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 September 30, 2018

OR

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

FOR THE TRANSITION PERIOD FROM TO

Commission File Number 001-37880

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	☒	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 November 1, 2018, there were 26,056,735 shares of the registrant's Common Stock outstanding.

Table of Contents

PART I—FINANCIAL INFORMATION

Item 1. Financial Statements

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

	September 30, 2018	December 31, 2017
ASSETS		
Current assets:		
Cash and cash equivalents	$ 12,173	$ 2,524
Prepaid expenses and other current assets	633	1,180
Total current assets	12,806	3,704
Other assets	760	806
Property and equipment, net	16,129	16,624
Total assets	$ 29,695	$ 21,134
LIABILITIES AND STOCKHOLDERS' DEFICIT		
Current liabilities:		
Accounts payable	$ 386	$ 479
Accrued compensation	1,689	2,168
Accrued outside research and development services	1,571	1,392
Accrued legal and professional fees	305	504
Other accrued expenses	1,247	1,700
Deferred revenue, current portion	2,595	2,631
Capital lease obligation, current portion	11	11
Total current liabilities	7,804	8,885
Deferred revenue, net of current portion	4,000	5,946
Capital lease obligation, net of current portion	13	21
Warrant liability	12,073	—
Other long-term liabilities	103	—
Facility financing obligation	7,998	7,998
Total liabilities	31,991	22,850
Commitments and contingencies (Notes 2, 3, 6, 9 and 10)		
Stockholders' deficit		
Preferred stock $0.0001 par value; 10,000,000 shares designated as of September 30, 2018 and December 31, 2017; 0 shares issued and outstanding as of September 30, 2018 and December 31, 2017	—	—
Common stock $0.0001 par value; 200,000,000 shares authorized as of September 30, 2018 and December 31, 2017; 26,064,109 and 16,014,908 shares issued as of September 30, 2018 and December 31, 2017, respectively; 26,054,609 and 16,005,408 shares outstanding as of September 30, 2018 and December 31, 2017, respectively	3	2
Additional paid-in capital	177,336	158,091
Treasury stock at cost, 9,500 shares as of September 30, 2018 and December 31, 2017	(155)	(155)
Accumulated deficit	(179,480)	(159,654)
Total stockholders' deficit	(2,296)	(1,716)
Total liabilities and stockholders' deficit	$ 29,695	$ 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 September 30,		Nine Months Ended September 30,	
	2018	2017	2018	2017
License and collaboration revenue	$ 648	$ 649	$ 1,946	$ 1,622
Research and development services revenue	—	218	9	286
Total revenue	648	867	1,955	1,908
Operating expenses:				
Research and development	5,697	5,193	18,208	19,101
General and administrative	3,295	2,762	8,795	10,654
Total operating expenses	8,992	7,955	27,003	29,755
Operating loss	(8,344)	(7,088)	(25,048)	(27,847)
Other income (expense), net:				
Interest income	83	22	242	78
Interest expense	(262)	(262)	(785)	(786)
Change in fair value of warrant liability	1,464	—	5,733	—
Other income, net	28	1	32	6
Total other income (expense), net	1,313	(239)	5,222	(702)
Net loss and comprehensive loss	$ (7,031)	$ (7,327)	$ (19,826)	$ (28,549)
Net loss per share, basic and diluted	$ (0.27)	$ (0.46)	$ (0.77)	$ (1.79)
Weighted-average common shares outstanding, basic and diluted	26,046,666	15,984,428	25,707,978	15,975,855

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

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

	Nine Months Ended September 30,	
	2018	**2017**
Cash flow from operating activities:		
Net loss	$ (19,826)	$ (28,549)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation and amortization	1,234	1,030
Share-based compensation	1,903	3,006
Loss on disposal and write-offs of property and equipment	93	6
Change in fair value of warrant liability	(5,733)	—
Changes in operating assets and liabilities:		
Prepaid expenses and other current assets	300	488
Accounts payable	(87)	(2,077)
Accrued compensation	(479)	(110)
Accrued outside research and development services	179	(4,561)
Accrued legal and professional fees	(61)	(103)
Other accrued expenses	(463)	(19)
Deferred revenue	(1,982)	9,203
Other long-term assets and liabilities	46	(206)
Net cash used in operating activities	(24,876)	(21,892)
Cash flow from investing activities:		
Purchases of property and equipment	(869)	(1,807)
Proceeds from the sale of property and equipment	41	8
Net cash used in investing activities	(828)	(1,799)
Cash flow from financing activities:		
Proceeds from public offering, net of underwriting fees and commissions	35,625	—
Payments related to public offering costs	(322)	(20)
Proceeds from exercise of stock options	58	67
Payments on capital lease obligation	(8)	(7)
Net cash provided by financing activities	35,353	40
Net increase (decrease) in cash, cash equivalents and restricted cash	9,649	(23,651)
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	$ 12,712	$ 11,499
Supplemental disclosure of non-cash investing and financing activities:		
Purchases of property and equipment with accounts payable and accrued expenses	$ 84	$ 105
Deferred offering costs reclassified to additional paid-in capital	$ 431	$ —
Non-cash addition to deferred offering costs	$ —	$ 90
Reconciliation to condensed consolidated balance sheets:		
Cash and cash equivalents	$ 12,173	$ 10,960
Restricted cash included in other long-term assets	539	539
Total cash, cash equivalents and restricted cash shown in the statement of cash flows	$ 12,712	$ 11,499

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

NOVAN, INC.

NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS
(unaudited)
(dollar values in thousands, except per share data)

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 consolidated balance sheet data was derived from audited financial statements but does not include all disclosures required by U.S. GAAP. Additionally, the Company's independent registered public accounting firm report for the December 31, 2017 financial statements included an explanatory paragraph indicating that there is substantial doubt about the Company's ability to continue as a going concern.

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. Restricted cash of $539 as of September 30, 2018 and December 31, 2017, consisted of funds maintained in a separate deposit account to secure a letter of credit for the benefit of the lessor of facility space leased by the Company.

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 provided certain development and manufacturing services to KNOW Bio's respiratory drug development subsidiary until the first quarter of 2018 when KNOW Bio requested that the Company stop performing services. Pursuant to applicable guidance in the Financial Accounting Standards Board ("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.

NOVAN, INC.

NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS
(unaudited)
(dollar values in thousands, except per share data)

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 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 agreed to provide certain development and manufacturing services to KNOW Bio on commercial terms. In exchange for these services, KNOW Bio agreed to pay 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.

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 Licenses" 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 September 30, 2018, the Company had an accumulated deficit of $179,480.

- 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 September 30, 2018 along with the upfront payments expected from the second amendment to the Sato Agreement will be sufficient to meet its anticipated cash requirements into the late second quarter of 2019. See "Note 12—Subsequent Events" for further details regarding this amendment.

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 from non-dilutive sources, including partnerships, collaborations, licensing, grants or other strategic relationships, or through equity or debt financings. 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 the 2018 and 2017 periods presented in the accompanying condensed consolidated financial statements.

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 condensed consolidated financial statements have been prepared in accordance with U.S. GAAP and applicable rules and regulations of the Securities and Exchange Commission's ("SEC") Rule 10-01 of Regulation S-X for interim financial information. The condensed consolidated financial statements were prepared 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 and its results of operations and cash flows. The results of operations for interim periods 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 for the year ended December 31, 2017 set forth in the Company's Annual Report on Form 10-K filed with the SEC 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 condensed 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 expenses 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 costs 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, upfront fees allocated to the license when the license is transferred to the customer and the customer is able to use and benefit from the license. 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, allocated facility costs, laboratory and manufacturing materials and supplies, 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 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, considering 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 September 30, 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.

NOVAN, INC.

NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS
(unaudited)
(dollar values in thousands, except per share data)

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

Equity-Based Awards

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 condensed consolidated statements of operations and comprehensive loss 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.

NOVAN, INC.

NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS
(unaudited)
(dollar values in thousands, except per share data)

Liability-Based Awards

Stock appreciation rights ("SARs") that include cash settlement features, such as those described in "Note 9—Share-Based Compensation," are accounted for as liability-based awards pursuant to ASC 718 *Share Based Payments*. The fair value of such SARs is estimated using a Black-Scholes option-pricing model on each financial reporting date using expected volatility, risk-free interest rate, expected life and fair value per share assumptions.

The fair value of obligations under the Tangible Stockholder Return Plan are estimated using a Monte Carlo simulation approach. The Company's common stock price is simulated under the Geometric Brownian Motion framework under each simulation path. The other assumptions for the Monte Carlo simulation include the risk-free interest rate, estimated volatility and the expected term. See additional description of the accounting treatment of the Tangible Stockholder Return Plan in "Note 10—Tangible Stockholder Return Plan."

The fair value of each liability award is estimated with a valuation model that uses certain assumptions, such as the award date, expected volatility, risk-free interest rate, expected life of the award 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 term. In evaluating similarity, the Company considered factors such as industry, stage of life cycle, financial leverage, size and risk profile. The expected term for liability-based awards is the estimated contractual life. The risk-free rate is based on the U.S. Treasury yield curve during the expected life of the award.

Income Taxes

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 did not record a federal or state income tax benefit for the three and nine months ended September 30, 2018 and 2017 due to its conclusion that a full valuation allowance is required against the Company's deferred tax assets.

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.

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 September 30, 2018 and December 31, 2017, the Company accrued no interest or 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.

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.

NOVAN, INC.

NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS
(unaudited)
(dollar values in thousands, except per share data)

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 of 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 anti-dilutive 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 and nine months ended September 30, 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.

	September 30,	
	2018	2017
Warrants to purchase common stock associated with January 2018 public offering (Note 8)	10,000,000	—
Stock options outstanding under the 2008 and 2016 Plans (Note 9)	1,626,488	1,333,153
Inducement options outstanding (Note 9)	100,500	—

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 $648 and $1,946 during the three and nine months ended September 30, 2018, respectively, and $649 and $1,622 during the three and nine months ended September 30, 2017, respectively. During the three and nine months ended September 30, 2018, substantially all revenue was generated from the Company's licensing partner in Japan. During the three and nine months ended September 30, 2017, approximately 75% and 85% of total revenue was generated from its licensing partner, respectively.

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.

NOVAN, INC.

NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS
(unaudited)
(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 September 30, 2017			Nine Months Ended September 30, 2017		
	As Reported	Adjustments	As Adjusted	As Reported	Adjustments	As Adjusted
License and collaboration revenue	$ 532	$ 117	$ 649	$ 1,233	$ 389	$ 1,622
Research and development services revenue	218	—	218	286	—	286
Total revenue	750	117	867	1,519	389	1,908
Operating expenses:						
Research and development	5,193	—	5,193	19,101	—	19,101
General and administrative	2,762	—	2,762	10,654	—	10,654
Total operating expenses	7,955	—	7,955	29,755	—	29,755
Operating loss	(7,205)	117	(7,088)	(28,236)	389	(27,847)
Other expense, net	(239)	—	(239)	(702)	—	(702)
Net loss and comprehensive loss	$ (7,444)	$ 117	$ (7,327)	$ (28,938)	$ 389	$ (28,549)
Net loss per share, basic and diluted	$ (0.47)	$ 0.01	$ (0.46)	$ (1.81)	$ 0.02	$ (1.79)
Weighted-average common shares outstanding, basic and diluted	15,984,428	—	15,984,428	15,975,855	—	15,975,855

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 Accounting Standards Update ("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 the Company's 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 was 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.

NOVAN, INC.

NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS
(unaudited)
(dollar values in thousands, except per share data)

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 was 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. In July 2018, the FASB issued ASU No. 2018-10, *Codification Improvements to Topic 842, Leases* and ASU 2018-11, *Leases (Topic 842): Targeted Improvements,* to provide expanded or clarifying guidance associated with the application of certain principles. These ASUs are effective for annual reporting periods beginning after December 15, 2018 and early adoption is permitted. We expect to elect the "package of practical expedients," which permits us to forgo reassessment of our prior conclusions about lease identification, lease classification and initial direct costs for leases entered into prior to the effective date. Additionally, we expect to elect the practical expedient to not provide comparative reporting periods and therefore financial information will not be updated and the disclosures required under the new standard will not be provided for dates and periods before January 1, 2019. The Company has been reviewing all material leases, the ASU practical expedient guidelines, current accounting policy elections, and evaluating the impact of the adoption of these ASUs on its condensed consolidated financial statements.

In June 2018, the FASB issued ASU No. 2018-07 *Compensation-Stock Compensation (Topic 718): Improvements to Nonemployee Share-Based Payment Accounting*. This guidance simplifies the accounting for non-employee share-based payment transactions by expanding the scope of Topic 718 to include share-based payment transactions for acquiring goods and services from non-employees. Under the new standard, most of the guidance on stock compensation payments to non-employees would be aligned with the requirements for share-based payments granted to employees. This standard is effective for annual reporting periods beginning after December 15, 2018, including interim reporting periods within those annual reporting periods, with early adoption permitted. The Company is currently evaluating the impact of adoption of this ASU on its condensed consolidated financial statements.

In August 2018, the FASB issued ASU No. 2018-13 *Fair Value Measurement (Topic 820): Disclosure Framework—Changes to the Disclosure Requirements for Fair Value Measurement.* This guidance is intended to improve the effectiveness of disclosure requirements on fair value measurements in Topic 820. The new standard modifies certain disclosure requirements and will be effective for annual reporting periods beginning after December 15, 2019. The Company is currently evaluating the impact of adoption of this ASU and does not expect the adoption of this new standard to have a material impact on its condensed consolidated financial statements.

In October 2018, the FASB issues ASU No. 2018-17 *Consolidation (Topic 810): Targeted Improvements to Related Party Guidance for Variable Interest Entities.* This guidance is intended to improve the accounting for variable interest entities and whether the entity should be consolidated. This guidance is effective for annual reporting periods beginning after December 15, 2019, including interim reporting periods within those annual reporting periods, with early adoption permitted. The Company is currently evaluating the impact of adoption of this ASU and does not expect the adoption of this new standard to have a material impact 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 and nine months ended September 30, 2018 and 2017.

NOVAN, INC.

NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS
(unaudited)
(dollar values in thousands, except per share data)

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 new drug application 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 1 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 preclinical 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.

See "Note 12—Subsequent Events" regarding a second amendment to the Sato Agreement entered into during October 2018 which modified certain of the terms of the Sato Agreement as described herein.

Note 4: Revenue Recognition

Revenue Recognition—Sato Agreement

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 preclinical 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 probable of not resulting in a significant revenue reversal as of September 30, 2018, is a 0.25 billion JPY (approximately $2,162 USD) milestone related to initiation of a Phase 1 trial in Japan. This milestone was achieved during the third quarter of 2018 and the Company expects to receive the corresponding payment in the fourth quarter of 2018. These two consideration amounts are allocated to the single performance obligation. No other variable consideration under the Sato Agreement is probable as of September 30, 2018 of not resulting in a significant revenue reversal and, therefore, is currently fully constrained and excluded from the transaction price. See "Note 12—Subsequent Events" for details regarding a second amendment to the Sato Agreement entered into during

October 2018, which includes an additional upfront payment and adjusts future potential development and regulatory milestone payments.

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 5 years, starting in February 2017 and completing in the first quarter of 2022. Pursuant to the terms of the Sato Agreement, the Company and Sato are advancing SB204 development for the Japan territory and the parties are working collaboratively to reach agreement with respect to the Japan territory development plan, including a corresponding timeline and estimated duration for the development program in whole. The Company notes that it monitors and reassesses the estimated performance period for purposes of revenue recognition during each reporting period. Therefore, if the duration of the development program timeline is affected by the establishment or subsequent adjustments to a mutually agreed upon SB204 development plan in the Japan territory, the Company will adjust its estimated performance period for revenue recognition purposes accordingly, as needed.

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 1 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 and nine months ended September 30, 2018, the Company recognized $648 and $1,946, 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. During the three and nine months ended September 30, 2017, the Company recognized license and collaboration revenue of $649 and $1,622, respectively. The deferred revenue balance under the Sato Agreement as of September 30, 2018 was $6,595, including $2,595 and $4,000 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 nine months ended September 30, 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.

(dollar values in thousands, except per share data)

- 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 September 30, 2018 was $6,595. The Company expects to recognize approximately 39% 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. See "Note 12—Subsequent Events" for details regarding a second amendment to the Sato Agreement entered into during October 2018, which includes additional sales-based milestone payments.

No revenue was recognized during the nine months ended September 30, 2018 associated with adjustments to the estimated performance period or the measure of progress.

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 nine months ended September 30, 2018, the Company recognized $9 in research and development services revenue for services performed under the KNOW Bio Services Agreement. There was no research and development services revenue recognized during the three months ended September 30, 2018.

Note 5: Property and Equipment, Net

Property and equipment consisted of the following:

	September 30, 2018	December 31, 2017
Computer equipment	$ 577	$ 529
Furniture and fixtures	312	354
Laboratory equipment	7,268	6,819
Office equipment	400	400
Building related to facility lease obligation	10,557	10,557
Leasehold improvements	1,186	1,000
Property and equipment, gross	20,300	19,659
Less: Accumulated depreciation and amortization	(4,171)	(3,035)
Total property and equipment, net	$ 16,129	$ 16,624

Depreciation and amortization expense was $425 and $1,234 for the three and nine months ended September 30, 2018, respectively, and $391 and $1,030 for the three and nine months ended September 30, 2017, respectively.

NOVAN, INC.

NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS
(unaudited)
(dollar values in thousands, except per share data)

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 "Primary Facility Lease"). The initial term of the Primary Facility Lease extends through June 30, 2026. The Company has an option to extend the Primary Facility Lease 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 Primary Facility Lease.

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 September 30, 2018. The non-current facility lease obligation on the Company's condensed consolidated balance sheet was $7,998 as of September 30, 2018 and December 31, 2017. During the three and nine months ended September 30, 2018, the Company recognized interest expense of $261 and $783, respectively, including $41 of accrued interest included in other accrued expenses as of September 30, 2018

Rent expense associated with the primary facility lease, comprised of monthly grounds rent and common area maintenance costs, was $89 and $220 for the three and nine months ended September 30, 2018, respectively, and $94 and $260 for the three and nine months ended September 30, 2017, respectively.

In May 2018, the Company entered into a sublease agreement under the Primary Facility Lease whereby the Company is the lessor and is subleasing approximately 6,400 square feet of office space to a third party at its leased headquarters facility in Morrisville, North Carolina. The sublease will expire in July 2021, unless sooner terminated in accordance with the provisions of the sublease. If for any reason, the lease between the Company and its landlord is terminated, the sublease will simultaneously terminate. The annual rent payments due to the Company, beginning August 2018, are approximately $141 per year, subject to a three percent increase annually over the term of the sublease agreement.

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 September 30, 2018.

See "Note 10—Tangible Stockholder Return Plan" regarding the Tangible Stockholder Return Plan adopted in August 2018.

NOVAN, INC.

NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS
(unaudited)
(dollar values in thousands, except per share data)

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. On June 14, 2018, the Company filed a motion to dismiss the consolidated amended complaint. 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. The Company is unable to estimate the amount of a potential loss or range of potential loss, if any.

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 combined severance expense of $0 and $332 during the three and nine months ended September 30, 2018 and $0 and $793 during the three and nine months ended September 30, 2017, respectively. The accrued severance obligation in respect of the three former officers was fully paid as of September 30, 2018. The Company also recognized non-cash stock compensation expense of $0 and $212 during the three and nine months ended September 30, 2018, and $0 and $374 during the three and nine months ended September 30, 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.

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 September 30, 2018 and December 31, 2017.

NOVAN, INC.

NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS
(unaudited)
(dollar values in thousands, except per share data)

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 September 30, 2018 and December 31, 2017. There were 26,054,609 and 16,005,408 shares of voting common stock outstanding as of September 30, 2018 and December 31, 2017, respectively. The following table summarizes stockholders' equity activity for the nine months ended September 30, 2018:

	Common Stock Shares	Common Stock Amount	Additional Paid-in Capital	Treasury Stock	Accumulated Deficit	Total Stockholders' deficit
Balance as of December 31, 2017	16,005,408	$ 2	$ 158,091	$ (155)	$ (159,654)	$ (1,716)
Share-based compensation	—	—	1,800	—	—	1,800
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	49,201	—	58	—	—	58
Net loss	—	—	—	—	(19,826)	(19,826)
Balance as of September 30, 2018	26,054,609	$ 3	$ 177,336	$ (155)	$ (179,480)	$ (2,296)

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

	September 30, 2018	December 31, 2017
Outstanding stock options (Note 9)	1,726,988	1,399,484
Warrants to purchase common stock issued in January 2018 Offering (Note 8)	10,000,000	—
For possible future issuance under 2016 Stock Plan (Note 9)	665,764	1,023,378
	12,392,752	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.

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.

(dollar values in thousands, except per share data)

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 nine months ended September 30, 2018. The following table presents the Company's warrant liability measured at fair value on a recurring basis as of September 30, 2018:

	September 30, 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	$ —	$ —	$ 12,073	$ 12,073
Total liabilities at fair value	$ —	$ —	$ 12,073	$ 12,073

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 $1.21 and $1.78 per common stock warrant as of September 30, 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.

	September 30, 2018	January 9, 2018
Estimated dividend yield	—	—
Expected volatility	79.16%-100%	75.66%-100%
Risk-free interest rate	2.89%	2.21%
Expected term (years)	3.3	4
Fair value per share of common stock underlying the warrant	$ 2.79	$ 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 and nine months ended September 30, 2018 of $1,464 and $5,733, respectively, 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 and nine months ended September 30, 2018 is primarily due to the decrease in the market price of the Company's underlying common stock from the date of issuance to September 30, 2018, in addition to fluctuations in the other valuation model inputs.

NOVAN, INC.

NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS
(unaudited)
(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 nine months ended September 30, 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	$ (5,733)	$ —	$ —	$ 12,073

Note 9: Share-Based Compensation

2016 Stock Plan

During the nine months ended September 30, 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.

On August 16, 2018, the board of directors approved an amendment to the 2016 Plan, subject to stockholder approval at the Company's 2019 annual meeting of stockholders, to increase the number of shares reserved under the 2016 Plan by 1,000,000 and to increase the award limit on the maximum aggregate number of shares of the Company's common stock that may be granted to any one person during any calendar year from 250,000 to 1,000,000 shares of the Company's common stock. All other material terms of the 2016 Plan otherwise remain unchanged.

Stock Appreciation Rights

On August 8, 2018, the Company entered into an employment agreement with G. Kelly Martin (the "Employment Agreement"). The Employment Agreement provided for 1,000,000 SARs granted on a contingent basis that shall be considered irrevocably forfeited and voided in full if the Company fails to obtain stockholder approval for an amendment to the 2016 Plan, described above. If such approval is not obtained, the Company will pay Mr. Martin the cash equivalent of the value of the SARs.

The SARs entitle Mr. Martin to a payment (in cash, shares of common stock or a combination of both) equal to the fair market value of one share of the Company's common stock on the date of exercise less the exercise price of $3.80 per share. The SARs have an expiration date of February 1, 2020 and will vest in full on such date. The SARs will be deemed automatically exercised and settled as of February 1, 2020, provided Mr. Martin remains continuously employed with the Company through such date unless vesting is otherwise expressly accelerated pursuant to the SAR Agreement.

Due to the cash settlement feature of the SAR grant, subject to stockholder approval, these share-based payment awards should be classified as liabilities and the amount of compensation cost recognized must be based on the fair value of those liabilities. Therefore, the obligation is recorded as a liability on the Company's condensed consolidated balance sheet at the estimated fair value on the date of issuance and is re-valued each subsequent reporting period with adjustments to the fair value recognized as share-based compensation expense in the condensed consolidated statements of operations.

NOVAN, INC.

NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS
(unaudited)
(dollar values in thousands, except per share data)

The fair value of the SARs is estimated at each financial reporting date using the Black-Scholes option-pricing model, using the following assumptions:

		September 30, 2018
Estimated dividend yield		—
Expected volatility		75.80%
Risk-free interest rate		2.54%
Expected term (years)		1.34
Fair value per share of common stock underlying the SAR	$	2.79
SAR exercise price	$	3.80

During the three and nine months ended September 30, 2018, the Company recorded employee share-based compensation expense related to the SARs of $65. In addition, the corresponding obligation is recorded within other long-term liabilities on the Company's condensed consolidated balance sheet as of September 30, 2018.

Inducement Grants

In May 2018, the Company awarded nonstatutory stock options to purchase an aggregate of 100,500 shares of common stock to newly-hired employees, not previously employees or directors of the Company, as inducements material to the individuals' entering into employment with the Company within the meaning of Nasdaq Listing Rule 5635(c)(4) (the "Inducement Grants"). The Inducement Grants have a grant date of May 31, 2018 and an exercise price of $3.15 per share. The Inducement Grants were awarded outside of the Company's 2016 Plan, pursuant to Nasdaq Listing Rule 5635(c)(4), but have terms and conditions generally consistent with the Company's 2016 Plan and vest over three years, with one-third of the award vesting on each annual anniversary of the employee's employment commencement date, subject to the employee's continued service as an employee through the vesting period.

Stock Compensation Expense

During the three and nine months ended September 30, 2018, the Company recorded employee share-based compensation expense for equity-based awards of $367 and $1,800, respectively. During the three and nine months ended September 30, 2017, the Company recorded employee share-based compensation expense for equity-based awards of $871 and $3,006, respectively. Total share-based compensation expense for equity-based awards included in the condensed consolidated statements of operations and comprehensive loss is as follows:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2018	2017	2018	2017
Research and development	$ 204	$ 475	$ 907	$ 1,301
General and administrative	163	396	893	1,705
	$ 367	$ 871	$ 1,800	$ 3,006

NOVAN, INC.

NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS
(unaudited)
(dollar values in thousands, except per share data)

Stock option activity for the nine months ended September 30, 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	608,862	3.08		
Options forfeited	(232,157)	9.01		
Options exercised	(49,201)	1.18		
Options outstanding as of September 30, 2018	1,726,988	$ 5.65	8.1	$ 120

As of September 30, 2018, there were a total of 1,726,988 stock options outstanding, including 100,500 inducement grants awarded in May 2018. In addition, there were 665,764 shares available for future issuance under the 2016 Plan as of September 30, 2018.

Note 10: Tangible Stockholder Return Plan

Performance Plan

On August 2, 2018, the Company's board of directors approved and established the Tangible Stockholder Return Plan, which is a performance-based long-term incentive plan (the "Performance Plan"). The Performance Plan was effective immediately upon approval and expires on March 1, 2022. The Performance Plan covers all employees, including the Company's executive officers, consultants and other persons deemed eligible by the Company's compensation committee. The core underlying metric of the Performance Plan is the achievement of two share price goals for the Company's common stock, which if achieved, would represent measurable increases in stockholder value.

The Performance Plan is tiered, with two separate tranches, each of which has a distinct share price target (measured as the average publicly traded share price of the Company's common stock on the Nasdaq stock exchange for a 30 consecutive trading day period) that will, if achieved, trigger a distinct fixed bonus pool. The share price target for the first tranche and related bonus pool are $11.17 per share and $25,000, respectively. The share price target for the second tranche and related bonus pool are $25.45 per share and $50,000, respectively. The compensation committee has discretion to distribute the bonus pool related to each tranche among eligible participants by establishing individual minimum bonus amounts before, as well as by distributing the remainder of the applicable pool after, the achievement of each tranche specific share price target. Otherwise, if the Company does not achieve one or both related share price targets, as defined, no portion of the bonus pools will be paid.

The Performance Plan provides for the distinct fixed bonus pools to be paid in the form of cash. However, the compensation committee has discretion to pay any bonus due under the Performance Plan in the form of cash, shares of the Company's common stock or a combination thereof, provided that the Company's stockholders have approved the reservation of shares of the Company's common stock for such payment.

The Performance Plan permits the compensation committee to make bonus awards subject to varying payment terms, including awards that vest and are payable immediately upon achieving an applicable share price target as well as awards that pay over an extended period (either with or without ongoing employment requirements). The Performance Plan contemplates that no bonus award payments will be delayed beyond 24 months for named executive officers or more than 12 months for all other participants.

For purposes of determining whether a share price target has been met, the share price targets will be adjusted in the event of any stock splits, cash dividends, stock dividends, combinations, reorganizations, reclassifications or similar events. In the event of a change in control, as defined in the Performance Plan, during the term of the Performance Plan, a performance bonus pool

(dollar values in thousands, except per share data)

will be generated based on pro-rata progress toward achievement of the applicable share price target through the date of the change in control.

The Company has concluded that the Performance Plan is within the scope of ASC 718, *Compensation—Stock Compensation* as the underlying plan obligations are based on the potential attainment of certain market share price targets of the Company's common stock. Any awards under the Performance Plan would be payable, at the discretion of the Company's compensation committee following the achievement of the applicable share price target, in cash, shares of the Company's common stock, or a combination thereof, provided that, prior to any payment in common stock, the Company's stockholders have approved the reservation of shares of the Company's common stock for such payment.

ASC 718 requires that a liability-based award should be classified as a liability on the Company's condensed consolidated balance sheets and the amount of compensation cost recognized should be based on the fair value of the liability. When a liability-based award includes both a service and market condition, the market condition is taken into account when determining the appropriate method to estimate fair value and the compensation cost is amortized over the estimated service period. Therefore, the liability associated with the Performance Plan obligation is recorded within other long-term liabilities on the Company's condensed consolidated balance sheets at the estimated fair value on the date of issuance and is re-valued each subsequent reporting period end with adjustments to the fair value recognized as share-based compensation expense within operating expenses in the condensed consolidated statements of operations.

The fair value of obligations under the Performance Plan are estimated using a Monte Carlo simulation approach. The Company's common stock price is simulated under the Geometric Brownian Motion framework under each simulation path. The other assumptions for the Monte Carlo simulation include the risk-free interest rate, estimated volatility and the expected term. 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 plan. 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 plan. The dividend yield percentage is zero because the Company does not currently pay dividends, nor does it intend to do so during the expected term of the plan. The expected life of bonus awards under the Performance Plan is assumed to be equivalent to the remaining contractual term based on the estimated service period including the service inception date of the plan participants and the contractual end of the Performance Plan.

The fair value of the Performance Plan is estimated at each financial reporting date using the Monte Carlo simulation model and the following assumptions:

		September 30, 2018
Estimated dividend yield		—
Expected volatility		75.80%
Risk-free interest rate		2.79%
Expected term (years)		3.58
Fair value per share of common stock underlying the Performance Plan	$	2.73

During the three and nine months ended September 30, 2018, the Company recorded employee share-based compensation expense related to the Performance Plan of $38.

Note 11: Related Party Transactions

Members of the Company's board of directors held 1,695,916 and 1,585,916 shares of the Company's common stock as of September 30, 2018 and December 31, 2017, respectively.

NOVAN, INC.

NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS
(unaudited)
(dollar values in thousands, except per share data)

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"), which beneficially owns approximately 10% of the Company's outstanding common stock, until October 1, 2017. On August 8, 2018, the Company entered into the Employment Agreement with G. Kelly Martin. Pursuant to the Employment Agreement, Mr. Martin serves as the Company's Chief Executive Officer, receives an annual base salary of $480 and is entitled to reimbursement of certain expenses. The Employment Agreement also provides Mr. Martin with eligibility to participate in standard benefit plans. In addition, the Employment Agreement provides for (i) a signing bonus of $560 which was paid in the third quarter of 2018; (ii) 1,000,000 SARs that are intended to be settled in shares, subject to stockholder approval; if such approval is not obtained, the Company will pay Mr. Martin the cash equivalent to the value of the SARs; and (iii) minimum bonus awards under the Performance Plan for each distinct tranche contingent upon achievement of the tranche specific share price targets ($5,250 of the first share price target pool; and either $10,500 or $8,000 of the second share price pool, dependent on if Mr. Martin is still in service as the Chief Executive Officer at the time the second share price target bonus amount is earned, or is no longer in service as the Chief Executive Officer but remains a director, respectively), along with the possibility of discretionary awards under the Performance Plan if the tranche specific share price targets are achieved. See "Note 9—Share-Based Compensation" and "Note 10—Tangible Stockholder Return Plan" for further information and accounting considerations related to the SARs and the Performance Plan.

During the three and nine months ended September 30, 2018, the Company incurred costs of $121 and $491, respectively, 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 and comprehensive loss. Aggregate estimated fees under the current statements of work are $550, which are expected to be incurred throughout the remainder of 2018.

Note 12: Subsequent Events

Second Amendment to the Sato Agreement

On October 5, 2018, the Company and Sato entered into the second amendment (the "Sato Amendment") to the Sato Agreement (collectively, the "Amended Sato Agreement"). The Sato Amendment expands the Sato Agreement to include SB206, the Company's drug candidate for the treatment of viral skin infections, in addition to SB204, the Company's drug candidate for the treatment of acne vulgaris. Under the Amended Sato Agreement, the Company has granted to Sato an exclusive, royalty-bearing, non-transferable license under certain of its 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 SB206 or SB204 in certain topical dosage forms for the treatment of viral skin infections or acne vulgaris, respectively, and to make the finished form of such products. The Company or its designated contract manufacturer will supply finished product to Sato for use in the development of SB204 and SB206 in the licensed territory. The rights granted to Sato do not include the right to manufacture the API of SB206 or SB204; rather, the parties agreed to negotiate a commercial supply agreement pursuant to which the Company or its designated 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 amendment, in exchange for the license rights granted to Sato, Sato agreed to pay the Company the following:

- An upfront payment of 1.25 billion JPY, payable in installments of 0.25 billion JPY, 0.5 billion JPY and 0.5 billion JPY on October 5, 2018, February 14, 2019 and September 13, 2019, respectively. This is in addition to the 1.25 billion JPY paid on January 19, 2017 following the execution of the license agreement on January 12, 2017. On October 23, 2018, the Company received the first installment of 0.25 billion JPY (or $2,224 USD).

- Up to an aggregate of 1.75 billion JPY (adjusted from 2.75 billion JPY in the license agreement) upon the achievement of various development and regulatory milestones.

NOVAN, INC.

NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS
(unaudited)
(dollar values in thousands, except per share data)

- Up to an aggregate of 3.9 billion JPY (adjusted from 0.9 billion JPY in the license agreement) upon the achievement of various commercial milestones.

- A tiered royalty ranging from a mid-single digit to a low-double digit percentage (adjusted from a mid-single digit percentage in the license agreement) 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 Amendment (and the period during which Sato must pay royalties under the amended license agreement) expires on the twentieth anniversary of the first commercial sale of a licensed product in the licensed field in the licensed territory. All other material terms of the license agreement remain unchanged by the Sato Amendment.

Health Decisions

On October 25, 2018, the Company announced the formation of a dedicated women's health business unit as well as a foundational collaboration with Health Decisions, Inc. (or "Health Decisions"). Health Decisions is a full-service contract research organization specializing in clinical studies of therapeutics for women's health indications. The Company's women's health business unit will be led by Paula Brown Stafford, the Company's Chief Development Officer, who also is a shareholder and serves on the board of directors of Health Decisions.

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 September 30, 2018, we had an accumulated deficit of $179.5 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.*
- *We may rely on strategic relationships for the further development and commercialization of product candidates 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.*
- *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.*
- *We may not be able to achieve the objectives described in the section entitled "Overview—Key Product Candidate Development Updates" below, including our ability to achieve a desirable business structure and/or funding necessary for the advancement of SB204. Further, the results of any further SB204 development activities may not be sufficient to support a new drug application, or NDA, submission for SB204, or regulatory approval of SB204.*
- *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 stockholders 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 utilize third parties, including Orion Corporation, or Orion, to manufacture components of our clinical trial materials and, potentially, commercial supplies of any approved product candidates. If we do not have sufficient quantities of clinical trial materials at acceptable quality levels and within established timelines, 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.*
- *Unexpected delays in our ability to manufacture our NVN1000 active pharmaceutical ingredient, or the associated drug product in a deliverable form, in our facility or at a third party manufacturer, for support of our development and/or commercialization activities could adversely affect our development and commercialization timelines and result in increased costs of our development programs.*
- *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 and maintain compliance with 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.*
- *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 or operational resources 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.*

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 development-stage biotechnology company focused on leveraging nitric oxide's naturally occurring 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 technology platform with the potential to generate differentiated clinical 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 an array of diseases.

We are advancing clinical-stage development programs in the field of dermatology through our current portfolio that includes product candidates with antiviral (SB206), anti-inflammatory (SB414), multi-factorial (SB204), and antifungal (SB208) applications. We are also conducting preclinical work on NCEs and formulations for oncovirus-mediated diseases in the women's health field. Further advancement of these development activities is dependent upon our ability to access additional capital, which we may secure through equity or debt financings or through non-dilutive sources, including partnerships, collaborations, licensing, grants or other strategic relationships.

During 2018, we have focused existing resources and capital on the clinical advancement of our antiviral (SB206) and anti-inflammatory (SB414) product candidates. We have completed enrollment of all four cohorts in our ongoing SB206 Phase 2 trial for the treatment of molluscum contagiosum, or molluscum, and target reporting top line results from trial Cohorts 1 to 3 by mid-November 2018. Based on results of two recently completed complementary Phase 1b clinical trials with SB414 in patients with psoriasis and atopic dermatitis, we intend to evaluate further trials in inflammatory skin diseases.

Also during 2018, we pursued and recently received U.S. regulatory pathway clarity pertaining to our SB204 product candidate for the treatment of acne vulgaris. Following receipt of FDA feedback via written minutes in the third quarter, we have determined that the most pragmatic development pathway for us will be to conduct one additional pivotal Phase 3 trial in moderate-to-severe acne patients. The FDA noted that only one additional pivotal trial in moderate-to-severe acne patients would be required for registration. We have completed our clinical development plan for this additional trial and have begun certain initial clinical start-up procedures. We plan to target trial initiation during the first half of 2019, subject to our ability to secure additional capital and/or enter into a business arrangement with one or more third parties.

We also recently created a dedicated women's health business unit, which will leverage existing knowledge on the potential utility of nitric oxide-based products in the field of women's health, with a focus on oncovirus-mediated diseases caused by underlying high-risk human papillomavirus, or HPV, infections. The women's health business unit will be led by Paula Brown Stafford, our Chief Development Officer, and complemented by our academic research collaborators at University of Alabama-Birmingham and our clinical research collaborators at Health Decisions, Inc., or Health Decisions. Previously announced Phase 2 data for the treatment of external genital warts, where SB206 12% demonstrated statistically significant clearance of baseline warts and was generally well-tolerated, provide a specific late stage clinical asset that targets HPV infections.

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 current updates related to our product candidates and certain forthcoming milestones, goals and objectives.

- ***SB206, a First-in-Class, Topical Antiviral Gel***— At the end-of-Phase 2 meeting for SB206 in the external genital warts indication, we also had a constructive discussion with the FDA regarding expansion of the SB206 program into the treatment of molluscum. Observational learnings from published literature with

topical nitric oxide demonstrate clinically meaningful complete clearance rates of baseline molluscum lesions. This, combined with our in vitro and in vivo antiviral SB206 program knowledge, provided a logical pathway for SB206 development in the molluscum indication.

We submitted an investigational new drug application, or IND, to the FDA in December 2017 and initiated a Phase 2 clinical trial utilizing SB206 for the treatment of molluscum during the first quarter of 2018. The study design is an ascending dose trial with 64 patients per cohort (3:1 randomization between active and placebo arms) to evaluate efficacy, safety and tolerability of SB206 in patients ages 2 and up with molluscum. We recently completed enrollment in all four trial cohorts. Reporting of top line results for Cohorts 1 to 3 with SB206 4%, 8% and 12% twice-daily is targeted for mid-November 2018, with Cohort 4, SB206 12% once-daily targeted to be reported in December. Pending the clinical results of this Phase 2 trial, we intend to request an end-of-Phase 2 meeting with the FDA during the first quarter of 2019 in order to discuss a potential Phase 3 development plan for molluscum.

- ***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 design of these complementary trials was to evaluate the safety, tolerability and pharmacokinetics, or PK, of SB414. The trials were also designed to assess overall and specific target engagement through a reduction of key inflammatory biomarkers, also known as pharmacodynamic, or PD, assessment.

  We received and analyzed the preliminary top line results from these Phase 1b clinical trials during the second and third quarters of 2018. In the Phase 1b trial for mild-to-moderate atopic dermatitis, 48 adults were randomized to receive one of 2% SB414 cream, 6% SB414 cream, or vehicle, twice daily for two weeks. Biomarkers from the Th2, Th17 and Th22 inflammatory pathways known to be highly relevant and indicative of atopic dermatitis, including Interleukin-13, or IL-13, IL-4R, IL-5, IL-17A and IL-22, were downregulated after two weeks of treatment with SB414 2%, achieving statistically significant 10.5, 2.5, 7.1, 7.4 and 7.5-fold reductions over vehicle, respectively. The changes in Th2 and Th22 biomarkers and clinical efficacy assessed as the percent change in Eczema Area Severity Index scores were highly correlated in the SB414 2% group. Additionally, the proportion of patients achieving a greater than or equal to 3-point improvement on the pruritus (itch) numeric rating scale after two weeks of treatment was 71% for patients treated with SB414 2% compared to 43% for vehicle.

  In the Phase 1b trial for mild-to-moderate chronic plaque psoriasis, 36 adults received SB414 6% cream or vehicle twice daily for four weeks. Analysis of the data revealed that various known biomarkers related to psoriasis were not downregulated after four weeks of treatment with SB414 6%.

  Both doses of SB414 were safe as defined by no serious adverse events and SB414 2% was more tolerable with no patients discontinuing treatment in the trial due to application site reactions. SB414 at the 6% dose was not consistently effective in reducing biomarkers across both the atopic dermatitis and psoriasis trials. This lack of consistent biomarker movement could potentially be explained by the increased irritation score experienced by patients treated with SB414 6% in both trials. Additionally, SB414 6% showed detectable systemic exposure in a subset of patients, which cleared in nearly all affected patients within 12 hours.

  Given the successful downregulation of key biomarkers, favorable tolerability and lack of systemic exposure with SB414 2%, we intend to conduct a Phase 2 trial of SB414 as a treatment for atopic dermatitis and additional exploratory trials in other inflammatory skin diseases.

- ***SB204 for the Treatment of Acne Vulgaris***—We have had several interactions with the FDA over the past 12 months regarding SB204 and the acne indication. In the second quarter of 2018, we conducted a Type C meeting to further discuss the Phase 3 program with the FDA and the potential for proceeding with a more narrowly defined patient segmentation. In that meeting, our focus was centered specifically on the severe

patient population. In the third quarter of 2018, the FDA provided feedback in their minutes on two paths forward for the acne indication, confirming the need for one additional pivotal trial for moderate-to-severe acne patients prior to NDA submission or, as an alternative, additional preliminary trials for a severe-only patient population.

Following receipt of FDA feedback via written minutes in the third quarter, we have determined that the most pragmatic development pathway for us will be to conduct one additional pivotal Phase 3 trial in moderate-to-severe acne patients. We have completed our clinical development plan for this additional trial and have begun certain initial clinical start-up procedures for a targeted trial initiation during the first half of 2019, subject to our ability to secure additional capital.

With our regulatory pathway and clinical development plan now finalized, we are focused on completing our plans to secure the capital needed to enable advancement of our SB204 asset. Our capital sourcing plan considers acne as a specific and singular indication as well as its incorporation into our overall clinical portfolio advancement strategy. Potential capital sources include capital markets as well as business structures and constructs with any one or more third parties that could enable execution of our clinical development path forward for SB204. As part of this planning process, we have continued discussions with the third party with which we entered into a non-binding term sheet in the fourth quarter of 2017.

Corporate Updates

Expansion of Partnership with Sato in Japanese Territory

On October 5, 2018, we and Sato Pharmaceutical Co., Ltd., or Sato, entered into the second amendment to the initial license agreement dated January 12, 2017. The initial license agreement had focused on the development and commercialization of SB204 for the treatment of acne vulgaris in Japan. The Sato amendment provides Sato with the exclusive rights to also develop and commercialize SB206 and related dosage forms for the treatment of viral skin infections in Japan. Under the terms of the Sato amendment, we will receive an upfront payment from Sato of 1.25 billion JPY (approximately $11.0 million USD) to be paid in installments over the next 12 months. As part of the revised agreement, the parties adjusted potential future development and regulatory milestone payments, added additional sales-based milestone payments and adopted a tiered royalty structure on net sales of SB204 and SB206 in Japan. While we will work closely with Sato on the progression of these assets, Sato is responsible for funding the development and commercial costs for the programs that are specific to Japan. We expect the upfront installment payments under the amended license agreement to provide funding for a portion of our 2019 operating cash needs and to have a favorable impact on our cash runway.

Advancement in Women's Health

On October 25, 2018, we announced the formation of a dedicated women's health business unit as well as a foundational collaboration with Health Decisions. Health Decisions is a full-service contract research organization specializing in clinical studies of therapeutics for women's health indications. Over the past twelve months, we have progressed our knowledge on the potential to utilize nitric oxide-based products in the field of women's health, with an emphasis on oncovirus applications and our initial focus centering on persistent high-risk HPV. Central to our effort has been an ongoing, multi-year research collaboration with the University of Alabama-Birmingham studying the effects of nitric oxide-releasing compounds on HPV infections. Published clinical research on high-risk HPV infections has demonstrated a link to the development of malignant lesions and neoplasias, including female cancers in the cervix, vagina, vulva, anus and oral cavity. This foundational science advancement pairs with our previously announced Phase 2 data for the treatment of external genital warts, where SB206 12% demonstrated statistically significant clearance of baseline warts and was generally well-tolerated, provide a specific late stage clinical asset that targets HPV. We believe that our new clinical collaboration with Health Decisions and our ongoing academic research collaboration with the University of Alabama-Birmingham provides us with a differentiated opportunity for advancement in the area of women's health.

Drug Manufacturing Agreement with Orion Pharmaceuticals

On October 15, 2018, we established a strategic alliance with Orion, a Finnish full-scale pharmaceutical company with broad experience in manufacturing. The alliance enables Orion to manufacture our topical nitric oxide-releasing product candidates on our behalf and on the behalf of our global strategic partners. We have executed a master contract manufacturing agreement to enable technology transfer and manufacturing of clinical trial materials for future clinical trials with our product candidates. We plan to transfer the technology for the manufacture of SB204 and intend for Orion to be able to manufacture the drug product, or the finished dosage form of the gel, in accordance with our established manufacturing processes, in compliance with applicable regulatory guidelines, as appropriate for clinical trials and alongside our current internal manufacturing capabilities.

While the initial framework of the agreement enables the manufacture of SB204, the companies plan to evaluate expanding the agreement to include other product candidates for the manufacture of clinical trial materials and, potentially, commercial quantities. Importantly, this alliance is intended to support major global markets in which we and our partners pursue regulatory approvals for our product candidates and complements our existing internal capabilities.

Resource and Compensation Alignments with Product Candidate Development Strategy

As outlined above, our product, clinical drug and business development activities drive certain developmental timelines and strategic activities which will require successful company-wide execution in order to potentially enable value creation for our stockholders. To accomplish the goal of value creation through asset progression, we have taken and will continue to take steps to align our internal resources with these results-focused activities, in addition to organizing our business in a manner that maximizes our goal-focused operating strategy. In doing so, we will continue our efforts to retain, recruit and position the appropriate levels of employee talents that are best suited to accomplish our strategy. Below are recent steps taken during the third quarter of 2018 to align resources and compensation with our operating strategy:

- *Performance Plan*— In August 2018, our board of directors approved and established the Tangible Stockholder Return Plan, which is a performance-based long-term incentive plan, or the Performance Plan. We believe that the Performance Plan will help us attract, retain and incentivize the highly qualified resources that are and will be necessary to execute on our operating strategy. Executive management and the board of directors believe this plan clearly and directly ties long-term employee incentive compensation to specific, significant increases in our underlying common stock price and thus directly aligns employee and stockholder objectives. Unlike our historical practice of providing long-term incentives to our employees through annual stock option grants under the 2016 Incentive Award Plan at the then current market price of our common stock, the Performance Plan only provides for employees to receive long-term incentive compensation payments if the established stock price targets ($11.17 per share and $25.45 per share, subject to adjustment as described below) are achieved.

  We intend to use the Performance Plan as the primary means of providing long-term incentive compensation to our employees. Therefore, we intend to reduce our utilization of the 2016 Incentive Award Plan and do not expect to continue our current practice of granting annual equity incentive awards to employees under the 2016 Incentive Award Plan as a form of long-term incentive compensation while the Performance Plan is effective.

  The core underlying metric of the Performance Plan is the achievement of two share price goals for our common stock, which if achieved, would represent measurable increases in stockholder value. The Performance Plan is intended to align the interests of plan participants with those of our stockholders in a manner that is intended to be constructive, direct and transparent, in that if we do not achieve one or both related distinct share price targets, no portion of the potential bonus pools will be distributed.

  The Performance Plan is tiered, with two separate tranches, each of which has a distinct share price target (measured as the average publicly traded share price of the Company's common stock on the Nasdaq stock exchange for a thirty consecutive trading day period) that will trigger a distinct fixed bonus pool. The share price target for the first tranche is $11.17 per share. The share price target for the second tranche is $25.45 per share. The related contingent bonus pools for the first and second tranches are $25.0 million and $50.0 million, respectively. The compensation committee

has discretion to distribute the bonus pool related to each tranche among eligible participants by establishing individual minimum bonus amounts before, as well as by distributing the remainder of the applicable pool after, the achievement of each tranche specific share price target. Otherwise, if we do not achieve one or both related share price targets, as defined, no portion of the bonus pools will be paid.

The Performance Plan provides for the bonus pool to generally be paid in the form of cash. However, the compensation committee has discretion to pay any bonus award under the Performance Plan in the form of cash, shares of our common stock or a combination thereof, provided that our board and stockholders have approved the reservation of such shares of our common stock for such payment. The share price targets will be adjusted in the event of any stock splits, cash dividends, stock dividends, combinations, reorganizations, reclassifications, or similar events. In addition, in the event of a change in control, a pro-rata amount will be paid to participants.

The Performance Plan was effective immediately upon approval, expires on March 1, 2022, and covers all employees, including our executive officers, consultants and other persons deemed eligible by our compensation committee. The Performance Plan was subsequently amended and restated to reflect minor changes in the timing for establishing minimum bonus amounts.

See "Note 10—Tangible Stockholder Return Plan" to the accompanying unaudited financial statements within this Form 10-Q for additional information on the Performance Plan. A copy of the Performance Plan, as amended and restated, is filed as Exhibit 10.4 to this Quarterly Report on Form 10-Q.

- *Compensation Arrangement with Chief Executive Officer*—In August 2018, we entered into an employment agreement with G. Kelly Martin that includes compensatory terms for his services as our Chief Executive Officer. Like the Performance Plan, as described above, our board designed the terms of the employment agreement so that the majority of Mr. Martin's potential compensation is aligned with and subject to the achievement of stockholder value creation through (i) participation in the Performance Plan and (ii) stock appreciation rights granted pursuant to our 2016 Incentive Award Plan, subject to future stockholder approval. In addition, Mr. Martin will receive an annual base salary and a one-time signing bonus but will not receive an annual target cash bonus, annual equity awards or any other discretionary bonuses other than which may be granted under the Performance Plan. A copy of Mr. Martin's employment agreement is filed as Exhibit 10.2 to this Quarterly Report on Form 10-Q.

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 September 30, 2018, we have raised total equity and debt proceeds of $184.0 million to fund our operations, including $35.2 million in net proceeds from 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 September 30, 2018, we had an accumulated deficit of $179.5 million. We incurred net losses of $7.0 million and $19.8 million during the three and nine months ended September 30, 2018, respectively, and $7.3 million and $28.5 million during the three and nine months ended September 30, 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.

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 received in the January 2018 Offering and the payments that we expect to receive

under the Sato Amendment, 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 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 certain fixed and variable consideration under the Sato Agreement, including a non-refundable $10.8 million upfront payment received in January 2017 and a milestone payment of approximately $2.2 million that we expect to receive in the fourth quarter of 2018. This consideration is 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. The material terms of the Sato Agreement and related revenue recognition are described within "Note 3—Collaboration Arrangements," "Note 4—Revenue Recognition" and "Note 12—Subsequent Events" to our condensed consolidated financial statements included in this Quarterly Report on Form 10-Q.

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 adopted the new revenue recognition standard, Accounting Standards Codification, or 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 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 September 30, 2018, we have incurred approximately $132.1 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 and nine months ended September 30, 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 September 30,		Nine Months Ended September 30,	
	2018	2017	2018	2017
	(in thousands)		(in thousands)	
External:				
SB204	$ 151	$ 1,263	$ 1,060	$ 6,828
SB206	1,998	133	4,037	(158)
SB208	—	(27)	—	362
SB414	47	317	1,658	1,642
Unallocated internal research and development expenses	3,501	3,507	11,453	10,427
Total research and development expenses	$ 5,697	$ 5,193	$ 18,208	$ 19,101

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 and nine months ended September 30, 2018 are summarized as follows:

- For SB204, we completed a preclinical long-term carcinogenicity study and began preparing for manufacture of clinical trial materials associated with the anticipated clinical trial program described in the preceding section entitled “Overview—Key Product Candidate Development Updates.”
- For SB206, we commenced and conducted a Phase 2 clinical trial for the treatment of molluscum contagiosum. We also conducted certain preclinical activities evaluating SB206’s potential as a therapy for HPV-associated sexually transmitted infections.
- For SB414, we conducted and completed two Phase 1b clinical trials to evaluate SB414 cream for the treatment of psoriasis and atopic dermatitis.

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, with our existing capital resources, we expect to continue to

incur substantial external development service provider fees and other research and development costs during the remainder of 2018 for ongoing development plan and strategic activities summarized in the "Overview" section above. The future advancement of our product candidates beyond the ongoing activities that are concluding in 2018 is subject to our ability to secure additional capital through equity or debt financings or through non-dilutive sources, including 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 and subsequent Quarterly Reports on Form 10-Q, including this Quarterly Report on Form 10-Q, 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 during the remainder of 2018 and in fiscal year 2019 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 and expect continued fluctuations in the fair value of the warrant liability.

Results of Operations

Comparison of Three Months Ended September 30, 2018 and 2017

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

	Three Months Ended September 30,			
	2018	2017	$ Change	% Change
	(in thousands, except percentages)			
License and collaboration revenue	$ 648	$ 649	$ (1)	—
Research and development services revenue	—	218	(218)	(100)%
Total revenue	648	867	(219)	(25)%
Operating expenses:				
Research and development	5,697	5,193	504	10 %
General and administrative	3,295	2,762	533	19 %
Total operating expenses	8,992	7,955	1,037	13 %
Operating loss	(8,344)	(7,088)	(1,256)	18 %
Other income (expense), net:				
Interest income	83	22	61	*
Interest expense	(262)	(262)	—	—
Change in fair value of warrant liability	1,464	—	1,464	100 %
Other income, net	28	1	27	*
Total other income (expense), net	1,313	(239)	1,552	(649)%
Net loss	$ (7,031)	$ (7,327)	$ 296	(4)%

** Not Meaningful*

Revenue

License and collaboration revenue of $0.6 million for the three months ended September 30, 2018 and 2017, 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 $0.2 million for the three months ended September 30, 2017, is associated with the completion of certain development services performed under the KNOW Bio Services Agreement.

Research and development expenses

Research and development expenses were $5.7 million for the three months ended September 30, 2018, compared to $5.2 million for the three months ended September 30, 2017. The increase of $0.5 million, or 10%, was due to an increase of $1.9 million in our SB206 program due to conducting a Phase 2 clinical trial in molluscum contagiosum. These program costs were partially offset by 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 $1.1 million, and two phase 1b clinical trials in our SB414 program for patients with psoriasis and atopic dermatitis, which resulted in a decrease of $0.3 million.

There was no change on a net basis in unallocated internal research and development expenses due to a $0.3 million increase in facility and manufacturing costs, which was offset by a $0.3 million decrease in research and development personnel costs. The increase of $0.3 million in facility and manufacturing costs is associated with certain activities in 2018 that focused on optimizing the quality and efficiency of our drug substance and drug product manufacturing capabilities. The $0.3 million

decrease in personnel costs is due to a decrease in non-cash stock compensation expense of $0.3 million associated with the amortization of awards with lower grant-date fair values during the three months ended September 30, 2018.

General and administrative expenses

General and administrative expenses were $3.3 million for the three months ended September 30, 2018, compared to $2.8 million for the three months ended September 30, 2017. The increase of approximately $0.5 million, or 19%, was primarily due to a $0.6 million increase in general and administrative personnel and related costs and a $0.1 million decrease in market research and related costs.

The $0.6 million increase in general and administrative personnel and related costs is primarily due to (i) a one-time signing bonus of $0.6 million in accordance with the employment agreement with our chief executive officer executed in the third quarter of 2018, (ii) an increase in general and administrative personnel costs of $0.2 million and (iii) reduced non-cash stock compensation expense of $0.2 million. The decrease in non-cash stock compensation expense is due to the amortization of awards with lower grant-date fair values during the three months ended September 30, 2018.

Other income (expense), net

Other income (expense), net was $1.3 million income for the three months ended September 30, 2018, compared to $0.2 million expense for the three months ended September 30, 2017. The net income increase of approximately $1.6 million was primarily due to the change in fair value of the warrant liability of $1.5 million and an increase in interest income of $0.1 million.

Comparison of Nine Months Ended September 30, 2018 and 2017

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

	Nine Months Ended September 30,			
	2018	2017	$ Change	% Change
	(in thousands, except percentages)			
License and collaboration revenue	$ 1,946	$ 1,622	$ 324	20 %
Research and development services revenue	9	286	(277)	(97)%
Total revenue	1,955	1,908	47	2 %
Operating expenses:				
Research and development	18,208	19,101	(893)	(5)%
General and administrative	8,795	10,654	(1,859)	(17)%
Total operating expenses	27,003	29,755	(2,752)	(9)%
Operating loss	(25,048)	(27,847)	2,799	(10)%
Other income (expense), net:				
Interest income	242	78	164	210 %
Interest expense	(785)	(786)	1	*
Change in fair value of warrant liability	5,733	—	5,733	100 %
Other income, net	32	6	26	*
Total other income (expense), net	5,222	(702)	5,924	(844)%
Net loss	$ (19,826)	$ (28,549)	$ 8,723	(31)%

** Not Meaningful*

Revenue

License and collaboration revenue of $1.9 million and $1.6 million for the nine months ended September 30, 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 $0.3 million for the nine months ended September 30, 2017 is associated with the completion of certain development services performed under the KNOW Bio Services Agreement.

Research and development expenses

Research and development expenses were $18.2 million for the nine months ended September 30, 2018, compared to $19.1 million for the nine months ended September 30, 2017. The decrease of $0.9 million, or 5%, 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 $5.8 million and the Phase 2 clinical trial for SB208, which resulted in a decrease of $0.4 million. These program costs were partially offset by an increase of $4.2 million in our SB206 program due to conducting a Phase 2 trial in molluscum contagiosum.

We also had an increase in unallocated internal research and development expenses of $1.0 million due to a $1.4 million increase in facility and manufacturing costs, which was offset by a $0.4 million decrease in research and development personnel costs. The increase of $1.4 million in facility and manufacturing costs is associated with certain activities in 2018 that focused on optimizing the quality and efficiency of our drug substance and drug product manufacturing capabilities. The $0.4 million decrease in personnel costs consists of (i) a decrease in non-cash stock compensation expense of $0.4 million, (ii) a decrease of $0.1 million related to decreased executive personnel and related costs to support and administer our active development programs and (iii) an increase of $0.1 million in personnel recruiting costs to attract qualified research and development candidates. The $0.4 million decrease in non-cash stock compensation expense is associated with certain discrete charges during the nine months ended September 30, 2017 as stock option vesting was accelerated and other stock options were forfeited upon departure of certain former research and development personnel.

General and administrative expenses

General and administrative expenses were $8.8 million for the nine months ended September 30, 2018, compared to $10.7 million for the nine months ended September 30, 2017. The decrease of approximately $1.9 million, or 17%, was primarily due to a $0.5 million decrease in general and administrative personnel and related costs, a $0.8 million decrease in professional services and other administrative costs necessary to support our operations as a public company, a $0.3 million decrease in market research and related costs, and a $0.3 million decrease in general corporate costs.

The $0.5 million decrease in general and administrative personnel and related costs is primarily due to a decrease in non-cash stock compensation expense for equity-based awards of $0.8 million which includes $0.3 million associated with the accelerated vesting of option awards of certain former general and administrative personnel during the nine months ended September 30, 2017. The remaining decrease in non-cash stock compensation expense of $0.5 million is due to fewer awards granted to our board of directors and general and administrative personnel during the nine months ended September 30, 2018. These decreases were offset by an increase of $0.1 associated with non-cash share-based compensation expense for liability-based awards and $0.2 million related to an increase in personnel and related costs of our general and administrative personnel.

Other income (expense), net

Other income (expense), net was $5.2 million income for the nine months ended September 30, 2018, compared to $0.7 million expense for the nine months ended September 30, 2017. The other income increase of approximately $5.9 million was primarily due to the change in fair value of the warrant liability of $5.7 million and an increase in interest income of $0.2 million. See “Note 8—Warrants” to the accompanying unaudited condensed consolidated financial statements for further discussion of the terms and accounting treatment of the warrants.

Liquidity and Capital Resources

Since our inception through September 30, 2018, we have financed our operations primarily with $184.0 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. In accordance with the Sato Amendment, we will also receive an upfront payment of 1.25 billion JPY, payable in installments of 0.25 billion JPY on October 5, 2018, 0.5 billion JPY on February 14, 2019 and 0.5 billion JPY on September 13, 2019.

As of September 30, 2018, we had $12.2 million of cash and cash equivalents. We believe that cash on hand as of September 30, 2018, along with the upfront payments expected from the Sato Amendment will provide us with adequate liquidity to fund our planned operating needs into the late second quarter of 2019. 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.

January 2018 Offering

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.

The warrants sold in the January 2018 Offering are classified as a liability in the accompanying condensed consolidated balance sheets and the warrant liability is recorded at fair value and is re-valued each reporting period, with adjustments to fair value recognized in the condensed consolidated statements of operations and comprehensive loss. 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 $12.1 million as of September 30, 2018, which resulted in the recognition of a non-cash unrealized gain of $1.5 million and $5.7 million for the three and nine months ended September 30, 2018, respectively. The decrease in the fair value of the warrant liability and the corresponding non-cash gain recognized during the nine months ended September 30, 2018 is primarily due to the decrease in the market price of our underlying common stock from the date of issuance to September 30, 2018. 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. The warrants' terms and accounting treatment are described further in "Note 8—Warrants" to the accompanying unaudited condensed consolidated financial statements.

We have not listed the warrants on an exchange but warrant holders have transacted through dealer networks within the over-the-counter, or 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 $1.21 and $1.78 per warrant as of September 30, 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 accounting principles generally accepted in the United States, or 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.

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 condensed consolidated 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:

	Nine Months Ended September 30,	
	2018	2017
	(in thousands)	
Net cash (used in) provided by:		
operating activities	$ (24,876)	$ (21,892)
investing activities	(828)	(1,799)
financing activities	35,353	40
Net increase (decrease) in cash and cash equivalents	$ 9,649	$ (23,651)

Net Cash Used in Operating Activities

During the nine months ended September 30, 2018, net cash used in operating activities was $24.9 million and consisted primarily of a net loss of $19.8 million, with adjustments for non-cash amounts related primarily to depreciation expense of $1.2 million, share-based compensation expense for both equity-based and liability-based awards of $1.9 million, decrease in fair value of warrant liability of $5.7 million and a $2.5 million net decrease in other operating assets and liabilities. The net decrease in assets and liabilities was primarily due to a $0.5 million decrease in accrued compensation following the payment of annual employee bonuses in the first quarter of 2018, a $0.5 million decrease in other accrued expenses following the payment of various accrued expenses during the period, including $0.2 million in travel costs paid to Malin, and a $2.0 million decrease in deferred revenue associated with the continued recognition of licensing revenues from the Sato Agreement during 2018. These decreases were partially offset by a favorable change in prepaid expenses and other current assets and accounts payable of $0.2 million.

During the nine months ended September 30, 2017, net cash used in operating activities was $21.9 million and consisted primarily of a net loss of $28.5 million, with adjustments for non-cash amounts related primarily to depreciation expense of $1.0 million, share-based compensation expense of $3.0 million and a $2.6 million net increase in assets and liabilities. The favorable net change 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 $4.6 million decrease in accrued 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. In addition, we had approximately $0.5 million in accrued severance costs as of September 30, 2017.

Net Cash Used in Investing Activities

During the nine months ended September 30, 2018, net cash used in investing activities was $0.8 million, which related primarily to purchases of laboratory equipment and leasehold improvements at our facility in Morrisville, North Carolina. In addition, we have approximately $0.1 million of purchases of property and equipment in accounts payable and accrued expenses as of September 30, 2018, which we expect to settle through cash disbursements made during the fourth quarter of 2018.

During the nine months ended September 30, 2017, net cash used in investing activities was $1.8 million, which primarily related to purchases of laboratory equipment and leasehold improvements at our facility in Morrisville, North Carolina.

Net Cash Provided by Financing Activities

During the nine months ended September 30, 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 nine months ended September 30, 2017, net cash provided by financing activities was less than $0.1 million, consisting primarily of proceeds from the exercise of stock options, which were partially offset by offering costs.

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, along with the upfront payments expected under the Sato Amendment are sufficient to fund our operations into the late second quarter of 2019. We are utilizing our existing capital resources to fund the ongoing and near-term development activities, as described in the "Overview" section above. 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 the issuance of debt or equity securities or through non-dilutive sources, including partnerships, collaborations, licensing, grants or other strategic relationships. We may decide to revise our activities or their timing depending on the availability of additional funding, partnership opportunities and our financial priorities. Throughout 2018, we have been exploring potential non-dilutive business development activities around clinical-stage assets in our platform, including various geographic and indication-specific opportunities. In October 2018, we expanded our partnership with Sato to include our topical nitric oxide-releasing product candidate SB206 for the treatment of viral skin infections including warts and molluscum contagiosum. The initial license agreement executed in January of 2017, focused on the development and commercialization of SB204 for the treatment of acne vulgaris in Japan. The Sato Amendment provides Sato with the exclusive rights to also develop and commercialize our SB206 and related dosage forms for the treatment of viral skin infections in Japan.

As we continue to endeavor to access additional capital, 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 adjust our current operating plan. As of September 30, 2018, we had an

accumulated deficit of $179.5 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 secure capital needed 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 and in utilizing our contract manufacturing partner;
- 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 and SB206 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," "Note 9—Share-Based Compensation" and "Note 10—Tangible Stockholder Return Plan" to the accompanying condensed consolidated financial statements included in this Quarterly Report on Form 10-Q, there were no material changes during the nine months ended September 30, 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 $1.0 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 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 nine months ended September 30, 2018, there were no material changes to our critical accounting policies, except as presented below:

Revenue Recognition

Effective January 1, 2018, we adopted 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 and comprehensive loss.

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.

Tangible Stockholder Return Plan

On August 2, 2018, our board of directors approved and established the Tangible Stockholder Return Plan, which is a performance-based long-term incentive plan. The Performance Plan is tiered, with two separate tranches, each of which has a distinct share price target (measured as the average publicly traded share price of our common stock on the Nasdaq stock exchange for a 30 consecutive trading day period) that will, if achieved, trigger a distinct fixed bonus pool. The share price target for the first tranche and related bonus pool are $11.17 per share and $25.0 million, respectively. The share price target for the second tranche and related bonus pool are $25.45 per share and $50.0 million, respectively.

We have concluded that the Performance Plan is within the scope of ASC Topic 718, *Compensation—Stock Compensation* as the underlying plan obligations are based on the potential attainment of certain market share price targets of our common stock. Any awards under the Performance Plan would be payable, at the discretion of our compensation committee following the

achievement of the applicable share price target, in cash, shares of our common stock, or a combination thereof, provided that, prior to any payment in common stock, our stockholders have approved the reservation of shares of our common stock for such payment.

ASC 718 requires that a liability-based award should be classified as a liability on our condensed consolidated balance sheets and the amount of compensation cost recognized should be based on the fair value of the liability. When a liability-based award includes both a service and market condition, the market condition is taken into account when determining the appropriate method to estimate fair value and the compensation cost is amortized over the estimated service period. Therefore, the liability associated with the Performance Plan obligation is recorded within other long-term liabilities on our condensed consolidated balance sheets at the estimated fair value on the date of issuance and is re-valued each subsequent reporting period end with adjustments to the fair value recognized as share-based compensation expense within operating expenses in the condensed consolidated statements of operations.

The fair value of obligations under the Performance Plan are estimated using a Monte Carlo simulation approach. Our common stock price is simulated under the Geometric Brownian Motion framework under each simulation path. The other assumptions for the Monte Carlo simulation include the risk-free interest rate, estimated volatility and the expected term. 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 plan. 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 plan. 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 plan. The expected life of bonus awards under the Performance Plan is assumed to be equivalent to the remaining contractual term based on the estimated service period including the service inception date of the plan participants and the contractual end of the Performance Plan.

Our estimates underlying the assumptions used in the Monte Carlo simulation 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 10—Tangible Stockholder Return Plan” for the significant assumptions used in estimating the fair value of the Performance Plan 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 included in the notes to our condensed consolidated financial statements in this Quarterly Report on Form 10-Q.

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 September 30, 2018, we had cash and cash equivalents of $12.2 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 liquidity 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 and the Sato Amendment in October 2018, 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 September 30, 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 September 30, 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. On June 14, 2018, we filed a motion to dismiss the consolidated amended complaint. 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 or the Quarterly Reports on Form 10-Q filed with the SEC on May 15, 2018 and August 8, 2018, respectively, except as set forth below.

In August 2018, our board approved and established the Tangible Stockholder Return Plan, a performance-based long-term incentive plan with two distinct share price targets. We may not be able to achieve the applicable targets, and even if they are achieved, we may not have the financial resources available to make the bonus payments contemplated by the plan.

On August 2, 2018, the Company's board approved and established the Tangible Stockholder Return Plan, or the Performance Plan, which is a performance-based long-term incentive plan.

The Performance Plan is tiered, with two separate tranches, each of which has a distinct share price target (measured as the average publicly traded share price of the Company's stock on the Nasdaq stock exchange for a thirty consecutive trading day period) that will trigger a distinct fixed bonus pool. The share price targets for the first and second tranches are $11.17 per share and $25.45 per share, respectively. The bonus pools for the first and second tranche are $25.0 million and $50.0 million, respectively. The compensation committee has discretion to distribute the bonus pool related to each tranche among eligible participants by establishing individual minimum bonus amounts before, as well as by distributing the remainder of the applicable pool after, the achievement of each tranche specific share price target. Otherwise, if we do not achieve one or both related share price targets, as defined, no portion of the bonus pools will be paid. See "Note 10—Tangible Stockholder Return Plan" for details regarding the Performance Plan.

Management intends to continue to assess the facts and circumstances, in addition to its capital structure and liquidity, with regards to our potential obligations related to the Performance Plan and the likelihood of future payment. There can be no assurance that we will achieve either or both share price targets during the term of the Performance Plan, that we will have sufficient cash on hand to pay cash bonuses under the Performance Plan at the time any share price target is achieved or within the time frames described above for payment of the bonuses, or that we will receive stockholder approval to pay bonuses in shares of our common stock in lieu of some or all of such cash payment, if sought. These factors may impact our business, financial condition, ability to retain key employees and ability to obtain additional capital. Additionally, because a minimum bonus amount will be paid on a pro-rata basis upon a change in control, the Performance Plan could increase the cost to acquire the Company and prevent or delay a change in control.

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.

Not applicable.

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:

				INCORPORATED BY REFERENCE			
EXHIBIT NO.		DESCRIPTION	Filed Herewith	FORM	File No.	Exhibit	Filing Date
10.1	†	Second Amendment, dated October 5, 2018 to the License Agreement, dated January 12, 2017, by and between Novan, Inc. and Sato Pharmaceutical Co. Ltd.	X				
10.2		Employment Agreement, dated August 8, 2018, by and between Novan, Inc. and G. Kelly Martin.	X				
10.3		Stock Appreciation Right Grant Notice and Agreement between Novan, Inc. and G. Kelly Martin.	X				
10.4		Tangible Stockholder Return Plan, dated August 2, 2018 (as amended and restated November 2, 2018).	X				

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

† Portions of this exhibit (indicated by asterisks) have been omitted pursuant to a request for confidential treatment pursuant to Rule 24b-2 under the Securities Exchange Act of 1934

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: November 5, 2018

Exhibit 10.1

[***] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

SECOND AMENDMENT TO LICENSE AGREEMENT BETWEEN NOVAN, INC. AND SATO PHARMACEUTICAL CO., LTD.

This Second Amendment to the License Agreement (the "**Second Amendment**"), is made and entered into as of October 5, 2018 (the "**Second Amendment Effective Date**") by and between Novan, Inc., a Delaware corporation having an address at 4105 Hopson Road, Morrisville, North Carolina 27560, USA ("**Novan**") and Sato Pharmaceutical Co., Ltd., a Japanese corporation having an address at 1-5-27, Moto-Akasaka, Minato-ku, Tokyo 107-0051, Japan ("**Sato**"). Novan and Sato shall also be referred to individually as a "**Party**" and collectively as the "**Parties**".

RECITALS

WHEREAS, the Parties have previously entered into a License Agreement, dated as of January 12, 2017 and amended on January 12, 2017 (as amended, the "**Agreement**"); and

WHEREAS, the Parties wish to further amend the Agreement to add one additional product based on the Compound and to amend certain payment terms and conditions of the Agreement as provided below.

NOW, THEREFORE, in consideration of the mutual covenants contained herein, the Parties agree as follows:

AGREEMENT

1. **Defined Terms.** All capitalized terms used herein but not defined herein shall have the meanings given to such terms in the Agreement.

2. **Definitions.** The following defined terms are hereby added to Section 1 of the Agreement as follows:

1.108 "Acne Licensed Product" means any topical finished dosage form that (i) contains the Compound and (ii) meets the Specifications for the "Acne Licensed Product" as specified in Annex 3, or, subject to Section 4.3, the Modified Specifications therefor.

1.109 "Antiviral Licensed Product" means any topical finished dosage form that (i) contains the Compound and (ii) meets the Specifications for the "Antiviral Licensed Product" as specified in Annex 3, or, subject to Section 4.3, the Modified Specifications therefor.

3. **Section 1.14.** Section 1.14 shall be amended and restated in its entirety to read as follows:

1.14 "Competing Product" means [***] product for [***].

4. **Section 1.46.** Section 1.46 shall be amended and restated in its entirety to read as follows:

1.46 "Licensed Field" means: (a) with respect to the Acne Licensed Product, the treatment of acne vulgaris in humans; and (b) with respect to the Antiviral Licensed Product,

the treatment of viral infections of the skin in humans, including warts and molluscum contagiosum.

5. **Section 1.47.** Section 1.47 shall be amended and restated in its entirety to read as follows:

1.47 "Licensed Product" means, individually or collectively, as applicable, the Acne Licensed Product and the Antiviral Licensed Product.

6. **Section 1.83(i).** Section 1.83(i) shall be amended and restated in its entirety to read as follows:

(i) the number and description of Licensed Products sold or otherwise disposed of and the applicable NHI Price therefor;

7. **Section 1.94.** Section 1.94 shall be amended and restated in its entirety to read as follows:

1.94 "Specifications" means the specifications set forth in Annex 3 for the Licensed Products; or, in each case, if applicable, the Modified Specifications therefor.

8. **Section 2.4(iii).** The first sentence of Section 2.4(iii) shall be amended and restated in its entirety to read as follows (with the remainder of Section 2.4(iii) remaining unchanged):

(iii) **JC Meetings**. The JC shall meet at least once every [***] for so long as any Licensed Product remains in development by Sato (directly or through its Affiliates or sublicensees) under this Agreement and at least [***] every year thereafter, in each case at times mutually agreed upon by the Parties.

9. **Section 14.1.** Section 14.1 shall be amended and restated in its entirety to read as follows:

14.1 Payments. In consideration of the licenses and other rights granted to Sato herein, Sato shall pay to Novan the following one-time, lump sum payments on occurrence of the corresponding events.

UPFRONT PAYMENT (the "**Upfront Payment**")

Upon the Effective Date	1.25 billion JPY

SECOND AMENDMENT UPFRONT PAYMENT (the "**Second Amendment Upfront Payment**")

Upon the Second Amendment Effective Date, 1.25 billion JPY, which shall be paid in installments upon the dates set forth below:

Second Amendment Effective Date	0.25 billion JPY
February 14, 2019	0.5 billion JPY
September 13, 2019	0.5 billion JPY

DEVELOPMENT MILESTONE PAYMENTS

Upon [***].	[***]
Upon [***].	[***]
Upon [***].	[***]
Upon [***].	[***]

SALES MILESTONE PAYMENTS

One-time sales milestone payments shall be made by Sato to Novan upon the first achievement of each of the following annual Net Sales milestones, based on aggregate Net Sales of all Licensed Products:

Annual Net Sales of [***]	[***]
Annual Net Sales of [***]	[***]
Annual Net Sales of [***]	[***]
Annual Net Sales of [***]	[***]
Annual Net Sales of [***]	[***]

For avoidance of doubt, if two or more of the foregoing milestones shall be achieved in the same calendar year, the payments corresponding to each such milestone shall be payable to Novan with respect to such calendar year.

10. **Section 14.3.** Section 14.3 shall be amended and restated in its entirety as follows:

14.3 Notification. Sato shall notify Novan of the achievement of each of the development milestones set forth in Section 14.1 within [***] of its achievement, and each of the sales milestones set forth in Section 14.1 within [***] after Sato closes its books for the relevant annual period in which such sales milestone payment becomes due. All payments under Section 14.1 shall be made within [***] after Sato receives the relevant invoice from Novan, except that (i) the Upfront Payment due pursuant to Section 14.1 shall be made within [***] after the Effective Date, (ii) the first installment of the Second Amendment Upfront Payment shall be made within [***] after the Second Amendment Effective Date, and (iii) the second and third installments of the Second Amendment Upfront Payment shall each be made within [***] after the date of the relevant invoice from Novan. All payments under Section 14.1 shall be made without setoff or deduction of any kind, other than pursuant to [***].

11. **Section 15.1.** Section 15.1 shall be amended and restated in its entirety as follows:

15.1 Royalty. In consideration of the rights granted to Sato herein, Sato shall pay to Novan a royalty on the applicable portion of aggregate annual Net Sales of all Licensed Products in the Licensed Territory during the Term as follows, subject to Section 15.2:

(i) [***] of the portion of aggregate annual Net Sales in the Licensed Territory of all Licensed Products below [***];

(ii) [***] of the portion of aggregate annual Net Sales in the Licensed Territory of all Licensed Products equal to or exceeding [***] and below [***]; and

(iii) [***] of the portion of aggregate annual Net Sales in the Licensed Territory of all Licensed Products equal to or exceeding [***].

12. **Section 15.2.** Section 15.2 shall be amended and restated in its entirety as follows:

15.2 Royalty Term; Reduction. Royalties shall be payable in the Licensed Territory for the duration of the Term. If during the Term (i) no Licensed Product (including without limitation its manufacture, use or sale) remains Covered by a Valid Claim in the Licensed Territory, and (ii) the Marketing Exclusivity with respect to all Licensed Products in the Licensed Territory has expired, then the royalty rate applicable shall be reduced by [***] for the remainder of the Term in the Licensed Territory.

13. **Section 18.1.** Section 18.1 shall be amended and restated in its entirety as follows:

18.1 Term. The term of this Agreement shall commence as of the Effective Date and, unless sooner terminated as specifically provided in this Agreement, shall continue in effect until the twentieth (20^{th}) anniversary of the First Commercial Sale (the "**Term**"), unless terminated earlier pursuant to Section 19. This Agreement may be renewed by mutual written agreement of the Parties for additional two (2) year periods following expiration of the Term.

14. **Annex 2.** Annex 2 of the Agreement is hereby replaced in its entirety by Annex 2 attached hereto.

15. **Annex 3.** Annex 3 of the Agreement is hereby replaced in its entirety by Annex 3 attached hereto.

16. **Upfront Payment.** Novan acknowledges that it received payment of the Upfront Payment from Sato on January 19, 2017.

17. **Reaffirmation of Other Terms and Conditions.** The Agreement shall remain in full force and effect, as amended hereby, and as so amended, the Parties hereby reaffirm their respective rights and obligations hereunder.

18. The Parties acknowledge and agree that Article 23 and Article 24 of the Agreement shall apply to this Second Amendment as if fully set forth herein.

19. The Parties may execute this Second Amendment in multiple counterparts, each of which shall be an original and all of which together shall constitute, together with the Agreement, one legal instrument.

[Signature page follows]

[***] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

IN WITNESS WHEREOF, the Parties have signed and delivered this Second Amendment as of the date first written above.

Novan, Inc.	**Sato Pharmaceutical Co., Ltd.**
/s/ G. Kelly Martin	/s/ Seiichi Sato
By: **G. Kelly Martin, CEO**	By: **Seiichi Sato, President and CEO**
Date: October 5, 2018	Date: October 4, 2018

[***] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

Annex 2: Patent List

Application No.	Title	Filing Date; Licensed Territory Numbers	Countries where Application was Filed & Status
[***]	[***]	[***]	[***]
[***]	[***]	[***]	[***]
[***]	[***]	[***]	[***]
[***]	[***]	[***]	[***]
[***]	[***]	[***]	[***]
[***]	[***]	[***]	[***]

[***] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

Annex 3: Specifications

[***]

[***] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

Exhibit 10.2

EXECUTIVE EMPLOYMENT AGREEMENT

This Executive Employment Agreement (the "Agreement") is entered into as of August 8, 2018 (the "Effective Date") by and between Novan, Inc., a Delaware corporation with its principal place of business in Durham County, North Carolina (the "Company"), and G. Kelly Martin, a resident of Southport, Connecticut ("Executive"). The Company and Executive may be referred to individually herein as a "party" or collectively as the "parties."

WITNESSETH:

WHEREAS, Executive has been serving as the Chief Executive Officer of the Company since June 2017 and as a director on the Company's Board of Directors since March 2015;

WHEREAS, Executive has been compensated pursuant to the Company's Non-Employee Director Compensation Policy, as amended, for services provided as a director of the Company's Board of Directors;

WHEREAS, prior to the Effective Date of this Agreement, Executive has not been compensated for, nor have the parties established any understanding of a form of compensation arrangement related to, Executive's services provided as Chief Executive Officer of the Company since June 2017;

WHEREAS, the Company now wishes to enter into this Agreement with Executive and employ Executive as its Chief Executive Officer. Executive desires to accept such employment with the Company, on the terms described herein, and desires to continue to serve the Company as a director or executive director through the end of his current term as a director in 2021; and

WHEREAS, effective as of the Effective Date, the parties desire to enter into this Agreement which shall supersede any other understandings or agreements between Executive and the Company;

NOW, THEREFORE, in consideration of the foregoing, the mutual promises herein contained, and other good and valuable consideration, including the employment of Executive by the Company and the compensation received by Executive from the Company from time to time, the receipt and sufficiency of which are hereby acknowledged, the parties hereto, intending to be legally bound, hereby agree as follows.

1. EMPLOYMENT AND TERM. The Company hereby agrees to employ Executive, and Executive hereby accepts such employment. Executive shall serve as the Company's Chief Executive Officer ("CEO") upon the terms and conditions hereinafter set forth. Executive's employment will continue through February 1, 2020 (the "Employment Term"), unless earlier terminated under Section 5 of this Agreement. Upon the expiration of the Employment Term, Executive's employment will end, unless the parties have agreed otherwise in writing. This Agreement will remain in effect until all obligations hereunder have been fulfilled (the "Agreement Term").

2. DUTIES; EXCLUSIVE SERVICE.

(a) During the Agreement Term, Executive shall faithfully discharge his responsibilities and perform all duties prescribed to him by the Board of Directors (the "Board") of the Company, as well as any duties as are set forth in the Bylaws of the Company related to Executive's position. Executive agrees to comply with all Company policies, standards and regulations now existing or hereafter promulgated. Executive further agrees to devote all of his working time and attention to the performance of his duties and responsibilities on behalf of the Company and in furtherance of its best interests. The parties agree that Executive may maintain his primary residence in Connecticut during the Employment Term. Executive agrees to immediately resign from the board of any company that engages in any business that competes with or represents a conflict with the business of the Company as determined in accordance with the Company's Noncompetition Agreement referenced in Section 4 hereof. Executive agrees that he will not serve on more than two outside boards without prior written consent from the Chairman of the Board.

(b) Upon expiration of the Employment Term, Executive shall serve as a non-employee Executive Director, Vice Chair, or similar role as determined by the Board until the end of his existing term as a director

which is through the Company's annual shareholder meeting to be held in 2021. Executive shall not be entitled to any additional compensation from the Company for service as a director while employed hereunder. While a member of the Board, Executive will be permitted to attend all meetings of the Board and executive sessions thereof, on substantially the same basis as other members of the Board, except for meetings of independent directors and except as prohibited by applicable law, listing standards or the Company's corporate governance guidelines. Notwithstanding the preceding sentence, Executive will not have the right to attend any portion of a meeting or executive session where the item of discussion relates to Executive's employment, including (but not limited to) his compensation, performance and/or service on the Board.

3. COMPENSATION. Executive's compensation shall be paid as follows:

(a) Base Salary. Executive shall be paid a base salary at the rate of Forty Thousand and 00/100 Dollars ($40,000.00) per month (the "Base Salary") (less applicable withholdings). The monthly Base Salary shall be payable semi-monthly in accordance with the Company's regular payroll practices and procedures.

(b) Signing Bonus. Executive will be paid a signing bonus in the amount of Five Hundred Sixty Thousand and 00/100 Dollars ($560,000.00) (less applicable withholdings) to be paid in one lump sum to be paid on the first administratively possible payroll date following the Effective Date of this Agreement.

(c) Benefits. During the Employment Term, Executive shall be entitled to participate in the employee benefit plans, programs and arrangements of the Company as are provided generally from time to time to all other similarly situated employees of the Company. All such benefits are subject to the provisions of their respective plan documents in accordance with their terms and are subject to amendment or termination by the Company without Executive's consent. Except as provided specifically herein, Executive will not be eligible to participate in the Company's annual performance bonus or incentive plans or programs.

(d) Business and Travel Expenses. During the Employment Term, the Company will pay for, advance, or reimburse Executive for all reasonable expenses incurred by Executive in the performance of his duties to the Company, provided Executive complies with the Company's policies and procedures for reimbursement or advance of business expenses established by the Company. In addition, the Company will pay for or reimburse Executive for his extra living and travel expenses beginning in June, 2017 and associated with the fact that Executive's primary residence is in Connecticut (e.g., lodging, rental of apartment, household furnishings, expenses, car rental, reasonable travel expenses for family, etc.). Any such reimbursements will be provided to Executive within thirty (30) days after Executive provides the Company with appropriate documentation of such expenses, provided that in no event will reimbursements be provided later than December 31 of the calendar year following the calendar year in which the expense was incurred.

(e) Tangible Stockholder Return Plan. Executive shall be granted the right to earn Bonus Awards under and in accordance with the terms of the Tangible Stockholder Return Plan (the "TSR Performance Plan"), associated with the First Share Price Target and, if applicable, the Second Share Price Target. Executive's Minimum Bonus Amount for the First Share Price Target of $11.17 per share under the TSR Performance Plan shall be $5,250,000 (less applicable withholdings), and Executive's Minimum Bonus Amount for the Second Share Price Target of $25.45 per share, if such Bonus Award is made, shall be: (i) $10,500,000 (less applicable withholdings) if Executive is still in service as the CEO at the time the Second Share Price Target Bonus Amount is earned, or (ii) $8,000,000 (less applicable withholdings) if Executive is no longer in service as CEO but remains a director at the time the Second Share Price Target Bonus Amount is earned. In order to earn the above-referenced bonuses under the TSR Performance Plan, the Company must, by March 1, 2022, achieve a First Share Price Target of an average trading price of $11.17 per share and a Second Share Price Target of an average trading price of $25.74, each such target measured over a 30 consecutive trading day period. Executive shall also be eligible for consideration for a Discretionary Bonus in connection with each Share Price Target, as applicable. In the event of a termination of employment by the Company without Cause or by Executive for Good Reason, both as defined herein, Executive shall continue to participate in the TSR Performance Plan with respect to any previously established Minimum Bonus Amounts. All capitalized terms used in this Section 3(e) shall have the meaning given to them in the TSR Performance Plan.

(f) Stock Appreciation Rights. The Company will grant Executive a contingent Stock Appreciation Rights (the "SAR Award") under the Company's 2016 Incentive Award Plan (the " 2016 Plan") covering 1.0 million shares of the Company's Common Stock pursuant to the Stock Appreciation Right Grant Notice and Stock Appreciation Right Agreement in substantially the form attached hereto as **Exhibit A**. The Exercise Price Per Share for the SAR Award shall be equal to the greater of: (1) $3.80 per share or (2) the fair market value of a share of the Company's Common Stock on the Grant Date. In the event such Exercise Price Per Share is greater than $3.80, the Company shall pay Executive a cash payment outside of the 2016 Plan within sixty (60) days of the exercise of the SAR Award in an amount equal to the difference between (x) the Exercise Price Per Share and (y) $3.80 multiplied by the Total Number of Shares Subject to SARs. The SAR Award will provide Executive the right to have applicable withholding taxes covered through net share settlement with no requirement that Executive contribute cash to the Company to facilitate its remittance of applicable withholding taxes. The SAR Award shall be transferrable to Executive's Permitted Transferees to the fullest extent permitted under the 2016 Plan and Applicable Law. This SAR Award shall be considered a contingent award and will be forfeited if the Company fails to obtain stockholder approval for amendments to the 2016 Incentive Award Plan required to permit the grant of the SAR Award under the Company's 2016 Incentive Award Plan. If such stockholder approval of the amendments required to the 2016 Incentive Award Plan to permit the SAR Award is not obtained prior to February 1, 2020, the contingent SAR Award shall be immediately and irrevocably forfeited as of February 1, 2020 and Executive shall have no rights or interests under the 2016 Incentive Award Plan with respect to the SAR Award. In such event, the Company shall instead pay Executive the cash-equivalent value of the amount that would have been due and payable per the SAR Award, if any, as of February 1, 2020. Such cash equivalent amount shall be paid outside of the 2016 Incentive Award Plan in substantially equal monthly installments over an eighteen (18) month period commencing in March 2020. All capitalized terms used in this Section 3(f) shall have the meaning given to them in the Stock Appreciation Right Grant Notice and Stock Appreciation Right Agreement or the 2016 Plan. Separate from the SAR Award, Executive shall have a right to receive an additional cash payment outside of the 2016 Plan equal to the cash dividends, if any, that would be paid on 1.0 million shares of the Company's Common Stock during the period running from the SAR Award's Grant Date through its vesting date; provided, however, that such accrued cash payment shall not vest in, and be paid to, Executive until the SAR Award vests.

4. RESTRICTIVE COVENANT AGREEMENTS. Executive's employment under this Agreement is conditioned upon his contemporaneous execution of the Company's Confidentiality and Assignment of Inventions Agreement and the Noncompetition Agreement (collectively the " Restrictive Covenants Agreements"), and his continued compliance with such Restrictive Covenants Agreements.

5. TERMINATION. Executive and the Company agree that Executive's employment with the Company constitutes "at-will" employment. Executive and the Company acknowledge that this employment relationship may be terminated at any time, upon written notice to the other party, with or without Cause or for any or no cause, at the option either of the Company or Executive. Upon termination of Executive's employment hereunder by either party regardless of the cause or reason, the Company shall pay Executive accrued, unpaid wages through the termination date. Such final payment, less any withholdings required by law or properly requested by Executive, shall be made on the next regular payday of the Company following the termination, in accordance with the Company's normal payroll procedures. Except as otherwise provided in Sections 3(e) and 6 of this Agreement, no other payments, benefits or other remuneration shall be due or payable to Executive, except such as to which he may otherwise be entitled to by law such as COBRA continuation rights.

6. SEVERANCE PROVISIONS.

(a) Definitions. For the purposes of this Section 6, the following terms shall be defined as set out below:

i. "Cause" shall be determined in good faith by the Board (excluding Executive if then a director) and shall mean:

a. Executive's conviction of, or plea of no contest to, any crime (whether or not involving the Company) that constitutes a felony in the jurisdiction in which Executive is charged, or that involves moral turpitude;

b. Any act of theft, fraud or embezzlement, or any other willful misconduct or materially dishonest behavior by Executive;

c. Executive's failure or refusal to perform his reasonablyassigned duties, as determined by the Board in its reasonable discretion, provided that such failure or refusal is not corrected as promptly as practicable, and in any event within ten (10) calendar days after Executive shall have received written notice from the Company stating the nature of such failure or refusal;

d. Executive's willful or material violation of any of his obligations contained in any agreement between Executive and the Company, including but not limited to Confidentiality and Assignment of Inventions Agreement and Noncompetition Agreement executed by Executive or material violation of any policies in the Company's Employee Handbook; and/or

e. Conduct by Executive that constitutes willful gross neglect or willful gross misconduct in carrying out his duties under this Agreement that results or that may result, as determined by the Company, in material harm to the Company, including harm to its reputation.

ii. "Change In Control" shall have the same meaning given to such term in Section 2.9 of the Company's 2016 Incentive Award Plan, as amended or restated from time to time. The Committee shall have sole discretion to determine conclusively whether a Change in Control has occurred pursuant to the above definition, the date of the occurrence of such Change in Control and all incidental matters relating thereto; provided that any exercise of authority in conjunction with a determination of whether a Change in Control is a "change in control event" as defined in Treasury Regulation Section 1.409A-3(i)(5) shall be consistent with such regulation.

iii. "Effective Release" is defined as a general release of claims in favor of the Company in a form reasonably acceptable to the Company's counsel that is executed after the Separation Date and within any consideration period required by applicable law and that is not revoked by Executive within any legallyprescribed revocation period; provided, however, a release shall not be considered an Effective Release unless, in addition to the foregoing conditions, the release is executed and not revoked, and the legallyprescribed revocation period ends by the sixtieth (60th) day following the Separation Date. Failure to provide and have in effect an Effective Release within the sixty (60)day period following the Separation Date shall result in forfeiture of any benefits conditioned upon the existence of an Effective Release.

iv. "Good Reason" shall mean a material negative change to Executive in the service relationship with the Company as a result of one or more of the following conditions arising without the consent of Executive:

a. A material diminution in Executive's Base Salary (other than in connection with an across-theboard reduction in the base salaries of the managementlevel employees of the Company);

b. A material diminution in Executive's authority, duties or responsibilities under this Agreement; provided however that Executive's appointment as CEO of a subsidiary or affiliate of the Company shall not constitute Good Reason hereunder;

c. A material change in the geographic location at which Executive must perform services for the Company, not to include regular business travel; or

d. Any other action or inaction that constitutes a material breach of the terms of this Agreement by the Company.

Notwithstanding the forgoing, "Good Reason" shall not include an event or condition unless (A) Executive notifies the Company within ninety (90) days of the initial existence of one of the adverse events described above, (B) Executive provides the Company with at least thirty (30) days' written notice of his intent to resign for Good Reason, and (C) the Company fails to correct the adverse event within thirty (30) days of such notice.

v. "Separation from Service" shall mean Executive has a "separation from service" within the meaning of Section 409A of the Code ("Code") and the regulations and other interpretative guidance thereunder ("Section 409A") from the Company and will not perform any additional services after a certain date for the Company (or a related entity) or that the level of bona fide services (whether performed as an employee or as a contractor) will permanently decrease to no more than 20% of the average level of bona fide services performed by Executive (whether performed as an employee or as a contractor) over the immediately preceding 36month period (or, if less, the period Executive has rendered service to the Company).

vi. "Separation Date" shall mean the date that Executive has a Separation from Service from the Company.

(b) "Compensation upon Separation without "Cause" or for "Good Reason." In the absence of a Change in Control, then upon Separation from Service by the Company without Cause or by Executive for Good Reason before the expiration of the Employment Term (excluding a termination of employment upon the expiration of the Employment Term), conditioned upon the existence of an Effective Release and Executive's continued compliance with the Restrictive Covenants Agreements and the terms thereunder, and subject to Section 7(c), Executive shall be entitled to, in lieu of any other separation payment or severance benefit:

i. Immediate vesting as of the Separation Date of the SAR described in Section 3(f);

ii. Payment of an amount equal to Three Million Dollars ($3,000,000) (less applicable withholdings), payable in equal monthly installment payments over the eighteen (18) month period following the Separation Date, commencing within no more than sixty (60) days following the Termination Date; provided, however, that if the 60-day period spans two calendar years, the payments will commence in the second calendar year, except as provided in Section 7(c) below, with the first payment to include any installment payments that would have been made had a delay not occurred; and

iii. Continued participation in the TSR Performance Plan with respect to previously established Minimum Bonus Amounts as described in Section 3(e) of this Agreement

(c) Compensation upon Separation due to Change in Control. Upon Separation from Service by the Company without Cause or by Executive for Good Reason within three (3) months before or within twelve (12) months after a Change in Control, and conditioned upon the existence of an Effective Release and Executive's continued compliance with the Restrictive Covenants Agreements and the terms thereunder, Executive shall be entitled to, in lieu of any other separation payment or severance benefit (including but not limited to the severance benefits provided for in Section 6(b) hereof):

i. Immediate vesting as of the Separation Date of the SAR described in Section 3(f);

ii. If the per share consideration for the Change in Control equals at least $5.00 (subject to revisions for stock splits, etc.), payment of an amount equal to Three Million Dollars ($3,000,000) (less applicable withholdings), payable in one lump sum within two-and-a-half months following the Change in control, or the Separation Date, whichever is later; and

iii. Continued participation in the TSR Performance Plan with respect to previously established Minimum Bonus Amounts as described in Section 3(e) of this Agreement in the event of Executive's Separation from Service within three (3) months prior to a Change in Control.

(d) Other Separation from Service. Upon Separation from Service of Executive other than: (i) for Good Reason by Executive; or, (ii) by the Company without Cause, Executive shall not be entitled to additional compensation under this Agreement beyond that earned and accrued as of the Separation Date.

7. SECTION 409A.

(a) The parties hereby acknowledge and agree that all benefits or payments provided by the Company to Executive pursuant to this Agreement are intended either to be exempt from Section 409A of the Code, or to be in compliance with Section 409A, and the Agreement shall be interpreted to the greatest extent possible to be so exempt or in compliance and to incorporate the terms and conditions required by Section 409A. If there is an ambiguity in the language of the Agreement, or if Section 409A guidance indicates that a change to the Agreement is required or desirable to achieve exemption or compliance with Section 409A, notwithstanding any provision of this Agreement to the contrary, the Company shall make a good faith effort (without any obligation to do so or to indemnify Executive for failure to do so) to (i) adopt such amendments to this Agreement and or adopt such other policies and procedures, including amendments, policies and procedures with retroactive effect, that the Company determines to be necessary or appropriate to preserve the intended tax treatment of the benefits provided by this Agreement, to preserve the economic benefits of this Agreement and to avoid less favorable accounting or tax consequences for the Company and/or (ii) take such other actions as the Company determines to be necessary or appropriate to exempt the amounts payable hereunder from Section 409A or to comply with the requirements of Section 409A and thereby avoid the application of penalty taxes thereunder. No provision of this Agreement shall be interpreted or construed to transfer any liability for failure to comply with the requirements of Section 409A from the Executive or any other individual to the Company or any of its affiliates, employees or agents.

(b) If any severance or other payments that are required by the Agreement are to be paid in a series of installment payments, each individual payment in the series shall be considered a separate payment for purposes of Section 409A. To the extent that any reimbursement of expenses or inkind benefits constitutes "deferred compensation" under Section 409A, such reimbursement or benefit shall be provided no later than December 31 of the year following the year in which the expense was incurred. The amount of expenses reimbursed in one year shall not affect the amount eligible for reimbursement in any subsequent year. The amount of any inkind benefits provided in one year shall not affect the amount of inkind benefits provided in any other year.

(c) If any severance compensation or other benefit provided to Executive pursuant to this Agreement that constitutes "nonqualified deferred compensation" within the meaning of Section 409A is considered to be paid on account of "separation from service" within the meaning of Section 409A, and Executive is a "specified employee" within the meaning of Section 409A, no payments of any of such severance or other benefit shall made for six (6) months plus one (1) day after the Separation Date (the "New Payment Date"). Amounts payable under this Agreement shall be deemed not to be "nonqualified deferral of compensation" subject to Section 409A to the extent provided in the exceptions in Treasury Regulation § § 1.409A1(b)(4) ("shortterm deferrals") and (b)(9) ("separation pay plans," including the exception under subparagraph (iii)) and other applicable provisions of Section 409A. The aggregate of any such payments that would have otherwise been paid during the period between the Separation Date and the New Payment Date shall be paid to Executive in a lump sum on the New Payment Date.

8. PARACHUTE PAYMENT LIMITATION . In the event amounts payable under this Agreement or otherwise are contingent on a Change in Control for purposes of Section 280G of the Code, and it is determined by a public accounting firm or legal counsel authorized to practice before the Internal Revenue Service selected by the Company that any payment or benefit made or provided to Executive in connection with this Agreement or otherwise (collectively, a "Payment") would be subject to the excise tax imposed by Section 4999 of the Code (the "Parachute Tax"), the Payments under this Agreement shall be payable in full or, if applicable, in such lesser amount which would result in no portion of such Payments being subject to the Parachute Tax, whichever of the foregoing amounts, taking into account the applicable federal, state and local income taxes and the Parachute Tax, results in Executive's receipt, on an after-tax basis, of the greatest amount of Payments under this Agreement. If Payments are reduced pursuant to this paragraph, cash severance payments under Section 6 shall first be reduced, and the other benefits under this Agreement shall thereafter be reduced, to the extent necessary so that no portion of the Payments is subject to the Parachute Tax.

9. NOTICES. Any notice required or permitted hereunder shall be made in writing (a) either by actual delivery of the notice into the hands of the party thereto entitled, by messenger, by fax or by over-night delivery service or (b) by the mailing of the notice in the United States mail, certified or registered mail, return receipt requested, all postage pre-paid and addressed to the party to whom the notice is to be given at the party's respective address set forth below, or such other address as the parties may from time to time designate by written notice as herein provided.

If to Executive: G. Kelly Martin
[***]

With a copy to:
David Zimble
dsz@navonelawgroup.com

If to the Company: Novan, Inc.
4105 Hopson Road
Morrisville, NC 27560
(Fax) (919) 237‑9212
Attn: Chair of the Board of Directors

The notice shall be deemed to be received, if sent per subsection (a), on the date of its actual receipt by the party entitled thereto and, if sent per subsection (b), on the third day after the date of its mailing.

10. RETURN OF COMPANY PROPERTY. Upon Executive's Separation from Service from the Company for any reason, Executive shall return to Company all personal property belonging to Company ("Company Property") that is in Executive's possession or control as of the date of such Separation from Service, including, without limitation, all records, papers, drawings, notebooks, specifications, marketing materials, software, reports, proposals, equipment, or any other device, document or possession, however obtained, whether or not such Company Property contains confidential information belonging to the Company. Such Company Property shall be returned in the same condition as when provided to Executive, reasonable wear and tear excepted.

11. EMPLOYEE REPRESENTATIONS.

(a) Executive represents that his performance of all of the terms of this Agreement does not and will not breach any arrangement to keep in confidence information acquired by Executive in confidence or in trust prior to Executive's employment by the Company. Executive represents that he has not entered into, and agrees not to enter into, any agreement either oral or written in conflict herewith.

(b) Executive understands as part of the consideration for this Agreement and for Executive's employment or continued employment by the Company, that Executive has not brought and will not bring with Executive to the Company, or use in the performance of Executive's duties and responsibilities for the Company or otherwise on its behalf, any materials or documents of a former employer or other owner which are generally not available to the public, unless Executive has obtained written authorization from the former employer or other owner for their possession and use and has provided the Company with a copy thereof.

(c) Executive understands that during his employment for the Company he is not to breach any obligation of confidentiality that Executive has to a former employer or any other person or entity and agrees to comply with such understanding.

12. INDEMNIFICATION. Executive agrees to indemnify and hold harmless the Company, its directors, officers, agents and employees against any liabilities and expenses, including amounts paid in settlement, incurred by any of them in connection with any claim by any of Executive's prior employers that the termination of Executive's

employment with such employer, Executive's employment by the Company, or use of any skills and knowledge by the Company is a violation of contract or law or otherwise violates the rights thereof.

13. SEVERABILITY. Executive hereby agrees that each provision herein shall be treated as a separate and independent clause, and the unenforceability of any one clause shall in no way impair the enforceability of any of the other clauses herein.

14. WAIVER. Any waiver by the Company of a breach of any provision of this Agreement shall not operate or be construed as a waiver of any subsequent breach of such provision or any other provision hereof.

15. AFFILIATES; ASSIGNMENT; BINDING EFFECT . The term "Company" shall also include any of the Company's subsidiaries, subdivisions or affiliates. The Company shall have the right to assign this Agreement to its successors and assigns, and all covenants and agreements hereunder shall inure to the benefit of and be enforceable by said successors or assigns. Executive may not assign any of his rights or delegate any of his duties under this Agreement. This Agreement shall be binding upon and shall inure to the benefit of each of the parties hereto, and to their respective heirs, representatives, successors and permitted assigns.

16. ENTIRE AGREEMENT. The terms of this Agreement (together with any other agreements and instruments contemplated hereby or referred to herein) are intended by the parties hereto to be the final expression of their agreement with respect to the employment of Executive by the Company and may not be contradicted by evidence of any prior or contemporaneous agreement (including, without limitation, any prior offer letters, or any term sheets). The parties hereto further intend that this Agreement shall constitute the complete and exclusive statement of its terms and that no extrinsic evidence whatsoever may be introduced in any judicial, administrative or other legal proceeding to vary the terms of this Agreement. No modification of or amendment to this Agreement, nor any waiver of any rights under this Agreement, will be effective unless in writing and signed by each of the parties hereto.

17. GOVERNING LAW; VENUE. This Agreement shall be construed, interpreted, and governed in accordance with and by North Carolina law and the applicable provisions of federal law ("Applicable Federal Law"). Any and all claims, controversies, and causes of action arising out of or relating to this Agreement, whether sounding in contract, tort, or statute, shall be governed by the laws of the state of North Carolina, including its statutes of limitations, except for Applicable Federal Law, without giving effect to any North Carolina conflict-of-laws rule that would result in the application of the laws of a different jurisdiction. Both Executive and the Company acknowledge and agree that the state or federal courts located in North Carolina have personal jurisdiction over them and over any dispute arising under this Agreement, and both Executive and the Company irrevocably consent to the jurisdiction of such courts.

18. COUNTERPARTS. This Agreement may be executed in separate counterparts, each of which is deemed to be an original and all of which taken together constitute one agreement. Counterparts may be transmitted and/or signed by facsimile or electronic mail. The effectiveness of any such documents and signatures shall have the same force and effect as manually signed originals and shall be binding on the parties to the same extent as a manually signed original thereof.

[Signature Page Follows]

IN WITNESS WHEREOF, the parties have executed this Agreement effective as of the day and year first above written.

NOVAN, INC.

/s/ Robert A. Ingram
Robert A. Ingram
Chair, Board of Directors

G. KELLY MARTIN

/s/ G. Kelly Martin

Exhibit 10.3

NOVAN, INC.
2016 INCENTIVE AWARD PLAN
STOCK APPRECIATION RIGHT GRANT NOTICE
AND
STOCK APPRECIATION RIGHT AGREEMENT

Novan, Inc., a Delaware corporation (the "Company"), pursuant to its 2016 Incentive Award Plan, as amended from time to time (the "Plan"), hereby grants to the holder listed below ("Participant") an award of stock appreciation rights over the number of shares of the Company's Common Stock, par value $0.0001 per share ("Common Stock") or ("Shares") set forth below (the "SARs"). Upon exercise, each SAR represents the right to receive an amount equal to the Fair Market Value of one share of the Company's Common Stock on the date of exercise less the Exercise Price per Share set forth below. Payment of such amount shall be in cash, shares of Common Stock (based on their Fair Market Value as of the date the SAR is exercised) or a combination of both, as determined by the Administrator. The SARs are subject to the terms and conditions set forth in this SAR Grant Notice (this "Grant Notice"), the SAR Agreement attached hereto as Exhibit A (the "Agreement"), and the Plan, each of which is incorporated herein by reference. Furthermore, the grant of the SARs is conditioned upon Participant's compliance with any Confidentiality and Assignment of Inventions Agreement and/or Noncompetition Agreement existing or entered into in connection herewith (the "Restrictive Covenants Agreement(s)"). Unless otherwise defined herein, the terms defined in the Plan shall have the same defined meanings in this Grant Notice and the Agreement.

Participant:	G. Kelly Martin
Grant Date:	August 16, 2018
Grant Number:	342
Exercise Price Per Share:	$3.80
Total Exercise Price:	$3,800,000
Total Number of Shares Subject to SARs:	1,000,000
Expiration Date:	February 1, 2020
Vesting Schedule:	The SARs shall vest in full as of February 1, 2020 and shall be deemed automatically exercised and settled as of that date provided Participant remains continuously employed with the Company through such date unless vesting is otherwise expressly accelerated pursuant to the Agreement.

By Participant's signature below, Participant agrees to be bound by the terms and conditions of the Plan, the Agreement, the Grant Notice, and the Restrictive Covenants Agreement(s). Participant has reviewed the Plan, the Agreement, the Grant Notice, and the Restrictive Covenants Agreement(s) in their entirety, has had an opportunity to obtain the advice of counsel prior to executing this Grant Notice and fully understands all provisions of this Grant Notice, the Agreement, the Plan, and the Restrictive Covenants Agreement(s). Participant hereby agrees to accept as binding, conclusive and final all decisions or interpretations of the Administrator upon any questions arising under the Plan, this Grant Notice, the Agreement, or the Restrictive Covenants Agreement(s).

NOVAN, INC.		**PARTICIPANT**	
By:	/s/ Jeff N. Hunter	By:	/s/ G. Kelly Martin
Print Name:	Jeff N. Hunter		G. Kelly Martin
Title:	Chief Business Officer		Chief Executive Officer

EXHIBIT A
TO
STOCK APPRECIATION RIGHT GRANT NOTICE

STOCK APPRECIATION RIGHT AGREEMENT

Pursuant to the Stock Appreciation Right Grant Notice (the "***Grant Notice***") to which this Stock Appreciation Right Agreement (this "***Agreement***") is attached, Novan, Inc., a Delaware corporation (the "***Company***") has granted to Participant Stock Appreciation Rights ("***SARs***") under the Company's 2016 Incentive Award Plan (as amended from time to time, the "***Plan***") over the number of shares of Common Stock set forth in the Grant Notice.

Notwithstanding any other provision of the Plan, the Grant Notice, or this Agreement to the contrary, the SARs granted herein are granted to Participant on a contingent basis and this grant shall be considered irrevocably forfeited and voided in full if the Company fails to obtain stockholder approval for an amendment to the Plan prior to the earliest date on which the SARs could vest and become exercisable to Participant providing for: (a) an increase in the number of shares reserved under the Plan to a level sufficient to permit the settlement of the SARs subject to this award in full, (b) removal or amendment of Award Limits as necessary to permit the settlement of the SARs subject to this award, and (c) such other amendments or changes to the Plan as may be necessary to permit this SAR grant to Participant under the Plan (such Plan amendments referred to collectively herein as the "***Required Plan Amendments***").

ARTICLE I.

GENERAL

1.1 Defined Terms. Capitalized terms not specifically defined herein shall have the meanings specified in the Plan or the Grant Notice. For purposes of this Agreement, the following terms shall be defined as in Participant's employment letter or agreement with the Company or a Subsidiary, as amended from time to time, or if Participant is not a party to such a letter or agreement or such letter or agreement does not contain such a definition, the terms shall be defined as follows:

(a) "Cause" shall mean (A) willful misconduct, gross negligence or an act of dishonesty of Participant with regard to the Company or any of its Affiliates, which in either case, results in or could reasonably be expected to result in material harm to the Company or such Affiliate; (B) the willful and continued failure of Participant to attempt to perform his or her duties with the Company or any of its Affiliates (other than any such failure resulting from Disability), which failure is not remedied within 30 days after receiving written notice thereof; (C) the conviction of Participant of (or the plea by Participant of guilty or *nolo contendere* to) any felony involving moral turpitude (other than traffic related offenses or as a result of vicarious liability); or (D) a material breach by Participant of any material provision of any written service agreement, which breach is not remedied within 10 days after receiving written notice thereof.

(b) "Disability" shall mean Participant's inability to engage in any substantial gainful activity by reason of any medically determinable physical or mental impairment that can be expected to result in death or that can be expected to last for a continuous period of not less than 12 months.

(c) "Good Reason" shall mean:

(i) a material diminution in Participant's authority, duties or responsibilities; or

(ii) a material reduction in Participant's annual base salary or target bonus,

in case of either of the foregoing, which remains uncured after 30 days following the Company's receipt of written notice from Participant that Participant believes in good faith that such condition constitutes Good Reason; provided that Participant shall provide such written notice within a period not to exceed 90 days following Participant's knowledge of the initial existence of such condition or occurrence of such event. Notwithstanding the foregoing, a

Termination of Service shall not be for Good Reason unless Participant resigns within six months after the occurrence of the applicable event.

1.2 Incorporation of Terms of Plan. The SARs are subject to the terms and conditions set forth in the Plan, each of which is incorporated herein by reference, as well as this Agreement. In the event of any inconsistency between the Plan and this Agreement, the terms of the Plan shall control except with respect to Section 4.5(a) of this Agreement which shall supersede the Plan.

ARTICLE II.

GRANT OF SARS

2.1 Grant of SARs. In consideration of Participant's past and/or continued employment with or service to the Company or a Subsidiary and for other good and valuable consideration, effective as of the grant date set forth in the Grant Notice (the "Grant Date"), the Company has granted to Participant the SARs over the aggregate number of shares of Common Stock set forth in the Grant Notice, upon the terms and conditions set forth in the Grant Notice, the Plan, and this Agreement, subject to adjustment as provided in Section 13.2 of the Plan.

2.2 Exercise Price. The exercise price per share of the shares of Common Stock covered by the SARs (the "Exercise Price") shall be as set forth in the Grant Notice.

2.3 Consideration to the Company. In consideration of the grant of the SARs by the Company, Participant agrees to render faithful and efficient services to the Company or any Subsidiary. Nothing in the Plan, the Grant Notice, or this Agreement shall confer upon Participant any right to continue in the employ or service of the Company or any Subsidiary or shall interfere with or restrict in any way the rights of the Company and the Subsidiaries, which rights are hereby expressly reserved, to discharge or terminate the services of Participant at any time for any reason whatsoever, with or without cause, except to the extent expressly provided otherwise in a written agreement between the Company or a Subsidiary and Participant.

ARTICLE III.

PERIOD OF EXERCISABILITY

3.1 Commencement of Exercisability; Accelerated Vesting and Deemed Exercise on Certain Events.

(a) Subject to the Company having attained requisite stockholder approval for the amendments to the Plan necessary to eliminate the contingent nature of this SAR grant and Participant's continuous employment in good standing with the Company as its Chief Executive Officer (CEO) through February 1, 2020, the SAR shall become vested and exercisable in full on February 1, 2020 (i.e., the SAR shall "cliff-vest" on February 1, 2020).

(b) Notwithstanding the Grant Notice or the provisions of Section 3.1(a) and (d), if, following stockholder approval of the Required Plan Amendments, Participant's employment or service with the Company is terminated due to either: (1) an involuntary Termination of Participant's Service by the Company without Cause or (2) Participant's Termination of Service due to Good Reason, in either case, within three (3) months prior to, or twelve (12) months following, a Change in Control, this SAR shall become vested and exercisable in full and shall be deemed to be automatically exercised to the extent of any value on the later of: (1) consummation of the Change in Control or (2) the date of Participant's Termination of Service. In such event, any SAR value shall be settled and paid to Participant as soon as practicable but in no event more than 60 days following the later of consummation of the Change in Control or the Participant's Termination of Service giving rise to such vesting and exercise. Notwithstanding the foregoing, in the event Participant's employment or service with the Company is terminated as set forth above in this Section 3.1(b) prior to stockholder adoption of the Required Plan Amendments, this SAR shall be immediately forfeited as of Participant's termination of service and no payment shall be made under this Agreement or the Plan.

(c) Notwithstanding the Grant Notice or the provisions of Sections 3.1(a) herein, in the event of Participant's involuntary Termination of Service by the Company without Cause or Participant's Termination of Service due to Good Reason following stockholder approval of the Required Plan Amendments but prior to the SAR Expiration Date, this SAR shall become vested and exercisable in full and shall be deemed to be automatically exercised as of the Participant's Termination of Service date. In such event, any SAR value shall be settled and paid to Participant as soon as practicable but in no event more than sixty (60) days following a Participant's Termination of Service. Notwithstanding the foregoing, in the event Participant's employment or service with the Company is terminated as set forth above in this Section 3.1(c) prior to stockholder adoption of the Required Plan Amendments, this SAR shall be immediately forfeited as of Participant's termination of service and no payment shall be made under this Agreement or the Plan.

(d) Except as set forth in Section 3.1(b) or (c), unless otherwise determined by the Administrator or as set forth in a written employment agreement between Participant and the Company, any portion of the SARs that has not become vested and exercisable on or prior to the date of Participant's Termination of Service shall be irrevocably forfeited on the date of Participant's Termination of Service and shall not thereafter become vested or exercisable. In the event of Participant's Termination of Service for Cause, this SAR shall in all cases be immediately and irrevocably forfeited in full. For the avoidance of doubt, this SAR shall be immediately and irrevocably forfeited and shall not provide for any payment under this Agreement or the Plan in the event of Participant's Termination of Service or other vesting and exercise trigger established hereunder prior to stockholder approval of the Required Plan Amendments.

3.2 Duration of Exercisability. In no event shall the SARs remain exercisable beyond February 1, 2020. Once the SARs become unexercisable, they shall be immediately and irrevocably forfeited.

3.3 Expiration of SARs. Except as otherwise provided in Section 3.1(b) or (c) or otherwise determined by the Administrator or set forth in a written employment agreement between the Participant and the Company, the SARs may not be exercised except on the Expiration Date given the general, 100% cliff-vesting of the SARs herein. The SARs shall be automatically exercised to the extent of any value as of the Expiration Date if not previously vested and exercised on an accelerated basis hereunder and shall thereafter be deemed expired and canceled for all purposes.

ARTICLE IV.

EXERCISE

4.1 Person Eligible to Exercise. During the lifetime of Participant, only the Participant may exercise the SARs.

4.2 Partial Exercise. The SARs granted hereunder are not eligible for partial exercise or with respect to fractional shares given the lack of installment-based vesting.

4.3 Manner of Exercise. The SARs granted hereunder shall be exercised automatically upon the first vesting and exercise trigger established herein provided Participant makes appropriate arrangements with the Company for the delivery of any written representations or documents as may reasonably be required in the Administrator's sole discretion to facilitate Participant's net share withholding process set forth in Section 4.5(a) in order to comply with applicable tax withholding obligations or to otherwise effect compliance with Applicable Laws. Notwithstanding any of the foregoing, the Administrator shall have the right to specify all conditions of the manner of exercise, which may be subject to change from time to time.

4.4 Time of Settlement. The shares of Common Stock or cash payable upon exercise of the SARs shall be provided to Participant within 60 days following the date of exercise of the SARs. Any such cash shall be payable in a lump sum. For the avoidance of doubt, in no event will any amount be paid to Participant upon exercise of the SARs awarded herein unless the Company's stockholders have approved the Required Plan Amendments.

4.5 Tax Withholding.

(a) Notwithstanding any other provision of this Agreement or the Plan, the Company and its Subsidiaries have the authority to deduct or withhold an amount sufficient to satisfy any applicable federal, state, local and foreign taxes (including the employee portion of any FICA obligation) required by law to be withheld with respect to any taxable event arising pursuant to this Agreement. Accordingly, the Company and its Subsidiaries shall satisfy such tax withholding obligations by having the Company withhold a net number of shares of Common Stock issuable upon the exercise of the SARs having a then current Fair Market Value or, if the SARs are settled in cash, an amount of the cash payment made with respect to the SARs, in each case not exceeding the amount necessary to satisfy the withholding obligation of the Company and the Subsidiaries based on the minimum applicable statutory withholding rates for federal, state, local and foreign income tax and payroll tax purposes or such other rate as does not result in adverse accounting consequences for the Company. The Company and the Participant may make alternative arrangements to satisfy such withholding obligations as the Participant may consent to in the Participant's sole discretion.

(b) The Company shall not be obligated to deliver any cash or any certificate representing shares of Common Stock issuable with respect to the exercise of the SARs to, or to cause any such shares of Common Stock to be held in book-entry form by, Participant or his or her legal representative unless and until Participant or his or her legal representative shall have satisfied in full the amount of all federal, state, local and foreign taxes applicable with respect to the taxable income of Participant resulting from the exercise of the SARs or any other taxable event related to the SARs; *provided*, *however*, that no payment shall be delayed under this Section 4.5(b) if such delay would result in a violation of Section 409A.

(c) In accordance with Section 4.5(a) above, the Company may elect to instruct any brokerage firm determined acceptable to the Company for such purpose to sell on Participant's behalf a whole number of shares from those shares of Common Stock then issuable upon the exercise of the SARs as the Company determines to be appropriate to generate cash proceeds sufficient to satisfy the tax withholding obligation and to remit the proceeds of such sale to the Company or the Subsidiary with respect to which the withholding obligation arises. Participant's acceptance of this Award constitutes Participant's instruction and authorization to the Company and such brokerage firm to complete the transactions described in this Section 4.5(c). In the event of any such broker-assisted sale of shares of Common Stock: (a) any shares of Common Stock to be sold through a broker-assisted sale will be sold on the day the tax withholding obligation arises, or as soon thereafter as practicable; (b) such shares of Common Stock may be sold as part of a block trade with other participants in the Plan in which all participants receive an average price; (c) Participant will be responsible for all broker's fees and other costs of sale, and Participant agrees to indemnify and hold the Company harmless from any losses, costs, damages or expenses relating to any such sale; (d) to the extent the proceeds of such sale exceed the applicable tax withholding obligation, the Company agrees to pay such excess in cash to Participant as soon as reasonably practicable; (e) Participant acknowledges that the Company or its designee is under no obligation to arrange for such sale at any particular price, and that the proceeds of any such sale may not be sufficient to satisfy the applicable tax withholding obligation; and (f) in the event the proceeds of such sale are insufficient to satisfy the applicable tax withholding obligation, Participant agrees to pay immediately upon demand to the Company or the Subsidiary with respect to which the withholding obligation arises an amount in cash sufficient to satisfy any remaining portion of the Company's or the applicable Subsidiary's withholding obligation.

(e) Participant is ultimately liable and responsible for all taxes owed in connection with the SARs, regardless of any action the Company or any Subsidiary takes with respect to any tax withholding obligations that arise in connection with the SARs. Neither the Company nor any Subsidiary makes any representation or undertaking regarding the treatment of any tax withholding in connection with the awarding, vesting or exercise of the SARs or the subsequent sale of shares of Common Stock. The Company and the Subsidiaries do not commit and are under no obligation to structure the SARs to reduce or eliminate Participant's tax liability.

4.6 Conditions to Issuance of Shares. If the Administrator determines to settle any SARs in shares of Common Stock, the Company shall not be required to issue or deliver any shares of Common Stock upon the exercise of such SARs prior to fulfillment of all of the following conditions: (a) the admission of such shares of Common Stock to listing on all stock exchanges on which such Shares are then listed, (b) the completion of any

registration or other qualification of such shares of Common Stock under any state or federal law or under rulings or regulations of the Securities and Exchange Commission or other governmental regulatory body that the Administrator shall, in its absolute discretion, deem necessary or advisable, (c) the obtaining of any approval or other clearance from any state or federal governmental agency that the Administrator shall, in its absolute discretion, determine to be necessary or advisable and (d) the receipt of full payment of any applicable withholding tax in accordance with Section 4.5 by the Company or its Subsidiary with respect to which the applicable withholding obligation arises.

4.7 Rights as Shareholder. This Agreement shall not convey to the Participant nor any person claiming under or through Participant any of the rights or privileges of a shareholder of the Company, including, without limitation, voting rights and rights to dividends, in respect of any of the Shares subject to the SARs unless and until certificates representing such Shares (which may be in book-entry form) will have been issued and recorded on the records of the Company or its transfer agents or registrars and delivered to Participant (including through electronic delivery to a brokerage account). No adjustment shall be made for a dividend or other right for which the record date is prior to the date of such issuance, recordation and delivery, except as provided in Section 13.2 of the Plan. Except as otherwise provided herein, if the Administrator determines to settle the SARs in Shares, after such issuance, recordation and delivery, Participant will have all the rights of a shareholder of the Company with respect to such Shares, including, without limitation, the right to receipt of dividends and distributions on such shares.

ARTICLE V.

OTHER PROVISIONS

5.1 Administration. The Administrator shall have the power to interpret the Plan, the Grant Notice, and this Agreement and to adopt such rules for the administration, interpretation and application of the Plan, the Grant Notice, and this Agreement as are consistent therewith and to interpret, amend or revoke any such rules. All actions taken and all interpretations and determinations made by the Administrator will be final and binding upon Participant, the Company and all other interested persons. To the extent allowable pursuant to Applicable Law, no member of the Committee or the Board will be personally liable for any action, determination or interpretation made with respect to the Plan, the Grant Notice, or this Agreement.

5.2 Limited Transferability of SARs. The SARs shall be transferrable to Participant's Permitted Transferees to the fullest extent permitted by Section 11.3 of the Plan and Applicable Law.

5.3 Adjustments. Unless otherwise limited by the terms of a Participant's employment letter or agreement, the Administrator may accelerate the vesting of all or a portion of the SARs in such circumstances as the Administrator, in the Administrator's sole discretion may determine. In addition, upon the occurrence of certain events relating to the Common Stock contemplated by Section 13.2 of the Plan (including, without limitation, an extraordinary cash dividend on such Common Stock) (and subject to the terms of Section 3.1(b) hereof), the Administrator may make such adjustments as the Administrator deems appropriate in the number of shares of Common Stock subject to the SARs, the exercise price of the SARs and the kind of securities that may be issued upon exercise of the SARs. Participant acknowledges that the SARs are subject to adjustment, modification and termination in certain events as provided in this Agreement and the Plan, including Section 13.2 of the Plan.

5.4 Notices. Any notice to be given under the terms of this Agreement to the Company shall be addressed to the Company in care of the Secretary of the Company at the Company's principal office, and any notice to be given to Participant shall be addressed to Participant at Participant's last address reflected on the Company's records. By a notice given pursuant to this Section 5.4, either party may hereafter designate a different address for notices to be given to that party. Any notice shall be deemed duly given when sent via email or when sent by reputable overnight courier or by certified mail (return receipt requested) and deposited (with postage prepaid) in a post office or branch post office regularly maintained by the United States Postal Service.

5.5 Titles. Titles are provided herein for convenience only and are not to serve as a basis for interpretation or construction of this Agreement.

5.6 Governing Law. The laws of the State of Delaware shall govern the interpretation, validity, administration, enforcement and performance of the terms of this Agreement regardless of the law that might be applied under principles of conflicts of laws.

5.7 Conformity to Securities Laws. Participant acknowledges that the Plan, the Grant Notice and this Agreement are intended to conform to the extent necessary with all Applicable Laws, including, without limitation, the provisions of the Securities Act and the Exchange Act, and any and all regulations and rules promulgated thereunder by the Securities and Exchange Commission and state securities laws and regulations. Notwithstanding anything herein to the contrary, the Plan shall be administered, and the SARs are granted and may be exercised, only in such a manner as to conform to Applicable Law. To the extent permitted by Applicable Law, the Plan, the Grant Notice, and this Agreement shall be deemed amended to the extent necessary to conform to Applicable Law.

5.8 Amendment, Suspension and Termination. To the extent permitted by the Plan, this Agreement may be wholly or partially amended or otherwise modified, suspended or terminated at any time or from time to time by the Administrator or the Board*, provided, however,* that, except as may otherwise be provided by the Plan, no amendment, modification, suspension or termination of this Agreement shall adversely affect the SARs in any material way without the prior written consent of Participant.

5.9 Successors and Assigns. The Company may assign any of its rights under this Agreement to single or multiple assignees, and this Agreement shall inure to the benefit of the successors and assigns of the Company. Subject to the restrictions on transfer set forth in Section 5.2 and the Plan, this Agreement shall be binding upon and inure to the benefit of the heirs, legatees, legal representatives, successors and assigns of the parties hereto.

5.10 Limitations Applicable to Section 16 Persons. Notwithstanding any other provision of the Plan or this Agreement, if Participant is subject to Section 16 of the Exchange Act, the Plan, the SARs, the Grant Notice, the Foreign Appendix, if applicable, and this Agreement shall be subject to any additional limitations set forth in any applicable exemptive rule under Section 16 of the Exchange Act (including any amendment to Rule 16b-3 of the Exchange Act) that are requirements for the application of such exemptive rule. To the extent permitted by Applicable Law, this Agreement shall be deemed amended to the extent necessary to conform to such applicable exemptive rule.

5.11 Not a Contract of Employment or Service Relationship. Nothing in this Agreement or in the Plan shall confer upon Participant any right to continue to serve as an Employee, Director, Consultant or other service provider of the Company or any Subsidiary or shall interfere with or restrict in any way the rights of the Company and the Subsidiaries, which rights are hereby expressly reserved, to discharge or terminate the services of Participant at any time for any reason whatsoever, with or without cause, except to the extent expressly provided otherwise in a written agreement between the Company or a Subsidiary and Participant.

5.12 Entire Agreement. The Plan, the Grant Notice, this Agreement (including any exhibit hereto) and the applicable terms of any employment agreement between Participant and the Company constitute the entire agreement of the parties and supersede in their entirety all prior undertakings and agreements of the Company, the Subsidiaries and Participant with respect to the subject matter hereof.

5.13 Section 409A. This Award is not intended to constitute "nonqualified deferred compensation" within the meaning of Section 409A. However, notwithstanding any other provision of the Plan, the Grant Notice, or this Agreement, if at any time the Administrator determines that this Award (or any portion thereof) may be subject to Section 409A, the Administrator shall have the right in its sole discretion (without any obligation to do so or to indemnify Participant or any other person for failure to do so) to adopt such amendments to the Plan, the Grant Notice or this Agreement, or adopt other policies and procedures (including amendments, policies and procedures with retroactive effect), or take any other actions, as the Administrator determines are necessary or appropriate for

this Award either to be exempt from the application of Section 409A or to comply with the requirements of Section 409A so long as such actions do not reduce the after-tax value of the Award to the Participant. Notwithstanding anything herein to the contrary, no provision of the Plan shall be interpreted or construed to transfer any liability for failure to comply with the requirements of Section 409A from Participant or any other person to the Company or any of its Subsidiaries, employees or agents.

5.14 Agreement Severable. In the event that any provision of the Grant Notice or this Agreement is held invalid or unenforceable, such provision will be severable from, and such invalidity or unenforceability will not be construed to have any effect on, the remaining provisions of the Grant Notice or this Agreement.

5.15 Limitation on Participant's Rights. Participation in the Plan confers no rights or interests other than as herein provided. This Agreement creates only a contractual obligation on the part of the Company as to amounts payable and shall not be construed as creating a trust. Neither the Plan nor any underlying program, in and of itself, has any assets. Participant shall have only the rights of a general unsecured creditor of the Company with respect to amounts credited and benefits payable, if any, with respect to the SARs, and rights no greater than the right to receive shares of Common Stock or cash as a general unsecured creditor with respect to the SARs, as and when exercised pursuant to the terms hereof.

5.16 Counterparts. The Grant Notice may be executed in one or more counterparts, including by way of any electronic signature, subject to Applicable Law, each of which shall be deemed an original and all of which together shall constitute one instrument.

Exhibit 10.4

NOVAN, INC.

TANGIBLE STOCKHOLDER RETURN PLAN

(As Amended and Restated November 2, 2018)

1. Purpose; Eligibility.

1.1 General Purpose. The name of this plan is the Novan, Inc. Tangible Stockholder Return Plan (the "**Plan**"). The purposes of the Plan are to: (a) enable Novan, Inc., a Delaware corporation (the "**Company**") to retain and attract highly-qualified employees who will contribute to the Company's long range success; (b) provide targeted incentive compensation that aligns the interests of Participants with those of the Company's stockholders by rewarding Participants for the achievement of significant, tangible stockholder return; and (c) promote the success of the Company's long-term business goals and objectives.

1.2 Effective Date; Performance Period The Plan was effective as of August 2, 2018, the date the Plan was initially approved and adopted by the Company's Board (the "**Effective Date**") and shall remain in effect through March 1, 2022 (the "**Performance Period**") for purposes of achieving the applicable Share Price Targets specified herein. The Plan was subsequently amended and restated as of November 2, 2018. Subject to Section 10.6, the Plan shall remain in effect through March 1, 2022 or such later date as necessary to ensure the payment of all Bonus Awards, if any, earned during the Performance Period.

2. Definitions.

"**Affiliate**" means any corporation or other entity controlled by the Company.

"**Applicable Laws**" means the requirements related to or implicated by the administration of the Plan under applicable state corporate law, United States federal and state securities laws, the Code, any stock exchange or quotation system on which the shares of Common Stock are listed or quoted, and the applicable laws of any foreign country or jurisdiction where Bonus Awards are granted under the Plan.

"**Award Notice**" means a written notice or other instrument evidencing the terms and conditions of an individual Bonus Award granted pursuant to the Plan, including the specific Minimum Bonus Amount communicated to a Participant along with any additional post-Share Price Target achievement employment or service or other conditions required to be satisfied in order to earn the Bonus Award. In the discretion of the Company, an Award Notice may be transmitted electronically to any Participant. Each Award Notice shall be subject to the terms and conditions of the Plan, the Securities Act and other applicable disclosure requirements. In the event of any conflict between the Plan terms and the terms of an Award Notice, the Plan terms shall govern.

"**Board**" means the Board of Directors of the Company, as constituted at any time.

"**Bonus Award**" means a long-term incentive award, the payment of which is contingent on the achievement of a specific Share Price Target established pursuant to the Plan. A Bonus Award for a particular Share Price Target shall consist of the following two components: (1) a fixed, Minimum Bonus Amount payable upon achievement of the specified Share Price Target (and any post-achievement retention or service obligations) as communicated to a Participant in a Participant's Award Notice upon inclusion in the Plan and (2) a potential Discretionary Bonus Amount as determined and approved by the Committee following achievement of the specified Share Price Target based upon the Committee's assessment of the Participant's overall contributions to the Company and its achievement of the applicable Share Price Target.

"**Bonus Pool**" or "**Bonus Pools**" shall mean, either individually or collectively, as applicable, the First Share Price Target Bonus Pool and/or the Second Share Price Target Bonus Pool.

"**Cause**" shall mean (A) willful misconduct, gross negligence or an act of dishonesty of Participant with regard to the Company or its Affiliates which results in or could reasonably be expected to result in material harm to the Company or its Affiliates; (B) the willful and continued failure of Participant to attempt to perform Participant's duties with the Company or any of its Affiliates (other than any such failure resulting from death or Disability), which failure is not remedied within thirty (30) days following receipt of written notice thereof; (C) the conviction of Participant of (or the plea by Participant of guilty or *nolo contendere* to) any felony involving moral turpitude (other than traffic related offenses or as a result of vicarious liability); or (D) a material breach by Participant of any material provision of any written service agreement, which breach is not remedied within ten (10) days of receiving written notice thereof. Notwithstanding the foregoing, if the Participant is a party to a written employment or similar agreement with the Company (or any Affiliate) in which the term "cause" is defined, the term "Cause" for purposes of this Plan shall have the same definition given the term in said agreement.

"**Change in Control**" shall have the same meaning given to such term in Section 2.9 of the Company's 2016 Incentive Award Plan, as amended or restated from time to time. Notwithstanding the foregoing, if a Change in Control results in or contributes to the achievement of a Share Price Target pursuant to this Plan and any Bonus Award is determined to be subject to, rather than exempt from, Section 409A, then, to the extent required to avoid the imposition of additional taxes under Section 409A, the transaction or event described in Section 2.9 of the Company's 2016 Incentive Award Plan shall only constitute a Change in Control for purposes of the timing of payment of Bonus Awards if such transaction constitutes a "change in control event" as defined in Treasury Regulation Section 1.409A-3(i)(5). The Committee shall have sole discretion to determine conclusively whether a Change in Control has occurred pursuant to the above definition, the date of the occurrence of such Change in Control and all incidental matters relating thereto; provided that any exercise of authority in conjunction with a determination of whether a Change in Control is a "change in control event" as defined in Treasury Regulation Section 1.409A-3(i)(5) shall be consistent with such regulation.

"**Code**" means the U.S. Internal Revenue Code of 1986, as amended from time to time.

"**Committee**" means the Compensation Committee of the Board or such other Board committee as may be appointed by the Board to administer the Plan in accordance with Section 3 hereof.

"**Common Stock**" shall mean the Company's common stock.

"**Company**" shall have the meaning set forth in Section 1.1.

"Covered Payments" shall have the meaning set forth in Section 7.7.

"**Disability**" means, unless otherwise specifically defined in an Award Notice or employment agreement between the Participant and the Company, total and permanent disability in accordance with the Company's long-term disability plan.

"**Discretionary Bonus Amount**" means the discretionary component of a Bonus Award to be denominated as a fixed dollar amount and communicated to a Participant following achievement of a Share Price Target (or upon a pro-rata determination following a Change in Control) as determined by the Committee.

"**Effective Date**" shall have the meaning set forth in Section 1.2.

"Equity Restructuring" shall mean a nonreciprocal transaction between the Company and its stockholders, such as a stock dividend, stock split, spin-off, rights offering or recapitalization through a large, nonrecurring cash dividend, that affects the number or kind of Shares (or other securities of the Company) or the share price of Common Stock (or other securities) and causes a change in the per-share value of the Common Stock.

"**Exchange Act**" means the Securities Exchange Act of 1934, as amended.

"Excise Tax" shall have the meaning set forth in Section 7.7.

"First Share Price Target" or **"First Target"** means TSR as reflected in achieving an average Share price of $11.17 per Share over a 30 consecutive trading day period during the Performance Period. For the avoidance of doubt, a Participant shall not be eligible to receive any Bonus Award under this Plan if the target stock price for the First Share Price Target is not achieved unless a pro-rata portion of the Bonus Award is to be paid upon a Change in Control in accordance with Section 8 or the First Share Price Target is adjusted by the Committee in accordance with Section 3.1(g) below.

"**First Share Price Target Bonus Pool**" means a fixed bonus pool of $25.0 million to be allocated in full to eligible Participants upon achievement of the First Share Price Target.

"**Minimum Bonus Amount**" means the specific dollar amount to be paid by the Company to a Participant upon the Company's achievement of a particular Share Price Target and Participant's satisfaction of any post-achievement employment or service obligations as may be specified by the Committee and communicated to the Participant in the applicable Award Notice. A Minimum Bonus Amount shall operate separately from a Discretionary Bonus Amount, if any, made to a Participant upon the Company's achievement of a Share Price Target.

"Net Benefit" shall have the meaning set forth in Section 7.7.

"Parachute Payments" shall have the meaning set forth in Section 7.7.

"**Participant**" means the employees and executive directors of the Company or an Affiliate and other consultants or independent contractors of the Company or an Affiliate awarded a Bonus Award under the Plan in accordance with Section 4 below.

"Performance Period" shall mean the period from the Effective Date through March 1, 2022 during which Share Price Targets must be achieved in order to earn have the meaning set forth in Section 1.2

"Plan" means this Novan, Inc. Tangible Stockholder Return Plan, as amended from time to time.

"Reduced Amount" shall have the meaning set forth in Section 7.7.

"**Second Share Price Target**" **or "Second Target"** means TSR as reflected in achieving an average Share price of $25.45 per Share over a 30 consecutive trading day period during the Performance Period. For the avoidance of doubt, a Participant shall not be eligible to receive any Bonus Award applicable to the Second Share Price Target if the target stock price for the Second Share Price Target is not achieved unless a pro-rata portion of the Bonus Award is to be paid upon a Change in Control in accordance with Section 8 or the Second Share Price Target is adjusted by the Committee in accordance with Section 3.1(g) below.

"**Second Share Price Target Bonus Pool**" means a fixed bonus pool of $50 million to be allocated in full to eligible Participants upon achievement of the Second Share Price Target. (For the avoidance of doubt, the $50.0 million shall be in addition to the $25.0 million allocated to eligible Participants upon achievement of the First Share Price Target.)

"**Securities Act**" means the Securities Act of 1933, as amended.

"**Share Price Target**" or "**Share Price Targets**" shall refer, either individually or collectively, as applicable, to the First Share Price Target and/or the Second Share Price Target.

"**Shares**" shall mean shares of Common Stock.

"**Tangible Stockholder Return**" or "**TSR**" means actual tangible value realized by Company stockholders through the increase in the Share price at any time during the term of this Plan. For such purposes, the Share price shall be calculated by averaging the Share price as quoted in the principal market on which Shares are traded across

any 30 consecutive trading day period. Such measurement shall be adjusted for cash dividends, stock dividends, other distributions paid, spin-off shares (shares of an Affiliate distributed to the Company's shareholders, the value of which shall be considered only in the event of third-party co-investment in the spin-off Affiliate), or other similar factors as the Committee deems necessary and appropriate to accurately reflect adjustment of the Share Price Targets. In order for Bonus Awards to be paid pursuant to this Plan, the Company must achieve TSR as reflected in the applicable Share Price Targets specified herein except to the extent pro rata awards are awarded pursuant to Section 8 or the Share Price Targets are adjusted as set forth above.

3. Administration.

3.1 Administration by the Committee; Authority of the Committee. The Plan shall be administered by the Committee, in the Committee's sole and exclusive discretion. Subject to the terms of the Plan, the Committee's charter and Applicable Laws, and in addition to other express powers and authorization conferred by the Plan, the Committee shall have exclusive authority to:

(a) construe and interpret the Plan and apply its provisions;

(b) promulgate, amend, and rescind rules and regulations relating to the administration of the Plan;

(c) authorize any officer to execute, on behalf of the Company, any instrument required to carry out the purposes of the Plan;

(d) determine when Bonus Awards are to be granted under the Plan;

(e) from time to time, select, subject to the limitations set forth in the Plan, those Participants to whom Bonus Awards shall be granted;

(f) prescribe the terms and conditions of each Bonus Award, including any employment or other service requirements, if any, and to specify the provisions of the Award Notice relating to such grant as well as the power to amend or waive employment or other service requirements or accelerate the payments of previously earned Bonus Awards to the extent permitted by Applicable Laws;

(g) track, measure, and interpret the TSR and Share price targets used for the applicable Share Price Targets including full authority, in the Committee's sole and absolute discretion, to determine and certify achievement of applicable Share Price Targets pursuant to the Plan as well as to approve any adjustments for cash dividends, stock dividends, other distributions paid, spin-off shares (i.e., shares of an Affiliate distributed to the Company's shareholders, the value of which shall be considered only in the event of third-party co-investment in the spin-off Affiliate), or similar events as the Committee deems necessary and appropriate to accurately measure TSR over the Performance Period and reflect appropriate adjustment of the Share Price Targets;

(h) make decisions with respect to outstanding Bonus Awards as necessary in accordance with Section 8 of the Plan upon a Change in Control of the Company, including, but not limited to, appropriate pro-ration or adjustment of Bonus Award amounts due as applicable;

(i) interpret, administer, reconcile any inconsistency in, correct any defect in and/or supply any omission in the Plan and any instrument or agreement relating to, or Bonus Award granted under, the Plan; and

(j) exercise discretion to make any and all other determinations which the Committee determines to be necessary or advisable for the proper administration of the Plan.

Notwithstanding the foregoing, the Board may at any time and from time to time exercise any and all rights and duties of the Committee under the Plan except with respect to matters which under Rule 16b-3 under the Exchange Act or any successor rule or the rules of any securities exchange or automated quotation system on which the Shares

are listed, quoted or traded are required to be determined in the sole discretion of the Committee. Furthermore, the full Board, acting by a majority of its members in office, shall conduct the general administration of the Plan with respect to any Bonus Awards held by a non-employee director to the extent required by Applicable Law.

3.2 Committee Decisions Final. All decisions made by the Committee pursuant to the provisions of the Plan shall be final and binding on the Company and the Participants, unless determined by a court having jurisdiction to be arbitrary and capricious.

3.3 Delegation. The Committee may delegate all or part of its authority and powers under the Plan to one or more directors and/or officers of the Company; provided, however, the Committee may not delegate its responsibility to: (i) determine, grant, or administer Bonus Awards granted to the Company's executive officers; (ii) determine, grant, or administer Bonus Awards that may not be delegated pursuant to Applicable Laws; (iii) certify achievement of Share Price Targets pursuant to Section 6 of the Plan when the Applicable Laws restrict certification to the Committee or Board; or (iv) determine whether a Change in Control has occurred and, if so, determine the allocation of Bonus Awards to be made pursuant to Section 8.

3.4 Indemnification. In addition to such other rights of indemnification as they may have as Directors or members of the Committee, and to the extent allowed by Applicable Laws, the Committee and its members shall be indemnified by the Company against the reasonable expenses, including attorney's fees, actually incurred in connection with any action, suit or proceeding or in connection with any appeal therein, to which the Committee may be party by reason of any action taken or failure to act under or in connection with the Plan or any Bonus Award granted under the Plan, and against all amounts paid by the Committee in settlement thereof (*provided, however*, that the settlement has been approved by the Company, which approval shall not be unreasonably withheld) or paid by the Committee in satisfaction of a judgment in any such action, suit or proceeding, except in relation to matters as to which it shall be adjudged in such action, suit or proceeding that such Committee did not act in good faith and in a manner which such person reasonably believed to be in the best interests of the Company, or in the case of a criminal proceeding, had no reason to believe that the conduct complained of was unlawful; *provided, however*, that within sixty (60) days after institution of any such action, suit or proceeding, such Committee shall, in writing, offer the Company the opportunity at its own expense to handle and defend such action, suit or proceeding.

4. Designation of Participants; Eligibility for Bonus Awards.

The Committee will, in the Committee's sole discretion, designate which officers, key employees or other service providers of the Company will receive a Bonus Award pursuant to the Plan. The Committee may, in consultation with the CEO and Company management, add new Participants to the Plan at any time during the term of the Plan. For the avoidance of doubt, designation of a Participant as eligible to receive a Minimum Bonus Amount under a Bonus Award shall not automatically entitle Participant to receive a Discretionary Bonus Amount with respect to any Share Price Target. Furthermore, designation of a Participant with respect to the First Share Price Target who is an independent contractor or consultant shall not automatically entitle the individual to receive a Bonus Award for the Second Share Price Target, if applicable. Designation of one person as a Participant eligible to receive a Bonus Award (or portion thereof) shall not obligate designation of any other similarly situated person as a Participant in the Plan or receipt of a Bonus Award (or portion thereof).

5. Share Price Targets and Granting of Bonus Awards.

5.1 Granting of Minimum Bonus Amount for First Share Price Target. The Committee, in consultation with management and taking into account the CEO's recommendations other than for the CEO's Bonus Awards, shall designate eligible Participants in the Plan with respect to the First Share Price Target and transmit individual Award Notices to each Participant specifying a Participant's Minimum Bonus Amount with respect to the First Share Price Target and such other terms and conditions applicable to receipt of a Bonus Award upon achievement of the First Share Price Target including, but not limited to, any additional employment or service required of a particular Participant beyond achievement of the First Share Price Target in order to receive payment of Minimum Bonus Amount for the First Share Price Target.

5.2 Granting of Discretionary Bonus Amounts for the First Share Price Target. If the Company achieves the First Share Price Target on or prior to March 1, 2022, in addition to paying the Minimum Bonus Amounts due to eligible Participants, the Committee, in consultation with management and taking into account the CEO's recommendations other than for the CEO's Bonus Awards, shall determine the specific Discretionary Bonus Amounts to be provided to eligible Participants subject to such other terms and conditions, including potential employment or service obligations, as may be required to receive such Discretionary Bonus Amounts. Discretionary Bonus Amounts due Participants with respect to the First Share Price Target shall be paid in accordance with Section 7 of this Plan. For the avoidance of doubt, participation in and receipt of a Minimum Bonus Amount under the Plan shall not guarantee a Participant receipt of a Discretionary Bonus Amounts under the Plan or vice versa

5.3 Granting of Minimum Bonus Amount Component of Bonus Award for the Second Share Price Target. As soon as practicable but in no event more than one hundred eighty (180) days following the Company's achievement of the First Share Price Target, the Committee, in consultation with management and taking into consideration the CEO's recommendations other than for the CEO's Bonus Awards, shall designate those individuals eligible to participate in the Plan with respect to the Second Share Price Target. The Committee shall transmit individual Award Notices to each Participant with respect to the Second Share Price Target specifying each Participant's Minimum Bonus Amount with respect to the Second Share Price Target and such other terms or conditions applicable to receipt of a Bonus Award contingent upon achievement of the Second Share Price Target including, but not limited to, any additional service required of a particular Participant beyond achievement of the Second Share Price Target to receive a Minimum Bonus Amount with respect to the Second Share Price Target.

5.4 Granting of Discretionary Bonus Amounts for Second Share Price Target. If the Company achieves the Second Share Price Target on or prior to March 1, 2022, in addition to paying the Minimum Bonus Amounts due to Participants with respect to the Second Share Price Target, the Committee, in consultation with management and taking into account the CEO's recommendations other than for the CEO's Bonus Awards, shall determine the potential Discretionary Bonus Amounts due Participants under the Plan and such other terms and conditions, including potential post-achievement service or retention obligations required to earn Discretionary Bonus Amounts. Discretionary Bonus Amounts due Participants with respect to achievement of the Second Share Price Target shall be paid in accordance with Section 7 of this Plan. For the avoidance of doubt, participation in and receipt of a Minimum Bonus Amount with respect to either or both the First Share Price Target or the Second Share Price Target under the Plan shall not guarantee Participant receipt of any Discretionary Bonus Amounts under the Plan.

6. Certification of Share Price Target Achievement and Discretionary Bonus Amounts.

Company management shall, on a monthly or more frequent basis, monitor and track the Company's progress toward achievement of Share Price Targets under the Plan and periodically report such progress to the Committee. Upon management's determination that a particular Share Price Target has been achieved, including achievement of an average stock price for the minimum 30 consecutive trading day period necessary to achieve the specified Share Price Targets, the Committee, within fourteen (14) shall review and, if deemed satisfactory, certify achievement of the applicable Share Price Target and authorize payment of the Bonus Awards due Participants in accordance with Section 5. In conjunction with such certification, the Committee shall determine the total portion of the applicable Bonus Pool available for Discretionary Bonus Amounts in accordance with Section 5 following payment of all Minimum Bonus Amounts due. In the event any Minimum Bonus Amounts are forfeited due to Participants' terminations or otherwise, such forfeited Minimum Bonus Amounts shall be included in the remaining Bonus Pool amount available for allocation as Discretionary Bonus Amounts. In the event any Discretionary Bonus Amounts subject to post-achievement employment or service obligations are forfeited due to a Participant's termination prior to vesting, such forfeited Discretionary Bonus Amounts shall also be allocated among remaining Participants as the Committee or its delegate may determine.

7. Payment of Bonus Awards.

7.1 Employment Requirement. Except as otherwise expressly provided in Section 9 of the Plan or in an applicable Award Notice, a Participant must be continuously employed in good standing with (or in continuous service to) the Company from the award date through the achievement of a specific Share Price Target (or through such post-achievement date as specified in a Participant's Award Notice if the Participant is subject to additional employment or service obligations) to receive a Bonus Award for such Share Price Target.

7.2 Achievement of Share Price Target Requirement. A Participant shall be eligible to receive payment in respect of a Bonus Award only to the extent that the applicable Share Price Target is achieved and such achievement is certified by the Committee pursuant to Section 6 of the Plan or Participant is entitled to a pro-rata allocation of a Bonus Award in conjunction with a Change in Control pursuant to Section 8.

7.3 Timing of Bonus Award Payments. Unless otherwise specified in an applicable Award Notice or notice awarding a Discretionary Bonus Amount under the Plan, Bonus Award payments for a particular Share Price Target shall be paid to Participants as soon as administratively practicable but in no event later than 2½ months following achievement of the applicable Share Price Target. In no event, however, shall any Bonus Award under the Plan be subject to a maximum delay in payment following achievement of an applicable Share Price Target in excess of twenty-four (24) months for named executive officers or twelve (12) months for all other Participants regardless of whether continued employment or service is required.

7.4 Form or Medium of Bonus Award Payments: Conversion of Specified Cash Bonus Awards to Stock Awards. All Bonus Award payments due shall generally be paid to Participants (or to a Participant's estate in the event of a Participant's death) in the form of lump sum cash payments. Notwithstanding the foregoing, the Committee may provide for any Bonus Payment due under this Plan to be paid in the form of cash, unrestricted and fully-vested Shares, or a combination of both provided that the Company's stockholders have approved this Plan, including the reservation of the Company's Common Stock for satisfying Bonus Awards to be paid hereunder. In the event the stockholders approve and adopt the Plan and the Committee determines to pay any portion of a Bonus Award in Shares rather than cash, the number of Shares deliverable shall be determined by dividing (x) by (y) where (x) is the dollar amount of the Bonus Award to be paid and (y) is the Share Price Target for such Bonus Award (i.e., $11.17 or $25.45, as applicable). A Participant shall have none of the rights of a stockholder with respect to Shares covered by any Bonus Award until the Participant becomes the record owner of such Shares. Upon becoming the record holder of such Shares, the Participant shall have all the rights of a stockholder with respect to said Shares, including the right to receive all dividends and other distributions paid or made with respect to the Shares to the extent such dividends and other distributions have a record date that is on or after the date on which the Participant becomes the record holder of such Shares. For the avoidance of doubt, no Bonus Awards paid pursuant to this Plan shall be satisfied in Shares unless the stockholders have adopted and approved this Plan.

7.5 [Reserved for Possible Future Reservation of Shares]

7.6 Shares Subject to the Plan. In the event the Plan is submitted to stockholders and the stockholders adopt and approve the Plan, including the express reservation of Shares for use under the Plan, any Shares distributed pursuant to a Bonus Award may consist, in whole or in part, of authorized and unissued Common Stock, treasury Common Stock or Common Stock purchased on the open market. In the event of any stock dividend, stock split, combination or exchange of shares, merger, consolidation or other distribution (other than normal cash dividends) of Company assets to stockholders, or any other similar change affecting the Company's Common Stock other than an Equity Restructuring, the Committee may make equitable adjustments, if any, to reflect such change with respect to the aggregate number and kind of Shares that may be issued under this Plan. In connection with the occurrence of any Equity Restructuring, and notwithstanding any contrary provisions of this Section 7.6, the Committee shall make such equitable adjustments, if any, as the Committee may deem appropriate to reflect such Equity Restructuring with respect to the aggregate number and kind of Shares that may be issued pursuant to this Plan. The Committee may include such further provisions and limitations on Shares covering Bonus Awards pursuant to the Plan as the Committee may deem equitable and in the best interests of the Company that are not inconsistent with the provisions of this Plan. The adjustments made pursuant to this Section 7.6 shall be permissible without any additional approval from stockholders.

7.7 Adjustments to Bonus Awards to Limit Impact of Code Section 280G. Notwithstanding any other provisions of this Plan or any other plan, arrangement, or agreement to the contrary, if any of the Bonus Award provided or to be provided by the Company or its Affiliates to a Participant (or for a Participant's benefit) pursuant to the Plan or otherwise ("**Covered Payments**") constitute parachute payments ("**Parachute Payments**") within the meaning of Code Section 280G and would, but for this Section 7.7 be subject to the excise tax imposed under Section 4999 of the Code (or any successor provision thereto) or any similar tax imposed by state or local law or any interest or penalties with respect to such taxes (collectively, the "**Excise Tax**"), then prior to making the Covered Payments, a calculation shall be made comparing (i) the Net Benefit (as defined below) to the Participant of the Covered Payments after payment of the Excise Tax to (ii) the Net Benefit to the Participant if the Covered Payments are limited to the extent necessary to avoid being subject to the Excise Tax. Only if the amount calculated under (i) above is less than the amount under (ii) above will the Covered Payments be reduced to the minimum extent necessary to ensure that no portion of the Covered Payments is subject to the Excise Tax (such amount, the "**Reduced Amount**"). **"Net Benefit"** for purposes of this Section 7.7 shall mean the present value of the Covered Payments net of all federal, state, local, foreign income, employment and excise taxes. Any such reduction in Covered Payments made pursuant to this Section 7.7 shall be made in accordance with Section 409A of the Code and the manner that maximizes the Executive's economic position. In the event a Participant's Bonus Award is reduced pursuant to this Section 7.7, the Participant's Reduced Amount shall be divided and paid as an additional Discretionary Bonus Amount among other Participants as the Committee determines.

8. Effect of Change in Control.

If a Change in Control occurs during the term of the Plan, the specified Minimum Bonus Amount for a pending Share Price Target (i.e., for the First Share Price Target if not previously achieved and for the Second Share Price Target if the First Share Price Target has been achieved) will be calculated and determined on a pro-rata basis by the Committee, based upon the Company's progress toward achieving the applicable Share Price Target through the Change in Control date. In determining the Company's progress toward achievement of the applicable Share Price Target, the Committee may adjust the Share price, as the Committee deems appropriate, to take into account total proceeds or other consideration to be received by the stockholders on a per Share basis as a result of the Change in Control to the extent such proceeds are not accurately reflected in the Share price. The pro-rata payout of a Bonus Pool in such cases shall not impact the Minimum Bonus Amounts for the applicable Share Price Target unless the total pro-rata payout is less than the aggregate Minimum Bonus Amounts due in which case the Minimum Bonus Amounts shall be reduced and paid on a pro-rata basis. In the event a Change in Control occurs prior to achievement of the First Share Price Target (and thus prior to the Company's issuance of Award Notices with Minimum Bonus Amounts with respect to the Second Share Price Target) but the Change in Control results in the Company achieving TSR in excess of the First Share Price Target, the Committee shall, following satisfaction of the Minimum Bonus Amounts due for the First Share Price Target, pay Discretionary Bonus Amounts covering full First Share Price Target Bonus Pool amounts as well as additional Discretionary Bonus Amounts applicable to the Second Share Price Target. The Discretionary Bonus Amounts with respect to the Second Share Price Target Bonus Pool shall be calculated and paid on a pro-rata basis relative to the Company's achievement of the Second Share Price Target. Bonus Awards paid in connection with a Change in Control shall be paid as soon as practicable but in no event later than 2½ months following consummation of the Change in Control.

9. Termination Due to Death, Disability or Involuntary Termination Without Cause.

If a Participant's employment or service terminates during the term of the Plan and prior to achievement of a particular Share Price Target as a result of Participant's death, Disability, or involuntary termination of employment or service without Cause and such termination occurs within sixty (60) days preceding the achievement of an applicable Share Price Target, the Participant shall nonetheless receive a Bonus Award reflecting the Participant's Minimum Bonus Amounts as well as a potential Discretionary Bonus Amount as the Committee may determine. Any such payment shall be paid to Participant (or the Participant's estate in the case of death) within 2½ months following the Company's achievement of the applicable Share Price Target. In the event of a Participant's termination of employment or service due to death, Disability, or involuntary termination of employment or service without Cause following achievement of a Share Price Target but while the Participant remains subject to a post-achievement service obligation, such service obligation shall be waived and the Bonus Award paid to the Participant

(or Participant's estate in the case of death) within 2½ months of termination. In no event shall a terminated Participant be paid a Bonus Payment unless and until the applicable Share Price Target has been achieved and certified by the Committee. If a Participant's employment terminates during the term of this Plan prior to the achievement of a particular Share Price Target for any reason other than death, Disability or the Participant's involuntary termination by the Company without Cause, the Participant shall forfeit any and all rights to future Bonus Award(s) under this Plan.

10. General Provisions.

10.1 Compliance with Legal Requirements. The Plan and the granting of Bonus Awards shall be subject to all Applicable Laws and corresponding federal, state and local rules and regulations, and to such approvals by any regulatory or governmental agency as may be required.

10.2 Non-transferability. A person's rights and interests under the Plan, including any Bonus Award(s) previously made to such person or any amounts payable under the Plan, may not be assigned, pledged, or transferred, except in the event of the Participant's death, to a designated beneficiary in accordance with such Plan procedures as the Committee may establish, or in the absence of such designation, by will or the laws of descent or distribution.

10.3 No Right to Employment. Nothing in the Plan or any Award Notice shall confer upon any person the right to continue in the employment of the Company or any Affiliate (or any other service relationship with the Company or any Affiliate) or affect the right of the Company or any Affiliate to terminate the employment or service of any Participant for any reason without notice.

10.4 No Right to Bonus Award. Unless otherwise expressly set forth in an employment agreement signed by the Company and a Participant, a Participant shall not have any right to any Bonus Award under the Plan unless and until such Bonus Award has been paid to such Participant. Participation in the Plan with respect to the First Share Price Target does not guarantee Participant a right to participate in the Plan with respect to the Second Share Price Target and related Bonus Awards. Furthermore, the right of a Participant to receive a Minimum Bonus Amounts upon achievement of a Share Price Target does not guarantee or entitle Participant to receive a Discretionary Bonus Amount with respect to such Share Price Target.

10.5 Withholding. The Company shall have the right to withhold from any Bonus Award, any federal, state or local income and/or payroll taxes required by law to be withheld and to take such other action as the Committee may deem advisable to enable the Company and Participants to satisfy obligations for the payment of withholding taxes and other tax obligations relating to a Bonus Award. The Committee may, in satisfaction of the foregoing requirements, allow a Participant to satisfy such obligations by allowing such Participant to have the Company withhold Shares otherwise issuable pursuant to a Bonus Award. The number of Shares which may be so withheld or surrendered shall be no greater than the number of Shares which have a fair market value on the date of withholding or repurchase equal to the aggregate amount of such liabilities based on the minimum statutory withholding rates for federal, state, local and foreign income tax and payroll tax purposes that are applicable to such supplemental taxable income (or such number as would not result in adverse financial accounting consequences for the Company or any of its Affiliates). The Committee shall determine the fair market value of the Shares, consistent with applicable provisions of the Code for tax withholding purposes.

10.6 Amendment or Termination of the Plan. The Board may, at any time, amend, suspend or terminate the Plan in whole or in part; *provided that*, no amendment that requires stockholder approval pursuant to Applicable Laws shall be effective unless approved by the requisite vote of the stockholders of the Company. Notwithstanding the foregoing, no amendment shall adversely affect the rights of any Participant to earn a Minimum Bonus Amount or Discretionary Bonus Amount communicated prior to such amendment, suspension or termination of the Plan unless the Participant expressly consents to such change in writing.

10.7 Unfunded Status. Nothing contained in the Plan, and no action taken pursuant to its provisions, shall create or be construed to create a trust of any kind or a fiduciary relationship between the Company

and any Participant, beneficiary or legal representative or any other person. To the extent that a person acquires a right to receive payments under the Plan, such right shall be no greater than the right of an unsecured general creditor of the Company. All payments to be made hereunder shall be paid from the general funds of the Company and no special or separate fund shall be established and no segregation of assets shall be made to assure payment of such amounts except as expressly set forth in the Plan. The Plan is intended to be a general, long-term bonus compensation plan and not an employee benefit plan or program for routinely deferring pay beyond a Participant's employment or otherwise subject to the Employee Retirement Income Security Act of 1974, as amended.

10.8 Governing Law. The Plan shall be construed, administered and enforced in accordance with the laws of Delaware without regard to conflicts of law.

10.9 Beneficiaries. To the extent that the Committee permits beneficiary designations, any payment of Bonus Awards due under the Plan to a deceased Participant shall be paid to the beneficiary duly designated by the Participant in accordance with the Company's practices. If no such beneficiary has been designated or survives the Participant, payment shall be made by will or the laws of descent or distribution.

10.10 Section 409A of the Code. It is intended that Bonus Awards paid pursuant to this Plan shall either (1) qualify as short-term deferrals exempt from the requirements of Section 409A of the Code by requiring that all payments be made to Participants, if at all, within the short-term deferral period following the achievement of the applicable Share Price Targets and the corresponding lapse of a substantial risk of forfeiture, including, certain post-achievement employment or service obligations as applicable or (2) comply with the requirements of Section 409A of the Code by providing for payment on a fixed schedule or upon payment triggers permitted by Section 409A. The Plan shall be interpreted and construed accordingly to the maximum extent permitted by Applicable Laws. In the event any Bonus Award is determined to be subject to Section 409A and such Bonus Award is payable on account of a Participant's "termination of employment" (or any similarly defined term), then (a) such Bonus Award shall only be paid to the extent such termination of employment qualifies as a "separation from service" as defined in Section 409A, and (b) if such Bonus Award is payable to a "specified employee" as defined in Section 409A, then to the extent required in order to avoid a prohibited distribution under Section 409A, such Bonus Award shall not be payable prior to the earlier of: (i) the expiration of the six-month period measured from the date of the Participant's separation from service, or (ii) the date of the Participant's death. To the extent applicable, each payment to a Participant under the Plan is intended as a separate and distinct payment rather than part of a series of payments for purposes of Section 409A. Notwithstanding any provision of the Plan to the contrary, in the event the Committee determines that any Award may be subject to Section 409A, the Committee may (but is not obligated to), without a Participant's consent, adopt such amendments to the Plan and the applicable Award Notice(s) or adopt other policies and procedures (including amendments, policies and procedures with retroactive effect), or take any other actions, that the Committee determines are necessary or appropriate to (A) exempt the Bonus Award from Section 409A and/or preserve the intended tax treatment of the benefits provided with respect to the Bonus Award, or (B) comply with the requirements of Section 409A and thereby avoid the application of any penalty taxes under Section 409A. The Company makes no representations or warranties as to the tax treatment of any Bonus Award under Section 409A or otherwise. The Company shall have no obligation under this Section 10.10 or otherwise to take any action (whether or not described herein) to avoid the imposition of taxes, penalties or interest under Section 409A with respect to any Award and shall have no liability to any Participant any other person if any Bonus Award, compensation or other benefits under the Plan are determined to constitute non-compliant, "nonqualified deferred compensation" subject to the imposition of taxes, penalties and/or interest under Section 409A.

10.11 Payments That May Jeopardize Company's Ability to Continue as a Going Concern. Notwithstanding any provisions of this Plan or an applicable Award Notice to the contrary, the Board, in accordance with Treas. Reg. Section 1.409A-1(b)(4)(ii) or other Applicable Law, may delay the payment of any amount due under this Plan to the extent making such payment, as originally scheduled, could jeopardize the ability of the Company to continue as a going concern or violate federal securities laws or other applicable laws; provided, however, that any such delayed amounts must be paid to Participants as soon as the Company is no longer experiencing such financial concerns or making the payment will no longer cause a legal violation, as applicable.

10.12 Expenses. All costs and expenses in connection with the administration of the Plan shall be paid by the Company.

10.13 Section Headings. The headings of the Plan have been inserted for convenience of reference only and in the event of any conflict, the text of the Plan, rather than such headings, shall control.

10.14 Severability. In the event that any provision of the Plan shall be considered illegal or invalid for any reason, such illegality or invalidity shall not affect the remaining provisions of the Plan, but shall be fully severable, and the Plan shall be construed and enforced as if such illegal or invalid provision had never been contained therein.

10.15 Gender and Number. Except where otherwise indicated by the context, wherever used, the masculine pronoun includes the feminine pronoun; the plural shall include the singular, and the singular shall include the plural.

10.16 Non-exclusive. Nothing in the Plan shall limit the authority of the Company, the Board or the Committee to adopt such other compensation arrangements as it may deem desirable for any Participant.

10.17 Notice. Any notice to be given to the Company or the Committee pursuant to the provisions of the Plan shall be in writing and directed to the Company or Committee in care of the Company's Chief Business Officer at 4105 Hopson Road, Morrisville, North Carolina 27560 or the primary business address of the Company at such time.

10.18 Successors. All obligations of the Company under the Plan with respect to Bonus Awards granted hereunder and payments thereof shall be binding upon any successor to the Company, whether the existence of such successor is the result of a direct or indirect purchase, merger, consolidation or otherwise, including the purchase or transfer of all or substantially all of the assets of the Company.

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 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: November 5, 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: November 5, 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 September 30, 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: November 5, 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 September 30, 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: November 5, 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.