement of various commercial milestones. Sato must also pay the Company a royalty equal to a mid-single digit percentage of net sales of licensed products in the licensed territory, subject to a reduction in the royalty payments in certain circumstances.

The term of the Sato Agreement and the period during which Sato must pay royalties under the Sato Agreement expires, on a licensed product-by-licensed product basis, on the tenth anniversary of the first commercial sale of a licensed product in the licensed field in the licensed territory. The term of the Sato Agreement may be renewed with respect to a licensed product by mutual written agreement of the parties for additional two year periods following expiration of the initial term.

Sato is responsible for funding the development and commercial costs for the program that are specific to Japan. The Company is obligated to perform certain oversight, review and supporting activities for Sato, including: (i) using commercially reasonable efforts to obtain marketing approval of SB204 in the U.S., (ii) sharing all future scientific information the Company may obtain during the term of the Sato Agreement pertaining to SB204, (iii) performing certain additional pre-clinical studies if such studies are deemed necessary by the Japanese regulatory authority, up to and not to exceed a total cost of $1,000 and (iv) participating in a joint committee that oversees, reviews and approves Sato's development and commercialization activities under the Sato Agreement. Additionally, the Company has granted Sato the option to use the Company's trademarks in connection with the commercialization of licensed products in the licensed territory for no additional consideration, subject to the Company's approval of such use.

The Sato Agreement may be terminated by (i) Sato without cause upon 120 days' advance written notice to the Company, (ii) either party in the event of the other party's uncured material breach upon 60 days' advance written notice, (iii) force majeure, (iv) either party in the event of the other party's dissolution, liquidation, bankruptcy or insolvency and (v) the Company immediately upon written notice if Sato challenges the validity, patentability, or enforceability of any of the Company's patents or patent applications licensed to Sato under the Sato Agreement. In the event of a termination, no portion of the upfront fee received from Sato in January 2017 is refundable.

Note 4: Revenue Recognition

Revenue Recognition—Sato Agreement

The Company entered into the Sato Agreement in the first quarter of 2017 in exchange for non-refundable upfront payments and potential future milestone and royalty payments.

The Company assessed the Sato Agreement in accordance with Topic 606 and concluded that the contract counterparty, Sato, is a customer within the scope of Topic 606. The Company identified the following promises under the Sato Agreement: (i) the grant of the intellectual property license to Sato, (ii) the obligation to participate in a joint committee that oversees, reviews, and approves Sato's research and development activities and provides advisory support during Sato's development process, (iii) the obligation to manufacture and supply Sato with all quantities of licensed product required for development activities in Japan, and (iv) the stand-ready obligation to perform any necessary repeat pre-clinical studies, up to $1,000 in cost. The Company determined that these promises were not individually distinct because Sato can only benefit from these licensed intellectual property rights and services when bundled together; they do not have individual benefit or utility to Sato. As a result, all promises have been combined into a single performance obligation.

The Sato Agreement also provides that the two parties agree to negotiate in good faith the terms of a commercial supply agreement pursuant to which the Company or a third-party manufacturer would be the exclusive supplier to Sato of the API for the commercial manufacture of licensed products in the licensed territory. The Company concluded this obligation to negotiate the terms of a commercial supply agreement does not create (i) a legally enforceable obligation under which the Company may have to perform and supply Sato with API for commercial manufacturing or (ii) a material right because the incremental commercial supply fee consideration agreed upon between the parties in the Sato Agreement is representative of a stand-alone selling price for the supply of API and does not represent a discount. Therefore, this contract provision is not considered to be a promise to deliver goods or services and is not a performance obligation or part of the combined single performance obligation described above.

The Company concluded that the non-refundable upfront payment of 1.25 billion JPY ($10,813 USD) is the only fixed consideration component of the agreement. The only portion of the variable consideration that is currently probable of not resulting in a significant revenue reversal is the milestone related to initiation of a Phase I trial in Japan, which is expected to occur in the second half of 2018 and requires a milestone payment of 0.25 billion JPY (approximately $2,162 USD). These two consideration amounts are allocated to the single performance obligation. No other variable consideration under the Sato Agreement is currently probable of not resulting in a significant revenue reversal and, therefore, is currently fully constrained and excluded from the transaction price.

The Company evaluated the timing of delivery for each of the obligations and concluded that a time-based input method is most appropriate because Sato is accessing and benefitting from the intellectual property and technology (the predominant items of the combined performance obligation) ratably over the duration of Sato's estimated development period in Japan. Although the Company concluded that the intellectual property is functional rather than symbolic, the services provided under the performance obligation are provided over time. Therefore, the allocated transaction price will be recognized using a time-based input method that results in

straight-line recognition over the Company's performance period, currently estimated to be approximately five years, starting in February 2017 and completing in the first quarter of 2022. The Company has recorded the transaction price, including the upfront payment received and the unconstrained variable consideration, as deferred revenue that initially totaled $10,813 (comprised of (i) an initial contract liability of $12,975 and net of (ii) a contract asset associated with the Phase I trial initiation milestone payment of $2,162) and is amortizing this deferred revenue over the estimated performance period.

In future periods, the Company will lift the variable consideration constraint from each contingent payment when there is no longer a probable likelihood of significant revenue reversal. When the constraint is lifted from a milestone payment, the Company will recognize the incremental transaction price using the same time-based input method that is being used to recognize the revenue, which results in straight-line recognition over the performance period. If the Company's performance is not yet completed at the time that the constraint is lifted, a cumulative catch-up adjustment will be recognized in the period. If no other performance is required by the Company at the time the constraint is lifted, the Company expects to recognize all revenue associated with such milestone payments at the time that the constraint is lifted.

During the three months ended March 31, 2018 and 2017, the Company recognized $649 and $324, respectively, in license and collaboration revenue under this agreement, all of which was previously included in deferred revenue at the beginning of the respective period. The deferred revenue balance under the Sato Agreement as of March 31, 2017 was $7,889, including $2,595 and $5,294 in current and non-current deferred revenue, respectively. The deferred revenue balance under the Sato Agreement as of December 31, 2017, as adjusted, was $8,541, including $2,595 and $5,946 in current and non-current deferred revenue, respectively. The change in the deferred revenue balances during the three months ended March 31, 2018 was associated with the continued amortization of deferred revenue and recognition of license and collaboration revenue associated with the Company's performance during the period.

Contract costs—Sato Agreement

The Company incurred certain fees and costs in the process of obtaining the Sato Agreement that were payable upon contract execution and, therefore, have been recognized as other assets and amortized as general and administrative expense on a straight-line basis over the same estimated performance period being used to recognize the associated revenue. These fees are associated with the following two arrangements and are described as follows:

- The Company entered into an agreement with a third party to assist the Company in exploring the licensing opportunity which led to the execution of the Sato Agreement. The Company paid a fee of $216 to the third party upon execution of the Sato Agreement and is obligated to pay the third party a low single-digit percentage of any future milestone payments the Company may receive from Sato under the Sato Agreement.
- The intellectual property rights granted to Sato under the Sato Agreement include certain intellectual property rights which the Company has licensed from UNC. Under the Company's license agreement with UNC described in Note 2—Research and Development Licenses, the Company is obligated to pay UNC a running royalty percentage in the low single digits on net sales of licensed products, including net sales that may be generated by Sato. Additionally, the Company made a payment to UNC in February 2017 representing the portion of the Sato upfront payment that was estimated to be directly attributable to the UNC intellectual property rights included in the license to Sato.

Performance Obligations under the Sato Agreement

The amount of existing performance obligations under long-term contracts unsatisfied as of March 31, 2018 was $7,889. The Company expects to recognize approximately 33% of the remaining performance obligations as revenue over the next 12 months, and the balance thereafter. The Company applied the practical expedient and does not disclose information about variable consideration related to sales-based or usage-based royalties promised in exchange for a license of intellectual property. This expedient specifically applied to the sales-based milestone payments that are present in the Sato Agreement (0.9 billion JPY), as well as percentage-based royalty payments in the Sato Agreement that are contingent upon future sales.

No revenue was recognized in the first quarter of 2018 associated with adjustments to the estimated performance period or the measure of progress.

(dollar values in thousands, except per share data)

Revenue Recognition—Research and Development Services to KNOW Bio

As described in Note 1—Organization and Significant Accounting Policies, the Company entered the KNOW Bio Services Agreement during 2017 and provided research and development services on a fee-for-service basis. After assessing revenue according to the five-step model of ASC 606, the Company determined that contract research and development services revenue should be recognized in the period in which the services are performed. During the three months ended March 31, 2018, the Company recognized $9 in research and development services revenue for services performed under the KNOW Bio Services Agreement and had current deferred revenue related to these services of $43 as of March 31, 2018.

Note 5: Property and Equipment, Net

Property and equipment consisted of the following:

	March 31, 2018	December 31, 2017
Computer equipment	$ 577	$ 529
Furniture and fixtures	303	354
Laboratory equipment	7,009	6,819
Office equipment	400	400
Building related to facility lease obligation	10,557	10,557
Leasehold improvements	1,064	1,000
Property and equipment, gross	19,910	19,659
Less: Accumulated depreciation and amortization	(3,436)	(3,035)
Total property and equipment, net	$ 16,474	$ 16,624

Depreciation and amortization expense was $401 and $299 for the three months ended March 31, 2018 and 2017, respectively.

Note 6: Commitments and Contingencies

Lease Obligations

Primary Facility Lease

In August 2015, the Company entered into a lease agreement for approximately 51,000 rentable square feet of facility space in Morrisville, North Carolina, commencing in April 2016. The initial term of the lease agreement extends through June 30, 2026. The Company has an option to extend the lease agreement by five years upon completion of the initial lease term. Current contractual base rent payments are $95 per month, subject to a three percent increase annually over the term of the lease agreement.

Pursuant to the Company's accounting policy and applicable guidance in ASC 840, *Leases,* the facility is being accounted for as an asset financing, with the building asset and related facility financing obligation remaining on the Company's balance sheet. The building asset is being depreciated over a 25 year period and the facility financing obligation is being amortized so that the net carrying value of the building asset and the facility financing obligation are equivalent at the end of the initial term of the lease agreement. Monthly rental payments will be allocated between principal and interest expense associated with the facility financing obligation, as well as grounds rent expense of $8 per month.

The Company has recorded an asset related to the building and construction costs within property and equipment of $10,557 as of March 31, 2018. The non-current facility lease obligation on the Company's condensed consolidated balance sheet is $7,998 as of March 31, 2018 and December 31, 2017. During the three months ended March 31, 2018, the Company recognized interest expense of $261, including $45 of accrued interest included in other accrued expenses as of March 31, 2018.

Rent expense associated with the primary facility lease, comprised of monthly grounds rent and common area maintenance costs, was $42 and $95 for the three months ended March 31, 2018 and 2017, respectively.

Contingencies

From time to time, the Company may have certain contingent liabilities that arise in the ordinary course of business activities. The Company accrues a liability for such matters when it is probable that future expenditures will be made and such expenditures can be reasonably estimated. See *Legal Proceedings* below for further discussion of pending legal claims.

The Company has entered into, and expects to continue to enter into, contracts in the normal course of business with various third parties who support its clinical trials, preclinical research studies and other services related to its development activities. The scope of the services under these agreements can generally be modified at any time, and these agreements can generally be terminated by either party after a period of notice and receipt of written notice. There have been no material contract terminations as of March 31, 2018.

Legal Proceedings

The Company is subject to putative stockholder class action lawsuits that were filed in November 2017 in the United States District Court for the Middle District of North Carolina against the Company and certain of its current and former directors and officers, which have been consolidated under the case name *In re Novan, Inc. Securities Litigation*. A lead plaintiff has been designated, and on April 30, 2018, the lead plaintiff filed a consolidated amended complaint. The consolidated amended complaint asserts claims for violation of Sections 11 and 15 of the Securities Act of 1933 and Sections 10(b) and 20(a) of the Exchange Act and SEC Rule 10b-5 promulgated thereunder, in connection with statements related to the Company's Phase 3 clinical trials of SB204. The consolidated amended complaint seeks, among other things, an unspecified amount of compensatory damages and attorneys' fees and costs on behalf of the putative class. The Company believes that the claims lack merit and intends to defend the lawsuits vigorously. However, there can be no assurance that a favorable resolution will be obtained in such lawsuits, and the actual costs may be significant.

Other than as described above, the Company is not currently a party to any material legal proceedings and is not aware of any claims or actions pending or threatened against the Company that the Company believes could have a material adverse effect on the Company's business, operating results, cash flows or financial statements. In the future, the Company might from time to time become involved in litigation relating to claims arising from its ordinary course of business.

Compensatory Obligations

In conjunction with the departures of three former Company officers in 2018 and 2017, the Company entered into separation and general release agreements that included separation benefits consistent with the Company's obligations under their previously existing employment agreements for "separation from service" for "good reason." The Company recognized $332 and $397 in combined severance expense during the three months ended March 31, 2018 and 2017. The remaining accrued severance obligation in respect of the three former officers was $38 as of March 31, 2018, which is included in accrued compensation in the accompanying condensed consolidated balance sheet. The Company also recognized approximately $212 and $250 in non-cash stock compensation expense during the three months ended March 31, 2018 and 2017, respectively, related to the accelerated vesting of the former officers' stock options.

Note 7: Stockholders' Equity

Capital Structure

Authorized Shares. In conjunction with the completion of the IPO in September 2016, the Company further amended its amended and restated certificate of incorporation and amended and restated its bylaws. The amendment provides for 210,000,000 authorized shares of capital stock, of which 200,000,000 shares have been designated as $0.0001 par value common stock and 10,000,000 shares have been designated as $0.0001 par value preferred stock.

(dollar values in thousands, except per share data)

Preferred Stock

The Company's amended and restated certificate of incorporation provides the Company's board of directors with the authority to issue $0.0001 par value preferred stock from time to time in one or more series by adopting a resolution and filing a certificate of designations. Voting powers, designations, preferences, dividend rights, conversion rights and liquidation preferences shall be stated and expressed in such resolutions. There were 10,000,000 shares designated as preferred stock and no shares outstanding as of March 31, 2018 and December 31, 2017.

Common Stock

Authorized, Issued and Outstanding Common Shares

The Company's common stock has a par value of $0.0001 per share and consists of 200,000,000 authorized shares as of March 31, 2018 and December 31, 2017. There were 26,038,742 and 16,005,408 shares of voting common stock outstanding as of March 31, 2018 and December 31, 2017, respectively. The following table summarizes stockholders' equity activity for the three months ended March 31, 2018:

	Common Stock Shares	Common Stock Amount	Additional Paid-in Capital	Treasury Stock	Accumulated Deficit	Total Stockholders' (deficit) equity
Balance as of December 31, 2017	16,005,408	$ 2	$ 158,091	$ (155)	$ (159,654)	$ (1,716)
Share-based compensation	—	—	887	—	—	887
Common stock issued in January 2018 Offering, net of underwriting discounts, commissions and offering costs	10,000,000	1	17,387	—	—	17,388
Exercise of stock options	33,334	—	37	—	—	37
Net loss	—	—	—	—	(5,217)	(5,217)
Balance as of March 31, 2018	26,038,742	$ 3	$ 176,402	$ (155)	$ (164,871)	$ 11,379

The Company had reserved shares of common stock for future issuance as follows:

	March 31, 2018	December 31, 2017
Outstanding stock options	1,560,134	1,399,484
Warrants to purchase common stock issued in January 2018 Offering	10,000,000	—
For possible future issuance under 2016 Stock Plan (Note 9)	829,394	1,023,378
	12,389,528	2,422,862

Note 8: Warrants

The Company evaluates its financial assets and liabilities subject to fair value measurements on a recurring basis to determine the appropriate level in which to classify them for each reporting period, pursuant to the fair value measurements policy described in Note 1—Organization and Significant Accounting Policies. This determination requires significant judgments to be made.

On January 9, 2018, the Company sold an aggregate of 10,000,000 shares of common stock and issued warrants to purchase up to 10,000,000 shares of common stock at a public offering price of $3.80 per share of common stock and accompanying warrant. Pursuant to the warrant agreement and form of warrant dated January 9, 2018 (the "Warrant Agreement"), the warrant exercise price is $4.66 per share and the warrants will expire four years from the date of issuance.

(dollar values in thousands, except per share data)

The Warrant Agreement includes a provision whereby the exercisability of the warrants may be limited if, upon exercise, the warrant holder or any of its affiliates would beneficially own more than 4.99% (or an amount up to 9.99% if the holder so elects) of the Company's common stock. The Warrant Agreement also provides that the aforementioned exercise limitation provision is not applicable to any warrant holder that beneficially owns 10.0% or more of the Company's outstanding common stock immediately following the closing of the January 2018 Offering and the issuance of the accompanying warrants.

If, at any time the warrants are outstanding, any fundamental transaction occurs, as described in the Warrant Agreement and generally including any consolidation or merger whereby another entity acquires more than 50% of the Company's outstanding common stock, or the sale of all or substantially all of its assets, the successor entity must assume in writing all of the obligations to the warrant holders. Additionally, in the event of a fundamental transaction, the Warrant Agreement provides that each warrant holder will have the right to require the Company, or its successor, to repurchase the warrants for an amount of cash equal to the Black-Scholes value of the remaining unexercised portion of the warrants. Further, the Warrant Agreement states that the volatility input used to derive such Black-Scholes value is the greater of the Company's historical volatility or 100%. Due to the provision that the warrant holder has the option to receive a cash settlement, equal to the Black-Scholes fair value of the remaining unexercised portion of the warrant, in the event that there is a fundamental transaction, the Company has classified the warrants as liabilities in accordance with ASC 480, *Distinguishing Liabilities from Equity*.

There were no exercises of warrants during the three months ended March 31, 2018. The following table presents the Company's warrant liability measured at fair value on a recurring basis as of March 31, 2018:

	March 31, 2018			
	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	Total
Liabilities:				
Warrant liability	$ —	$ —	$ 14,248	$ 14,248
Total liabilities at fair value	$ —	$ —	$ 14,248	$ 14,248

The fair value of the common stock warrants is estimated using a valuation model that approximates a Monte Carlo simulation model, which takes into consideration the probability of a fundamental transaction occurring during the contractual term of the warrants. This valuation model, which includes inputs classified as Level 3 in the fair value hierarchy, estimated a fair value of $1.42 and $1.78 per common stock warrant as of March 31, 2018 and January 9, 2018 (the date of issuance), respectively. The inputs to the valuation model that approximates a Monte Carlo simulation model are presented below.

	March 31, 2018	January 9, 2018
Estimated dividend yield	0.00 %	0.00 %
Expected volatility	79.93%-100 %	75.66%-100 %
Risk-free interest rate	2.45 %	2.21 %
Expected term (years)	3.8	4.0
Fair value per share of common stock underlying the warrant	$ 2.93	$ 3.48
Warrant exercise price	$ 4.66	$ 4.66

Due to the Company's limited historical stock price data, the Company estimates stock price volatility based on the actual historical volatility of a group of comparable publicly traded companies observed over a historical period equal to the expected life of the warrant.

The change in fair value of the warrants for the three months ended March 31, 2018 of $3,558 was included as a component of other income and expense in the Company's condensed consolidated statements of operations and comprehensive loss. The decrease in the warrant liability and the corresponding unrealized gain recognized during the three months ended March 31, 2018 is primarily due to the decrease in the market price of the Company's underlying common stock during the period.

(dollar values in thousands, except per share data)

The following table summarizes the change in the fair value of the warrant liability, which is valued using significant unobservable Level 3 inputs, for the three months ended March 31, 2018:

	Fair Value Measurements Using Significant Unobservable Inputs (Level 3)					
	Beginning Balance	Issuance	Revaluations Included In Earnings	Exercises	Expirations	Ending Balance
Warrant liability	$ —	$ 17,806	$ (3,558)	$ —	$ —	$ 14,248

Note 9: Stock Option Plan

2016 Stock Plan

During the three months ended March 31, 2018, the Company continued to administer and grant awards under the 2016 Incentive Award Plan (the "2016 Plan"), the Company's only active equity incentive plan. Certain of the Company's outstanding and exercisable stock options remain subject to the terms of the Company's 2008 Stock Plan (the "2008 Plan"), which is the predecessor to the 2016 Plan and became inactive upon adoption of the 2016 Plan effective September 20, 2016. Accordingly, no new share awards will be issued out of the 2008 Plan.

As of March 31, 2018, there were a total of 1,560,134 stock options outstanding under the 2016 Plan and 2008 Plan combined. In addition, there were 829,394 shares available for future issuance under the 2016 Plan as of March 31, 2018.

Stock Compensation Expense

During the three months ended March 31, 2018 and 2017, the Company recorded employee share-based compensation expense of $887 and $1,252, respectively. Total share-based compensation expense included in the condensed consolidated statements of operations is as follows:

	Three Months Ended March 31,	
	2018	2017
Research and development	$ 420	$ 396
General and administrative	467	856
	$ 887	$ 1,252

Stock option activity for the three months ended March 31, 2018 is as follows:

	Shares Subject to Outstanding Options	Weighted-Average Exercise Price Per Share	Weighted-Average Remaining Contractual Term (in years)	Aggregate Intrinsic Value
Options outstanding as of December 31, 2017	1,399,484	$ 7.17		
Options granted	247,362	3.05		
Options forfeited	(53,378)	8.30		
Options exercised	(33,334)	1.12		
Options outstanding as of March 31, 2018	1,560,134	$ 6.61	8.17	$ 155

Note 10: Related Party Transactions

Members of the Company's board of directors held 1,585,916 shares of the Company's common stock as of March 31, 2018 and December 31, 2017, respectively.

In June 2017, G. Kelly Martin was appointed as the Company's Interim Chief Executive Officer before being named as the Company's Chief Executive Officer in April 2018. Mr. Martin continues to serve as a member of the Company's board of directors and previously served as chief executive officer of Malin Corporation plc, the parent company of Malin Life Sciences Holdings Limited ("Malin"), a greater than 10% shareholder of the Company, until October 1, 2017. Mr. Martin has not received any additional compensation for his service as the Company's Chief Executive Officer during the three months ended March 31, 2018. Mr. Martin continued to be compensated pursuant to the Company's non-employee director compensation policy.

Two of the Company's directors are also affiliated with Malin, including Sean Murphy, who is an executive officer and director of Malin and is an executive vice president of Malin Corporation plc, and Robert A. Ingram, who is a director of Malin Corporation plc.

During the three months ended March 31, 2018, the Company incurred costs of $198 in relation to a development and manufacturing consulting agreement with Cilatus BioPharma AG, which is majority-owned by Malin Corporation plc, a related party of the Company. These costs are expensed as incurred and are classified as research and development expenses in the accompanying condensed consolidated statements of operations. Aggregate estimated fees under the current statements of work are $418, which are expected to be incurred throughout 2018.

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

You should read the following discussion and analysis of our financial condition and results of operations in conjunction with our condensed consolidated financial statements and notes thereto included in this Quarterly Report on Form 10-Q and our audited financial statements and notes thereto for the year ended December 31, 2017 included in our Annual Report on Form 10-K filed with the Securities and Exchange Commission, or SEC, on March 27, 2018.

In addition to historical information, this discussion and analysis contains forward-looking statements within the meaning of Section 21E of the Securities Exchange Act of 1934, as amended, or the Exchange Act. All statements other than statements of historical facts contained in this Quarterly Report on Form 10-Q are forward-looking statements. These statements are often identified by the use of words such as "believe," "contemplate," "continue," "due," "goal," "objective," "plan," "seek," "target," "expect," "believe," "anticipate," "intend," "may," "will," "would," "could," "should," "potential," "predict," "project," "estimate," or "continue" and similar expressions or variations. These statements are based on the beliefs and assumptions of our management based on information currently available to management. Forward-looking statements 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 the forward-looking statements. Except as may be required by law, we undertake no obligation to update any forward-looking statements to reflect events or circumstances after the date of such statements.

These forward-looking statements are subject to numerous risks, including, without limitation, the following:

- *We will need substantial additional funding and as of March 31, 2018, we had an accumulated deficit of $ 164.9 million. If we are unable to raise capital when needed, we would be forced to delay, reduce, terminate or eliminate our product development programs, or eventual commercialization efforts.*
- *Clinical drug development involves a lengthy and expensive process with an uncertain outcome, and results of earlier studies and trials may not be predictive of future trial results.*
- *Delay or termination of planned clinical trials for our product candidates could result in unplanned expenses or significantly adversely impact our commercial prospects with respect to, and ability to generate revenues from, such product candidates.*
- *The FDA's feedback from the Type C meeting scheduled for the second quarter of 2018, if any, and the resulting SB204 Phase 3 program design may not achieve trial results that are sufficient to support an NDA submission for SB204, or regulatory approval of SB204. Further, we may not be able to complete a strategic arrangement, whether through the contemplated arrangement, or another one, to finance and support the development necessary to achieve the objectives described in the section entitled "Overview—Key Product Candidate Development Updates" below.*
- *The regulatory approval processes of the Food and Drug Administration, or FDA, are lengthy, time-consuming and inherently unpredictable, and if we are ultimately unable to obtain regulatory approval for our product candidates, our business will be substantially harmed.*
- *We specialize solely in developing nitric oxide-based therapeutics to treat dermatological and oncovirus-mediated diseases, and if we do not successfully achieve regulatory approval for any of our product candidates or successfully commercialize them, we may not be able to continue as a business.*
- *The issuance of shares upon exercise of our outstanding warrants and options may cause substantial dilution to our existing shareholders and reduce the trading price of our common stock.*
- *As a result of our operating losses and negative cash flows from operations, the report of our independent registered public accounting firm on our December 31, 2017 financial statements included an explanatory paragraph indicating that there is substantial doubt about our ability to continue as a going concern.*
- *We rely on third parties to conduct some of our preclinical studies and all of our clinical trials. If these third parties do not successfully carry out their contractual duties or meet expected deadlines, we may be unable to obtain regulatory approval for or commercialize any of our product candidates.*
- *We currently manufacture clinical trial materials internally and we intend to qualify and contract with third parties to manufacture clinical trial materials and commercial supplies of any approved product candidates. If we do not have sufficient quantities of clinical trial materials at acceptable quality levels, it could adversely impact our development and potential future commercialization of any of our product candidates or result in our breaching our obligations to others.*

- *We intend to rely on third parties to manufacture raw materials and drug product components utilized in clinical trial materials for us and parties with which we contract. Failure of those third parties to obtain approval of the FDA or comparable regulatory authorities, to provide us with sufficient quantities of raw materials and drug product components or to provide such raw materials or drug product components at acceptable quality levels or prices could adversely impact our development and potential future commercialization of any of our product candidates or result in our breaching our obligations to others.*
- *Unexpected delays in our ability to manufacture our NVN1000 active pharmaceutical ingredient, or the associated drug product in a deliverable form, in our facility, for support of our development activities could adversely affect our development and commercialization timelines and result in increased costs of our development programs.*
- *Our product candidates may pose safety issues, cause adverse events, have side effects or have other properties 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.*
- *Our product candidates, if approved, will face significant competition, and our failure to effectively compete may prevent us from achieving significant market penetration.*
- *If we are unable to obtain and maintain patent protection for our product candidates, or if the scope of the patent protection obtained is not sufficiently broad, our competitors could develop and commercialize technology and products similar or identical to ours, and our ability to successfully commercialize our technology and product candidates may be impaired.*
- *Changes to our leadership team could prove disruptive to our operations and have adverse consequences for our business and operating results.*
- *We recently broadened the focus of our product development strategy, and there can be no guarantee that these areas of our platform will be successful or the most profitable.*
- *We may rely on strategic relationships for the further development and commercialization of product candidates outside our current core areas of focus, and if we are unable to enter into such relationships on favorable terms or at all, or if such relationships are unsuccessful, we may be unable to realize the potential economic benefit of those product candidates.*

For a further discussion of risks that could cause or contribute to differences between actual results and those implied by forward-looking statements, see the "Risk Factors" section of the Annual Report on Form 10-K filed with the SEC on March 27, 2018.

Novan® is a registered trademark of our company in the United States. This Quarterly Report on Form 10-Q also includes trademarks, trade names and service marks that are the property of other organizations. Solely for convenience, our trademarks and trade names referred to in this Quarterly Report on Form 10-Q appear without any "™" or "®" symbol, but those references are not intended to indicate, in any way, that we will not assert, to the fullest extent under applicable law, our rights or the rights of any applicable licensor, to these trademarks and trade names.

Overview

We are a clinical-stage biotechnology company focused on leveraging nitric oxide's natural antiviral and immunomodulatory mechanisms of action to treat dermatological and oncovirus-mediated diseases. Nitric oxide plays a vital role in the natural immune system response against microbial pathogens and is a critical regulator of inflammation. Our ability to harness nitric oxide and its multiple mechanisms of action has enabled us to create a platform with the potential to generate differentiated product candidates. The two key components of our nitric oxide platform are our proprietary Nitricil technology, which drives the creation of new chemical entities, or NCEs, and our topical formulation science, both of which we use to tune our product candidates for specific indications for specific diseases. Our ability to deploy nitric oxide in a solid form, on demand and in localized formulations allows us the potential to improve patient outcomes in a variety of diseases.

We are advancing strategic development programs in the fields of dermatology and oncovirus-mediated diseases. We have clinical-stage drug candidates with anti-acne (SB204) and antifungal (SB208) applications, which we intend to advance through partnerships, collaborations or other strategic relationships we are currently exploring. We are utilizing our existing capital resources to fund the ongoing and near-term development activities in our antiviral (SB206) and anti-inflammatory (SB414) programs. Advancement of the SB206 and SB414 development programs beyond ongoing and near-term activities is dependent upon our ability to access additional capital from non-dilutive sources, including partnerships, collaborations, licensing, grants or other strategic relationships, or through equity or debt financings. We have recently increased our focus on potential non-dilutive business development activities around all clinical-stage assets in our platform, including various geographic and indication-specific opportunities.

Refer to the section entitled "Liquidity and Capital Resources" for further discussion of our current liquidity and our future funding needs.

Key Product Candidate Development Updates

Below are selected key developments related to our product candidates during or subsequent to the first quarter of 2018 and certain upcoming milestones.

- ***SB204 for the Treatment of Acne Vulgaris***—We continue to work collaboratively with a third party to evaluate and finalize the most appropriate design of one or more anticipated clinical trial(s) to maximize the probability of trial success. As part of this process, we are also examining all aspects of the acne field, including recent Phase 3 clinical trial failures in this therapeutic area. The next step requires additional FDA input and guidance that we expect to obtain during a Type C meeting scheduled in the second quarter of 2018. We anticipate FDA input from the upcoming meeting will likely facilitate (i) finalization of our Phase 3 design and strategy and (ii) conclusion and execution of a definitive agreement with the third party. As we continue to collaborate with the third party on all aspects of the Phase 3 program design, we are currently and expect to continue preparing for manufacture of clinical trial materials and conducting certain clinical start-up activities. The conduct of further Phase 3 program-related activities is subject to FDA feedback and our ability to complete a business structure, such as the contemplated business structure described below.

  We and the third party are actively working towards finalization of a definitive agreement that will establish a business structure to execute the Phase 3 program. The finalized third-party business structure may differ from what was envisioned in the November 2017 non-binding term sheet due to the fluidity of the regulatory feedback, the continued assessment of the optimal strategy as well as the challenging set of co-primary efficacy endpoints. As a result, the business structure may include a blend of capital providers, including corporate and institutional investors. In addition, we may retain an option to participate in some portion of the funding. Both Novan and the third party continue to evaluate the optimal path forward for the asset and believe that feedback from the upcoming FDA meeting will help to provide clarity around that path.

  We intend to continue to evaluate various risk/benefit scenarios as we determine how to deploy capital for development in the acne space. We remain highly focused on managing the dynamic process of balancing the upside optionality and the near-term risk that accompanies the anticipated business structure. We target substantially completing a strategic arrangement, consistent with the expected timing for completion of our Phase 3 program design, so that the remaining components of the Phase 3 program could commence during the third quarter of 2018 if the parties agree that the risk/benefit assessment is appropriate to move forward and if capital is available to fund the program.

- ***SB414, a Topical Cream for the Treatment of Inflammatory Skin Diseases***—In late 2017, we initiated clinical exploration in inflammatory skin diseases through the conduct of two Phase 1b clinical trials evaluating SB414 cream for the treatment of psoriasis and atopic dermatitis. The aim of these complementary trials was to evaluate the safety, tolerability and pharmacokinetics (PK) of SB414 and to assess target engagement through a reduction of key inflammatory biomarkers, also known as pharmacodynamic (PD) assessment. As previously communicated, the output from these two complementary trials is expected to allow us to draw initial conclusions regarding possible paths forward for our inflammatory skin disease program, including obtaining added insights into the different mechanisms of action for each indication.

  We recently received preliminary top line results from the Phase 1b trial in patients with psoriasis. Our preliminary assessment is that SB414 was found to be safe and well-tolerated in 36 adult patients with mild-to-moderate chronic plaque

psoriasis treated twice daily for four weeks. We are continuing to analyze the preliminary PK (systemic exposure) and PD (inflammatory biomarker) data from the psoriasis trial; potential further analysis may enable generation of additional data and associated learnings regarding patient characteristics, disease progression, co-morbidities and others. Due to the complementary design and nature of the psoriasis and atopic dermatitis trials, the psoriasis PK and PD results will be released after being evaluated in conjunction with future PK and PD data collected from our ongoing Phase 1b atopic dermatitis trial.

Additionally, our ongoing Phase 1b trial in atopic dermatitis recently achieved full enrollment and we continue to target top line results in the third quarter of 2018. Once we have completed our analysis of the data from both studies, we anticipate communicating full results, including PK and PD data, from both trials along with our planned next steps for SB414 and our inflammatory skin disease program in the second half of 2018.

- ***SB206, a First-in-Class, Topical Antiviral Gel***—We initiated a Phase 2 clinical trial utilizing SB206 for the treatment of molluscum during the first quarter of 2018, with top line results targeted in the fourth quarter of 2018.

Corporate Updates

Organizational and Governance Structure Alignment with Current Strategy

We have continued to strategically add talent and reposition our organizational structure in early 2018 to further align with the aforementioned drug development strategy. Recently occurring additions and changes are described below. We expect continued targeted expansion of internal resources and further repositioning activities during the remainder of 2018.

- In February 2018, Eugene Sun, M.D. was appointed to our board as a non-employee director and chairperson of our newly formed science and technology committee. Dr. Sun strengthens our board by contributing his extensive experience in translational medicine and drug development. The science and technology committee, which consists of members of the board in consultation with our executive management team, will assist the board in evolving and overseeing the strategic direction and medical applications of our proprietary nitric oxide-based technology.
- G. Kelly Martin was named as our Chief Executive Officer in April 2018. Mr. Martin has served as our Chief Executive Officer in an interim capacity since June 2017. In addition to the full breadth of responsibilities as Chief Executive Officer, Mr. Martin will be directly responsible for shareholder and market interface, including current or potential shareholders, sell side analysts and other traditional and nontraditional providers of capital. To date, we have not paid Mr. Martin any compensation in his capacity as Chief Executive Officer. Mr. Martin continues to serve as a director and is currently being compensated pursuant to our non-employee director compensation policy. During the second quarter of 2018, we are targeting to enter into an employment agreement with Mr. Martin that provides for compensation commensurate with his experience and expertise leading biopharmaceutical companies.
- Also in April 2018, we established a new leadership role in clinical operations and positioned our finance team for the future.
    - *Clinical development*—Elizabeth Messersmith, Ph.D. will be joining us in the role of Senior Vice President of Clinical Operations on June 1, 2018. Dr. Messersmith will report to Paula Brown Stafford, Chief Development Officer, and be responsible for the direction and execution of the Company's broad and diverse clinical drug development programs.
    - *Financial operations*—our board appointed Andrew J. Novak, who served most recently as our Senior Director of Financial Reporting and Analysis, as Vice President and Chief Accounting Officer. Mr. Novak will serve as our principal accounting officer while Jeff N. Hunter, Executive Vice President, Chief Business Officer and Corporate Secretary will continue to serve as our principal financial officer. Together, Mr. Novak and Mr. Hunter will lead and oversee our financial and accounting operations. As principal financial officer, Mr. Hunter is responsible, with Mr. Martin as Chief Executive Officer, for our overall financial activities. As principal accounting officer, Mr. Novak is responsible for overseeing all of our accounting and financial reporting functions.
- Brian Johnson, our former Chief Commercial Officer, departed the Company effective January 22, 2018, and we entered into a separation and general release agreement with Mr. Johnson that included termination benefits that are consistent with our obligations under Mr. Johnson's employment agreement for "separation from service" by Mr. Johnson for "good reason."

January 2018 Offering

On January 9, 2018, we completed a public offering of our common stock and warrants, or the January 2018 Offering, under a prospectus supplement to our effective Shelf Registration. We sold an aggregate of 10,000,000 shares of common stock and warrants to purchase up to 10,000,000 shares of our common stock at a public offering price of $3.80 per share of common stock and accompanying warrant. The warrant exercise price is $4.66 per share and will expire four years from the date of issuance. Net proceeds from the offering were approximately $35.2 million after deducting underwriting discounts and commissions and offering expenses of $2.8 million.

In accordance with ASC 480, *Distinguishing Liabilities from Equity*, the warrants sold in the January 2018 Offering are classified as a liability in the accompanying condensed consolidated balance sheets due to certain provisions in the warrant agreement and form of warrant that provide the warrant holder with a right to settle in cash in the event of a fundamental transaction, as described further in "Note 8—Warrants" in the accompanying condensed consolidated financial statements included in this Quarterly Report on Form 10-Q. The warrant liability is recorded at fair value and is re-valued each reporting period, with adjustments to fair value recognized in the statements of operations. The fair value of the warrants has been estimated using a valuation model that approximates a Monte Carlo simulation model and the significant assumptions used in estimating fair value are further described in "Note 8—Warrants" to the accompanying condensed consolidated financial statements included in this Quarterly Report on Form 10-Q. As of January 9, 2018, the date the warrants were issued, the warrants were recorded at fair value which approximated $17.8 million. The fair value of the warrants decreased to approximately $14.2 million as of March 31, 2018, which resulted in the recognition of a non-cash unrealized gain of $3.6 million for the three months ended March 31, 2018. The decrease of $3.6 million in the fair value of the warrant liability and the corresponding non-cash gain recognized during the three months ended March 31, 2018 is primarily due to the decrease in the market price of our underlying common stock during the period. We will continue to adjust the fair value of the warrant liability each reporting period during the remaining contractual life of the warrants and the resulting non-cash unrealized gains or losses may have a significant effect on our reported net losses in future periods.

We have not listed the warrants on an exchange but warrant holders have transacted through dealer networks within the over-the-counter (OTC) market on a sporadic basis. The transaction price range observed in the OTC market includes prices that are lower than those estimated using the valuation model that approximates a Monte Carlo simulation model, which estimated a fair value of $1.42 and $1.78 per warrant as of March 31, 2018 and January 9, 2018, respectively. Because of the limited trading volumes currently occurring in the OTC market, the published transaction prices cannot be used to estimate fair value of the warrant liability under U.S. GAAP. However, we believe the pricing disparity observed between our fair value estimate and the limited OTC market transactions indicates that the estimated fair value of the warrant liability value is subject to change in the future and may not necessarily be representative of what a warrant holder can expect to receive or an interested investor can expect to pay in the marketplace.

Financial Overview

Since our inception in 2006, we have devoted substantially all of our efforts to developing our nitric oxide platform technology and resulting product candidates, including conducting preclinical and clinical trials and providing general and administrative support for these operations. We conduct these activities in a single operating segment. We have not generated any revenue from product sales and, to date, have funded our operations through a variety of sources described in further detail within the "Liquidity and Capital Resources" section below. From inception through March 31, 2018, we have raised total equity and debt proceeds of $183.9 million to fund our operations, including $35.2 million in net proceeds from the recent sale of common stock and accompanying warrants in the January 2018 Offering. Other historical forms of funding have included payments received from licensing and supply arrangements, government research contracts and grants and contract development manufacturing services. We have never generated revenue from product sales and have incurred net losses in each year since inception. As of March 31, 2018, we had an accumulated deficit of $164.9 million. We incurred net losses of $5.2 million and $11.4 million in the three months ended March 31, 2018 and 2017, respectively. We expect to continue to incur substantial losses in the future as we conduct our planned operating activities. We do not expect to generate revenue from product sales unless and until we obtain regulatory approval from the FDA for our clinical-stage product candidates. If we obtain regulatory approval for any of our product candidates, we expect to incur significant commercialization expenses related to product sales, marketing, manufacturing and distribution.

In addition, we expect that we will continue to incur substantial expenses as we continue clinical trials and preclinical studies for, and research and development of, our product candidates and maintain, expand and protect our intellectual property portfolio. As a result, in addition to the proceeds that we recently received in the January 2018 Offering, we will need substantial additional funding to support our planned and future operating activities. Adequate future funding may not be available to us on acceptable terms, or at all. The current market value of our common stock may negatively impact funding options and the acceptability of funding terms. Additionally, we expect future advancement of certain of our product candidates to occur after the formation of partnering, collaborations, licensing, grants or other strategic relationships or through equity or debt financings. Our failure to enter into such relationships, or our failure to obtain sufficient additional funds on acceptable terms as and when needed could cause us to alter or

reduce our planned operating activities, including but not limited to delaying, reducing, terminating or eliminating planned product candidate development activities, to conserve our cash and cash equivalents. Such actions could delay development timelines and have a material adverse effect on our business, results of operations, financial condition and market valuation. As further discussed in our condensed consolidated financial statements and related footnotes included in this Quarterly Report on Form 10-Q, these matters raise substantial doubt about our ability to continue as a going concern.

Components of our Results of Operations

Revenue

License and collaboration revenue consists of the amortization of a non-refundable $10.8 million upfront payment received under the Sato Agreement. The material terms of the Sato Agreement and related revenue recognition are described within "Note 3—Collaboration Arrangements" and "Note 4—Revenue Recognition" to our condensed consolidated financial statements included in this Quarterly Report on Form 10-Q. The $10.8 million upfront consideration under this agreement, along with the expected milestone payment of approximately $2.2 million, are being recognized on a straight-line basis over the estimated performance period of approximately five years, from February 2017 through the first quarter of 2022.

Research and development services revenue is associated with the master development services and clinical supply agreement and related statements of work we entered into with KNOW Bio, or collectively the KNOW Bio Services Agreement. Under the KNOW Bio Services Agreement, we are providing certain development and manufacturing services to KNOW Bio in exchange for service fees. Although existing services have contractual budget estimates totaling approximately $0.9 million, the service fees are billed on a cost-plus basis based on actual time and materials incurred by us. We recognized approximately $0.4 million of services revenue during the year ended December 31, 2017. In January 2018, upon request by KNOW Bio, we stopped performing remaining development or manufacturing services contemplated under the Services Agreement and we cannot currently estimate if or when we may perform further services for KNOW Bio under existing or future statements of work. We do not expect the fees we may receive under the KNOW Bio Services Agreement, if any, to significantly increase the period over which our cash and cash equivalents can fund our operating expenses. Our accounting policies pertaining to KNOW Bio are included in "Note 1—Organization and Significant Accounting Policies" to the accompanying condensed consolidated financial statements included in this Quarterly Report on Form 10-Q.

We recently adopted the new revenue recognition standard, ASC Topic 606, which became effective January 1, 2018. See "Note 1—Organization and Significant Accounting Policies" and "Note 4—Revenue Recognition" to our condensed consolidated financial statements included elsewhere in this Quarterly Report on Form 10-Q for details regarding adoption of the new standard.

Research and Development Expenses

Since our inception, we have focused our resources on our research and development activities, including conducting preclinical studies and clinical trials, manufacturing development efforts and activities related to regulatory filings for our product candidates. Research and development expenses, including those paid to third parties for which there is no alternative use, are expensed as they are incurred. Research and development expenses include:

- external research and development expenses incurred under agreements with contract research organizations, investigative sites and consultants to conduct our clinical trials and preclinical and non-clinical studies;
- costs to acquire, develop and manufacture supplies for clinical trials and preclinical studies, including fees paid to contract manufacturing organizations;
- legal and other professional fees related to compliance with FDA requirements;
- licensing fees and milestone payments incurred under license agreements;
- salaries and related costs, including share-based compensation and travel expenses, for personnel in our research and development functions; and
- facilities, depreciation and other allocated expenses, which include direct and allocated expenses for rent, maintenance of facilities, utilities, equipment and other supplies.

From inception through March 31, 2018, we have incurred approximately $120.2 million in research and development expenses to develop, expand or otherwise improve our nitric oxide platform and resulting product candidates, as well as costs incurred to generate research and development services revenue. The table below sets forth our external research and development expenses incurred for current product candidates and unallocated internal research and development expenses for the three months ended March 31, 2018 and 2017. All research and development salaries and related personnel costs, as well as certain manufacturing costs, facilities expenses and costs incurred to generate research and development services revenue, are included in unallocated internal research and development expenses.

	Three Months Ended March 31,	
	2018	2017
	(in thousands)	
External:		
SB204	$ 600	$ 3,232
SB206	1,083	(315)
SB208	15	206
SB414	785	575
Unallocated internal research and development expenses	3,852	3,248
Total research and development expenses	$ 6,335	$ 6,946

We expect that for the foreseeable future, the substantial majority of our research and development efforts will be focused on our current clinical programs and our future pipeline development. Major clinical and preclinical development activities conducted during the three months ended March 31, 2018 are summarized as follows:

- For SB204, we completed a non-clinical long-term carcinogenicity study and began preparing for manufacture of clinical trial materials associated with the anticipated Phase 3 program described in the preceding section entitled "Overview—Key Product Candidate Development Updates."
- For SB206, we commenced a Phase 2 clinical trial for the treatment of molluscum contagiosum with top line results targeted in the fourth quarter of 2018. We also conducted and initiated certain non-clinical activities evaluating SB206's potential as a therapy for HPV-associated sexually transmitted infections.
- For SB414, we fully enrolled and completed patient treatment in a Phase 1b clinical trial to evaluate SB414 cream for the treatment of psoriasis, followed by receipt of preliminary topline results in May 2018. We also continued to conduct a Phase 1b clinical trial to evaluate SB414 cream for the treatment of atopic dermatitis with targeted top line results in the third quarter of 2018.

We expect to incur substantial research and development expenses in the future as we develop our clinical product candidates and for other existing or future product candidates. In particular, we expect to continue to incur substantial external development service provider fees and other research and development costs in 2018 for ongoing activities summarized in the development plan in the "Overview—Key Product Candidate Development Updates" section above. Further, the future advancement of SB204 and SB208 product candidates are subject to our ability to identify partnerships, collaborations or other strategic relationships currently being explored. We may decide to revise our plans or the related timing, depending on information we learn through our research and development activities, our ability to access additional capital, our ability to enter into strategic arrangements and our financial priorities.

The successful development of our product candidates is highly uncertain. At this time, we cannot reasonably estimate the nature, timing or costs required to complete the remaining development of our current product candidates or any future product candidates. This is due to the numerous risks and uncertainties associated with the development of product candidates. See the "Risk Factors" section in our Annual Report on Form 10-K filed with the SEC on March 27, 2018, for a discussion of the risks and uncertainties associated with our research and development projects.

General and Administrative Expenses

Our general and administrative expenses consist primarily of salaries and related costs, including share-based compensation and travel expenses for personnel in our executive, finance, commercial, corporate development and other administrative functions. Other general and administrative expenses include allocated depreciation and facility-related costs, legal costs of pursuing patent protection of our intellectual property, insurance coverage and professional services fees for auditing, tax, general legal, litigation defense and other corporate and administrative services.

We expect to continue to incur substantial general and administrative expenses in 2018 in support of our product development operating activities and as necessary to operate in a public company environment. Significant general and administrative expenses associated with operations in a public company environment include legal, accounting, regulatory and tax-related services associated with maintaining compliance with exchange listing and SEC requirements, directors' and officers' liability insurance premiums and investor relations activities. In addition, we expect litigation defense fees to increase during 2018 as we vigorously defend the putative stockholder class action lawsuits as described in the section entitled "Legal Proceedings" of this Quarterly Report on Form 10-Q.

Other Income (Expense), net

Other income (expense), net consists primarily of (i) fair value adjustments to our warrant liability (ii) lease interest expense on our primary facility lease financing obligation, (iii) interest income earned on cash and cash equivalents and (iv) other miscellaneous income and expenses. We expect to continue to incur interest expense on our primary facility lease financing obligation during 2018 and through the remainder of the initial lease term that expires in 2026.

Results of Operations

Comparison of Three Months Ended March 31, 2018 and 2017

The following table sets forth our results of operations for the periods indicated:

	Three Months Ended March 31,			
	2018	2017	$ Change	% Change
	(in thousands, except percentages)			
License and collaboration revenue	$ 649	$ 324	$ 325	100%
Research and development services revenue	9	—	9	100%
Total revenue	658	324	334	103%
Operating expenses:				
Research and development	6,335	6,946	(611)	(9)%
General and administrative	2,880	4,531	(1,651)	(36)%
Total operating expenses	9,215	11,477	(2,262)	(20)%
Operating loss	(8,557)	(11,153)	2,596	23%
Other income (expense), net:				
Interest income	44	27	17	63%
Interest expense	(262)	(262)	—	0%
Change in fair value of warrant liability	3,558	—	3,558	100%
Other income, net	—	5	(5)	(100)%
Total other income (expense), net	3,340	(230)	3,570	(1552)%
Net loss	$ (5,217)	$ (11,383)	$ 6,166	54%

Revenue

License and collaboration revenue of $0.6 million and $0.3 million for the three months ended March 31, 2018 and 2017, respectively, represents amortization of a non-refundable upfront payment and expected milestone payment under the Sato Agreement that was entered into during the first quarter of 2017. Research and development services revenue of less than $0.1 million for the three months ended March 31, 2018, is associated with the completion of certain development services performed under the KNOW Bio Services Agreement. There were no research and development services revenues earned during the three months ended March 31, 2017.

Research and development expenses

Research and development expenses were $6.3 million for the three months ended March 31, 2018, compared to $6.9 million for the three months ended March 31, 2017. The decrease of $0.6 million was primarily due to the completion of certain clinical trials in our active development programs, including the two parallel Phase 3 pivotal trials and the long-term safety trial in the SB204 program, which resulted in a decrease of $2.6 million and the Phase 2 clinical trial for SB208, which resulted in a decrease of $0.2 million. These program costs were partially offset by an increase of $1.4 million in our SB206 program due to the commencement of a Phase 2 trial in molluscum contagiosum and an increase of $0.2 million in our SB414 development program as we advanced from pre-clinical study activities during the first quarter of 2017 to the conduct of two Phase 1b clinical trials in patients with psoriasis and atopic dermatitis during the first quarter of 2018.

We also had an increase in unallocated internal research and development expenses of $0.6 million due to a $0.1 million increase in research and development personnel costs and $0.5 million increase in facility and manufacturing costs. The $0.1 million increase in personnel costs is primarily due to increased personnel and related costs to support and administer our active development programs. The increase of $0.5 million in facility and manufacturing costs is associated with certain activities in the first quarter of 2018 that focused on optimizing the quality and efficiency of our drug substance and drug product manufacturing capabilities.

General and administrative expenses

General and administrative expenses were $2.9 million for the three months ended March 31, 2018, compared to $4.5 million for the three months ended March 31, 2017. The decrease of approximately $1.6 million was primarily due to a $0.8 million decrease in general and administrative personnel and related costs, a $0.5 million decrease in professional services, insurance, board compensation and other administrative costs necessary to support our operations as a public company, a $0.2 million decrease in market research and related costs and $0.1 million decrease in general corporate costs.

The $0.8 million decrease in general and administrative personnel and related costs is primarily due to (i) fewer general and administrative employees in the first quarter of 2018, as compared to the first quarter of 2017, and (ii) reduced non-cash stock compensation expense primarily due to the depressed stock option award valuations following the decline in our common stock price between the comparative periods. To align with our current operating strategy, we took various organizational structure repositioning actions subsequent to the first quarter of 2017, including an employee workforce reduction that occurred in the second quarter of 2017. As a result, we have fewer general and administrative employees, and therefore less associated personnel compensation costs, in the first quarter of 2018. Personnel and related costs in the comparative periods also included certain discrete cash and non-cash charges that resulted in a net decrease of $0.1 million. In the first quarter of 2017, we recognized a discrete accrued cash severance charge of $0.4 million and a discrete $0.3 million non-cash stock compensation charge associated with the departure of our former Chief Financial Officer. In the first quarter of 2018, we recognized and paid a discrete cash severance charge of $0.4 million and $0.2 million discrete non-cash stock compensation charge associated with the departure of our former Chief Commercial Officer.

Other income (expense), net

Other income (expense), net was $3.3 million income for the three months ended March 31, 2018, compared to $0.2 million expense for the three months ended March 31, 2017. The net income increase of approximately $3.6 million was primarily due to the change in fair value of the warrant liability.

Liquidity and Capital Resources

Since our inception through March 31, 2018, we have financed our operations primarily with $183.9 million in net proceeds from the issuance and sale of equity securities and convertible debt securities, including $35.2 million in net proceeds from the sale of common stock and accompanying warrants in the January 2018 Offering and $44.6 million in net proceeds from the sale of common stock in our 2016 initial public offering. Other historical forms of funding have included payments received from licensing and supply arrangements and government research contracts and grants. We received an upfront payment of approximately $10.8 million following the execution of the Sato Agreement in the first quarter of 2017 for the exclusive right to develop, use and sell SB204 in certain topical dosage forms in Japan for the treatment of acne vulgaris.

As of March 31, 2018, we had $28.1 million of cash and cash equivalents. We believe that cash on hand as of March 31, 2018, will provide us with adequate liquidity to fund our planned operating needs into the second quarter of 2019. However, as described in the section below entitled “Capital Requirements,” we have concluded that the prevailing conditions and ongoing liquidity risks we face raise substantial doubt about our ability to continue as a going concern. We anticipate that we will need substantial additional funding to continue our operating activities and make further advancements in each of our drug development programs.

Our cash and cash equivalents are held in a variety of interest-bearing instruments, including money market accounts. Cash in excess of immediate requirements is invested with a view toward liquidity and capital preservation, and we seek to minimize the potential effects of concentration and degrees of risk.

On January 9, 2018, we completed a public offering of our common stock and warrants under our effective shelf registration statement on Form S-3. We sold an aggregate of 10,000,000 shares of common stock and warrants to purchase up to 10,000,000 shares of our common stock at a public offering price of $3.80 per share of common stock and accompanying warrant. The warrant exercise price is $4.66 per share and the warrants will expire four years from the date of issuance. Net proceeds from the offering were approximately $35.2 million after deducting underwriting discounts and commissions and offering expenses of approximately $2.8 million.

Facility Lease Financing

Our approximately 51,000 square foot leased facility in Morrisville, North Carolina serves as our corporate headquarters and sole research, development and manufacturing facility. We have accounted for the lease for this facility as a capitalized asset and a corresponding facility financing obligation on our balance sheets. We began recognizing interest expense associated with this financing obligation in the first quarter of 2017, following completion of the build-out phase in December 2016. See "Note 1—Organization and Significant Accounting Policies" and "Note 6—Commitments and Contingencies" to the condensed consolidated financial statements included in this Quarterly Report on Form 10-Q for further discussion of the accounting for this lease.

Cash Flows

The following table sets forth our cash flows for the periods indicated:

	Three Months Ended March 31,	
	2018	2017
	(in thousands)	
Net cash (used in) provided by:		
operating activities	$ (9,648)	$ (3,964)
investing activities	(140)	(578)
financing activities	35,364	19
Net increase (decrease) in cash and cash equivalents	$ 25,576	$ (4,523)

Net Cash Used in Operating Activities

During the three months ended March 31, 2018, net cash used in operating activities was $9.6 million and consisted primarily of a net loss of $5.2 million, with adjustments for non-cash amounts related primarily to depreciation expense of $0.4 million, stock-based compensation expense of $0.9 million, decrease in fair value of warrant liability of $3.6 million and a $2.2 million net decrease in other operating assets and liabilities. The net decrease in assets and liabilities was primarily due to a $1.2 million decrease in accrued compensation following the payment of annual employee bonuses in the first quarter of 2018, a $0.6 million decrease in other accrued expenses following the payment of various accrued expenses in the first quarter of 2018, including $0.2 million in travel costs paid to Malin, and a $0.6 million decrease in deferred revenue associated with the continued recognition of licensing revenues from the Sato Agreement during the first quarter of 2018.

During the three months ended March 31, 2017, net cash used in operating activities was $4.0 million and consisted primarily of a net loss of $11.4 million, with adjustments for non-cash amounts related primarily to depreciation expense of $0.3 million, stock-based compensation expense of $1.3 million and a $5.9 million net increase in assets and liabilities. The net increase in assets and liabilities was primarily due to receipt of an upfront payment of $10.8 million following the execution of the Sato Agreement. This increase was partially offset by decreases in accounts payable and accrued expense balances associated with our outside research and development activities during the period, including a $3.0 million decrease in outside research and development services. The decrease in payables and accruals for these services was primarily related to the completion of two identically designed Phase 3 pivotal trials in our SB204 program and the Phase 2 clinical trial in our SB206 program.

Net Cash Used in Investing Activities

During the three months ended March 31, 2018, net cash used in investing activities was $0.1 million, which related to purchases of laboratory equipment and leasehold improvements at our facility in Morrisville, North Carolina. In addition, we have approximately $0.2 million of purchases of property and equipment in accounts payable and accrued expenses as of March 31, 2018, which we expect to settle through cash disbursements made during the second quarter of 2018.

During the three months ended March 31, 2017, net cash used in investing activities was $0.6 million, which related to purchases of property and equipment. The purchases of property and equipment are primarily associated with leasehold improvements and laboratory equipment needed to support our research, development and manufacturing capabilities at our facility in Morrisville, North Carolina.

Net Cash Provided by Financing Activities

During the three months ended March 31, 2018, net cash provided by financing activities was $35.4 million, consisting primarily of net proceeds from the January 2018 Offering after deducting underwriting discounts and offering expenses.

During the three months ended March 31, 2017, net cash provided by financing activities was less than $0.1 million and consisted primarily of proceeds from the exercise of stock options.

Capital Requirements

To date, we have not generated any revenue from product sales. We do not know when, or if, we will generate any revenue from product sales. We do not expect to generate revenue from product sales unless and until we obtain regulatory approval of and commercialize one of our current or future product candidates. We anticipate that we will continue to generate losses for the foreseeable future, and we expect the losses to increase as we continue the development of, and seek regulatory approvals for, our product candidates and begin to commercialize any approved products. We are subject to all of the risks incident in the development of new pharmaceutical products, and we may encounter unforeseen expenses, difficulties, complications, delays and other unknown factors that may adversely affect our business.

Our primary use of cash is to fund our operating expenses, which consist principally of research and development expenditures necessary to advance our clinical-stage product candidates. Based upon our current operating plan, we anticipate our existing cash and cash equivalents are sufficient to fund our operations into the second quarter of 2019. We are utilizing our existing capital resources to fund the ongoing and near-term development activities in our core programs, as described in the "Overview" section above. In addition to the net proceeds from the January 2018 Offering, we anticipate that we will need substantial additional funding to continue our operating activities and make further advancements in each of our drug development programs. Further advancement of these development programs is dependent upon our ability to access additional capital through non-dilutive sources, including partnerships, collaborations, licensing, grants or other strategic relationships, or through the issuance of debt or equity securities. We may decide to revise our activities or their timing depending on the availability of additional funding, partnership opportunities and our financial priorities. We are exploring potential non-dilutive business development activities around clinical-stage assets in our platform, including various geographic and indication-specific opportunities. There can be no assurance that we will be able to obtain additional capital on terms acceptable to us, on a timely basis or at all. A failure to obtain sufficient funds on acceptable terms when needed could cause us to alter or reduce our planned operating activities, including but not limited to delaying, reducing, terminating or eliminating planned product candidate development activities to conserve our cash and cash equivalents. Our anticipated expenditure levels may change if we make adjustments to our current operating plan. As of March 31, 2018, we had an accumulated deficit of $164.9 million and there is substantial doubt about our ability to continue as a going concern if we do not secure adequate additional financing.

We have based our projections of operating capital requirements on assumptions that may prove to be incorrect and we may use all of our available capital resources sooner than we expect. Because of the numerous risks and uncertainties associated with research, development and commercialization of pharmaceutical products, we are unable to estimate the exact amount of our operating capital requirements. Our future funding requirements will depend on many factors, including, but not limited to:

- the initiation, progress, timing, costs, results, and evaluation of results of trials for our clinical-stage product candidates, including trials conducted by us or potential future partners;
- the progress, timing, costs and results of development and preclinical study activities relating to other potential applications of our nitric oxide platform;
- the number and characteristics of product candidates that we pursue;
- our ability to enter into strategic relationships for the continued development of certain product candidates and the success of those arrangements, including our ability to enter into a strategic arrangement, whether through the contemplated arrangement, or another one, to finance and support the SB204 development necessary to achieve the objectives described in the section entitled "Overview—Key Product Candidate Development Updates" above;
- our success in scaling our manufacturing process;
- the outcome, timing and costs of seeking regulatory approvals;
- the occurrence and timing of potential development and regulatory milestones achieved by Sato, our licensee for SB204 in Japan;
- the terms and timing of any future collaborations, licensing, consulting or other arrangements that we may enter into;
- the amount and timing of any payments we may be required to make, or that we may receive, in connection with the licensing, filing, prosecution, defense and enforcement of any patents or other intellectual property rights;
- the costs of preparing, filing and prosecuting patent applications, maintaining and protecting our intellectual property rights;

- defending against intellectual property related claims;
- the costs associated with our securities litigation, and the outcome of that litigation;
- the extent to which we in-license or acquire other products and technologies; and
- subject to receipt of marketing approval, revenue received from commercial sales or out licensing of our product candidates.

We also expect to incur capital expenditures as we continue to invest in information technology systems and equipment at our corporate headquarters and manufacturing facility in Morrisville, North Carolina.

Contractual Obligations and Contingent Liabilities

Except for compensatory obligations described in "Note 6—Commitments and Contingencies" to the accompanying condensed consolidated financial statements included in this Quarterly Report on Form 10-Q, there were no material changes during the three months ended March 31, 2018 in our commitments under contractual obligations, as disclosed in "Management's Discussion and Analysis of Financial Condition and Results of Operations" contained in our Annual Report on Form 10-K filed with the SEC on March 27, 2018.

Off-Balance Sheet Arrangements

We did not have during the periods presented, and we do not currently have, any off-balance sheet arrangements, as defined under SEC rules.

Jumpstart Our Business Startups Act of 2012 (JOBS Act)

In April 2012, the JOBS Act was signed into law. The JOBS Act contains provisions that, among other things, reduce certain reporting requirements for an "emerging growth company." As an "emerging growth company," we are electing not to take advantage of the extended transition period afforded by the JOBS Act for the implementation of new or revised accounting standards, 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 public companies. Section 107 of the JOBS Act provides that our decision not to take advantage of the extended transition period is irrevocable. We have chosen to rely on the other exemptions and reduced reporting requirements provided by the JOBS Act. Subject to certain conditions set forth in the JOBS Act, as an "emerging growth company" we are not required to, among other things, (i) provide an auditor's attestation report on our system of internal controls over financial reporting pursuant to Section 404 of the Sarbanes-Oxley Act, (ii) provide all of the compensation disclosure that may be required of non-emerging growth public companies under the Dodd-Frank Act, (iii) comply with any requirement that may be adopted by the Public Company Accounting Oversight Board regarding mandatory audit firm rotation or a supplement to the auditor's report providing additional information about the audit and the financial statements (auditor discussion and analysis) and (iv) disclose certain executive compensation-related items, such as the correlation between executive compensation and performance and comparisons of the chief executive officer's compensation to median employee compensation. We may remain an emerging growth company until the last day of 2021. However, if certain events occur prior to such date, including if we become a "large accelerated filer," our annual gross revenue equals or exceeds $1.07 billion or we issue more than $1.07 billion of non-convertible debt in any three-year period, we will cease to be an emerging growth company prior to such date.

Critical Accounting Policies and Use of Estimates

Our management's discussion and analysis of financial condition and results of operations is based on our financial statements, which have been prepared in accordance with accounting principles generally accepted in the United States, or U.S. GAAP. The preparation of these financial statements requires us to make estimates and assumptions that affect the reported amounts of assets and liabilities and the disclosure of contingent assets and liabilities at the date of the financial statements, as well as the reported revenue and expenses during the reporting periods. These items are monitored and analyzed by us for changes in facts and circumstances, and material changes in these estimates could occur in the future. We base our estimates on historical experience and on various other factors that we believe are reasonable under the circumstances, the results of which form the basis for making judgments about the carrying value of assets and liabilities that are not readily apparent from other sources. Changes in estimates are reflected in reported results for the period in which they become known. Actual results may differ materially from these estimates under different assumptions or conditions. Our significant accounting policies are more fully described in "Note 1—Organization and Significant Accounting Policies" to the condensed consolidated financial statements included in this Quarterly Report on Form 10-Q and in "Note 1—Organization and Significant Accounting Policies" to our audited consolidated financial statements contained in our Annual Report on Form 10-K filed with the SEC on March 27, 2018. During the three months ended March 31, 2018, there were no material changes to our critical accounting policies, except as presented below:

Revenue Recognition

Effective January 1, 2018, we adopted FASB ASC Topic 606, *Revenue from Contracts with Customers*, and established our revenue recognition accounting policy pursuant to this new standard. Our policy, and related significant judgments and estimates used to recognize revenue under our policy, is described in "Note 1—Organization and Significant Accounting Policies" and "Note 4—Revenue Recognition" to the condensed consolidated financial statements included in this Quarterly Report on Form 10-Q.

Fair Value of Warrant Liability

On January 9, 2018, we issued warrants to purchase 10,000,000 shares of common stock at an exercise price of $4.66, which expire four years from the date of issuance. The warrants include certain provisions that provide the warrant holder with the optional right to settle any unexercised warrants for cash in the event of a fundamental transaction, as defined in the warrant agreement and associated form of warrant. Due to this provision, the warrants are recorded as a liability on our condensed consolidated balance sheet at the estimated fair value on the date of issuance and are re-valued as of each subsequent reporting period with adjustments to the fair value recognized as an unrealized gain or loss within our condensed consolidated statements of operations.

The fair value of the warrants is estimated using a valuation model that approximates a Monte Carlo simulation model, which takes into consideration the probability of a fundamental transaction occurring during the contractual term of the warrants. The valuation model includes estimates and assumptions related to expected stock price volatility, fair value of our underlying common stock, expected life of the warrants, risk-free interest rate and dividend yield. Our estimates underlying the assumptions used in the valuation model are subject to risks and uncertainties and may change over time. Such changes could have a significant effect on our reported net losses in future periods. See "Note 8—Warrants" for the significant assumptions used in estimating the fair value of the warrants and see "Note 1—Organization and Significant Accounting Policies" for our accounting policy pertaining to the fair value of financial instruments, both of which are notes to our condensed consolidated financial statements included in this Quarterly Report on Form 10-Q.

The probability of a fundamental transaction occurring during the remaining contractual term of the warrants is based on our judgment and takes into consideration the risk-adjusted probability of success within our drug development programs. An increase in the probability of occurrence of a fundamental transaction will increase the fair value of the warrants. Expected stock price volatility is based on the actual historical volatility of a group of comparable publicly traded companies observed over a historical period equal to the expected remaining life of the warrant. The fair value of the underlying common stock is the published closing market price on the Nasdaq Global Market as of each reporting date. The risk-free interest rate is based on the U.S. Treasury yield curve in effect on the date of valuation equal to the remaining expected life of the warrants. An increase in the expected stock price volatility, fair value of the underlying common stock or risk-free interest rate will increase the fair value of the warrants. The dividend yield percentage is zero because we do not currently pay dividends nor do we intend to do so during the expected term of the warrants. The expected life of the warrants is assumed to be equivalent to their remaining contractual term. All other assumptions held constant, the fair value of the warrants will decrease as the remaining contractual term decreases.

Recent Accounting Pronouncements

Recently issued accounting pronouncements that we have adopted or are currently evaluating are described in detail within "Note 1—Organization and Significant Accounting Policies" to the accompanying unaudited condensed consolidated financial statements included in Item 1 of this Quarterly Report on Form 10-Q.

Item 3. Quantitative and Qualitative Disclosures About Market Risk

We are exposed to market risks in the ordinary course of our business. Our primary exposure to market risk is currently limited to our cash and cash equivalents, all of which have maturities of less than three months. The primary objectives of our investment activities are the preservation of principal and maintenance of liquidity for the purpose of funding operations and maximizing total return. The related interest income sensitivity is affected by changes in the general level of short-term U.S. interest rates. We place our cash and cash equivalents with high-credit quality financial institutions. Our investment policy prohibits us from holding corporate bonds, auction rate securities, asset-backed securities, municipal obligations, structured investment vehicles, extendable commercial paper or collateralized debt/loan obligations.

As of March 31, 2018, we had cash and cash equivalents of $28.1 million. We believe that an immediate one percentage point increase or decrease in interest rates would not materially affect the fair value of these cash equivalents. We do not believe that our cash and cash equivalents have significant risk of default or illiquidity and do not expect our operating results or cash flows to be affected significantly by a sudden change in market interest rates. While we believe our cash and cash equivalents do not contain excessive risk, we cannot provide absolute assurance that in the future our investments will not be subject to adverse changes in fair value. In addition, we maintain significant amounts of cash and cash equivalents at one or more financial institutions that are in excess of federally insured limits.

Following the execution of the Sato Agreement in January 2017, we have become exposed to some degree of foreign exchange risk as a result of entering into transactions denominated in a currency other than U.S. dollars, particularly in Japanese yen. All foreign transactions settle on the applicable spot exchange basis at the time such payments are made, and all monetary balances are translated to U.S. dollars using the period-end exchange rate. A hypothetical 10% change in the exchange rate between the Japanese yen and the U.S. dollar during any of the periods presented would not have had a significant impact on our results of operations, financial position or financial performance.

Item 4. Controls and Procedures

(a) *Evaluation of Disclosure Controls and Procedures*

The term "disclosure controls and procedures," as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended, or the Exchange Act, refers to controls and procedures that are designed to ensure that information required to be disclosed by a company in the reports that it files or submits under the Exchange Act is recorded, processed, summarized and reported, within the time periods specified in the SEC's rules and forms. Disclosure controls and procedures include, without limitation, controls and procedures designed to ensure that such information is accumulated and communicated to a company's management, including its principal executive and principal financial officers, as appropriate to allow timely decisions regarding required disclosure.

In designing and evaluating our disclosure controls and procedures, management recognizes that disclosure controls and procedures, no matter how well conceived and operated, cannot provide absolute assurance that the objectives of the disclosure controls and procedures are met. Additionally, in designing disclosure controls and procedures, our management necessarily was required to apply its judgment in evaluating the cost-benefit relationship of possible disclosure controls and procedures. Our disclosure controls and procedures are designed to provide reasonable assurance of achieving their objectives. The design of any system of controls also is based in part upon certain assumptions about the likelihood of future events, and there can be no assurance that any design will succeed in achieving its stated goals under all potential future conditions; over time, controls may become inadequate because of changes in conditions, or the degree of compliance with policies or procedures may deteriorate. Because of the inherent limitations in a control system, misstatements due to error or fraud may occur and not be detected.

Our management, with the participation of our principal executive and financial officers, has evaluated the effectiveness of our disclosure controls and procedures as of March 31, 2018, the end of the period covered by this Quarterly Report on Form 10-Q. 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. Based upon such evaluation, our principal executive and financial officers have concluded that our disclosure controls and procedures were effective as of such date at the reasonable assurance level.

(b) *Changes in Internal Controls Over Financial Reporting*

There have not been any changes in our internal controls over financial reporting during our fiscal quarter ended March 31, 2018 that 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 subject to putative stockholder class action lawsuits that were filed in November 2017 in the United States District Court for the Middle District of North Carolina against us and certain of our current and former directors and officers, which have been consolidated under the case name *In re Novan, Inc. Securities Litigation*. A lead plaintiff has been designated, and on April 30, 2018, the lead plaintiff filed a consolidated amended complaint. The consolidated amended complaint asserts claims for violation of Sections 11 and 15 of the Securities Act of 1933 and Sections 10(b) and 20(a) of the Exchange Act and SEC Rule 10b-5 promulgated thereunder, in connection with statements related to our Phase 3 clinical trials of SB204. The consolidated amended complaint seeks, among other things, an unspecified amount of compensatory damages and attorneys' fees and costs on behalf of the putative class. We believe that the claims lack merit and intend to defend the lawsuits vigorously. However, there can be no assurance that a favorable resolution will be obtained in such lawsuits, and the actual costs may be significant.

Other than as described above, we are not currently a party to any material legal proceedings and are not aware of any claims or actions pending or threatened against us that we believe could have a material adverse effect on our business, operating results, cash flows or financial statements. In the future, we may from time to time become involved in litigation relating to claims arising from our ordinary course of business.

Item 1A. Risk Factors.

There have been no material changes to the risk factors disclosed in the Annual Report on Form 10-K filed with the SEC on March 27, 2018, except as set forth below.

We issued 10,000,000 warrants to purchase our common stock in January 2018 and these warrants must be revalued each reporting period. Such valuations involve the use of estimates, assumptions, probabilities and application of complex accounting principles that could differ materially from actual results.

On January 9, 2018, we sold an aggregate of 10,000,000 shares of common stock and warrants to purchase up to 10,000,000 shares of our common stock at a public offering price of $3.80 per share of common stock and accompanying warrant. Due to certain provisions contained in the warrant agreement, the warrants are classified as a liability in the accompanying condensed consolidated balance sheets in this Quarterly Report on Form 10-Q. The valuation of the warrant liability is determined using estimates, assumptions, probabilities and application of complex accounting principles. The actual value received by us at the time the warrants are exercised could vary significantly from the value assigned to the warrant liability on a quarterly basis. In addition, the warrant liability is revalued at each reporting period and the resulting non-cash gain or loss is recorded in the accompanying condensed consolidated statements of operations and comprehensive loss in this Quarterly Report on Form 10-Q. We cannot be certain that the valuation of the warrant liability and related unrealized gains and losses recognized each reporting period will not differ significantly from the actual value realized upon exercise or expiration of the warrants, which could significantly affect our reported net losses in future periods. Further, the reported fair value of the warrant liability may not necessarily be representative of what a warrant holder can expect to receive or an interested investor can expect to pay in the marketplace.

Item 2. Unregistered Sales of Equity Securities and Use of Proceeds

Unregistered Sales of Equity Securities

None.

Issuer Purchases of Equity Securities

None.

Item 3. Defaults Upon Senior Securities.

Not applicable.

Item 4. Mine Safety Disclosures.

Not applicable.

Item 5. Other Information.

None.

Item 6. Exhibits

The following exhibits are being filed herewith or are being incorporated by reference and are numbered in accordance with Item 601 of Regulation S-K:

EXHIBIT NO.	DESCRIPTION	FILED HEREWITH	INCORPORATED BY REFERENCE			
			FORM	FILE NO.	EXHIBIT	FILING DATE
4.1	Warrant Agreement, by and between Novan, Inc. and American Stock Transfer & Trust Company, LLC, dated January 9, 2018.		8-K	001-37880	4.1	January 9, 2018
10.1	Employment Agreement, dated March 16, 2017, by and between Novan, Inc. and Paula Brown Stafford, as amended October 12, 2017 and March 14, 2018.		10-K	001-37880	10.16	March 27, 2018
10.2	Non-Employee Director Compensation Plan.		10-K	001-37880	10.17	March 27, 2018
31.1	Certification of Chief Executive Officer pursuant to Exchange Act Rules 13a-14(a) and 15d-14(a), as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.	X				
31.2	Certification of Principal Financial Officer pursuant to Exchange Act Rules 13a-14(a) and 15d-14(a), as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.	X				
32.1	Certification of Chief Executive Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.	X				
32.2	Certification of Principal Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.	X				

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the Company has duly caused this report to be signed on its behalf by the undersigned thereunto duly authorized.

Novan, Inc.

By: /s/ G. Kelly Martin
G. Kelly Martin
Chief Executive Officer
(Principal Executive Officer)

By: /s/ Jeff N. Hunter
Jeff N. Hunter
Executive Vice President and Chief Business Officer
(Principal Financial Officer)

By: /s/ Andrew J. Novak
Andrew J. Novak
Vice President and Chief Accounting Officer
(Principal Accounting Officer)

Date: May 15, 2018

Exhibit 31.1

CERTIFICATION OF PERIODIC REPORT UNDER SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, G. Kelly Martin, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Novan, Inc. (the "registrant");

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

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

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

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

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

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

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

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

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

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

Date: May 15, 2018

/s/ G. Kelly Martin
G. Kelly Martin
Chief Executive Officer
(Principal Executive Officer)

Exhibit 31.2

CERTIFICATION OF PERIODIC REPORT UNDER SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Jeff N. Hunter, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Novan, Inc. (the "registrant");

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

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

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

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

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

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

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

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

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

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

Date: May 15, 2018

/s/ Jeff N. Hunter
Jeff N. Hunter
Executive Vice President and Chief Business Officer
(Principal Financial 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

I, G. Kelly Martin, Chief Executive Officer of Novan, Inc. (the "Company"), do hereby certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that to the best of my knowledge:

(1) the Quarterly Report on Form 10-Q of the Company for the quarter ended March 31, 2018 (the "Report") fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

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

Date: May 15, 2018

/s/ G. Kelly Martin
G. Kelly Martin
Chief Executive Officer
(Principal Executive Officer)

This certification is being furnished solely to accompany the Report pursuant to 18 U.S.C. § 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, and shall not be deemed "filed" by the Company for purposes of Section 18 of the Securities Exchange Act of 1934, as amended, and shall not be incorporated by reference into any filing of the Company under the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended, whether made before or after the date of this Report, irrespective of any general incorporation language contained in such filing.

A signed original of this written statement required by Section 906 of the Sarbanes-Oxley Act of 2002 has been provided to the Company and will be retained by the Company and furnished to the Securities and Exchange Commission or its staff upon request.

Exhibit 32.2

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

I, Jeff N. Hunter, Executive Vice President and Chief Business Officer of Novan, Inc. (the "Company"), do hereby certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that to the best of my knowledge:

(1) the Quarterly Report on Form 10-Q of the Company for the quarter ended March 31, 2018 (the "Report") fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

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

Date: May 15, 2018

/s/ Jeff N. Hunter
Jeff N. Hunter
Executive Vice President and Chief Business Officer
(Principal Financial Officer)

This certification is being furnished solely to accompany the Report pursuant to 18 U.S.C. § 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, and shall not be deemed "filed" by the Company for purposes of Section 18 of the Securities Exchange Act of 1934, as amended, and shall not be incorporated by reference into any filing of the Company under the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended, whether made before or after the date of this Report, irrespective of any general incorporation language contained in such filing.

A signed original of this written statement required by Section 906 of the Sarbanes-Oxley Act of 2002 has been provided to the Company and will be retained by the Company and furnished to the Securities and Exchange Commission or its staff upon request.