Table of Contents

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

Form 10-Q

(Mark One)

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

For the quarterly period ended March 31, 2018

or

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

For the transition period from _____ to _____

Commission File Number: 001-34186

VANDA PHARMACEUTICALS INC.
(Exact name of registrant as specified in its charter)

Delaware	**03-0491827**
(State or other jurisdiction of incorporation or organization)	**(I.R.S. Employer Identification No.)**
2200 Pennsylvania Avenue, N.W., Suite 300 E Washington, D.C.	**20037**
(Address of principal executive offices)	**(Zip Code)**

(202) 734-3400
(Registrant's telephone number, including area code)

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

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes ☒ No ☐

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

Large accelerated filer	☒	Accelerated filer	☐
Non-accelerated filer	☐ (Do not check if a smaller reporting company)	Smaller reporting company	☐
		Emerging growth company	☐

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

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

As of April 19, 2018, there were 52,110,701 shares of the registrant's common stock issued and outstanding.

Table of Contents

Vanda Pharmaceuticals Inc.

Quarterly Report on Form 10-Q
For the Quarter Ended March 31, 2018

Table of Contents

CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

Various statements throughout this report are "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act of 1995. Forward-looking statements may appear throughout this report. Words such as, but not limited to, "believe," "expect," "anticipate," "estimate," "intend," "plan," "project," "target," "goal," "likely," "will," "would," and "could," or the negative of these terms and similar expressions or words, identify forward-looking statements. Forward-looking statements are based upon current expectations that involve risks, changes in circumstances, assumptions and uncertainties. Important factors that could cause actual results to differ materially from those reflected in our forward-looking statements include, among others:

- the ability of Vanda Pharmaceuticals Inc. (we, our, the Company or Vanda) to continue to commercialize HETLIOZ® (tasimelteon) for the treatment of Non-24-Hour Sleep-Wake Disorder (Non-24) in the United States (U.S.) and Europe;
- uncertainty as to the ability to increase market awareness of Non-24 and the market acceptance of HETLIOZ®;
- our ability to continue to generate U.S. sales of Fanapt® (iloperidone) for the treatment of schizophrenia;
- our dependence on third-party manufacturers to manufacture HETLIOZ® and Fanapt® in sufficient quantities and quality;
- our level of success in commercializing HETLIOZ® and Fanapt® in new markets;
- our ability to prepare, file, prosecute, defend and enforce any patent claims and other intellectual property rights;
- a loss of rights to develop and commercialize our products under our license agreements;
- the ability to obtain and maintain regulatory approval of our products, and the labeling for any approved products;
- the timing and success of preclinical studies and clinical trials;
- a failure of our products to be demonstrably safe and effective;
- the size and growth of the potential markets for our products and the ability to serve those markets;
- our expectations regarding trends with respect to our revenues, costs, expenses, liabilities and cash, cash equivalents and marketable securities;
- the scope, progress, expansion, and costs of developing and commercializing our products;
- our failure to identify or obtain rights to new products;
- a loss of any of our key scientists or management personnel;
- limitations on our ability to utilize some or all of our prior net operating losses and orphan drug and research and development credits;
- the cost and effects of litigation;
- our ability to obtain the capital necessary to fund our research and development or commercial activities;
- losses incurred from product liability claims made against us; and
- use of our existing cash, cash equivalents and marketable securities.

All written and verbal forward-looking statements attributable to us or any person acting on our behalf are expressly qualified in their entirety by the cautionary statements contained or referred to in this section. We caution investors not to rely too heavily on the forward-looking statements we make or that are made on our behalf. We undertake no obligation, and specifically decline any obligation, to update or revise publicly any forward-looking statements, whether as a result of new information, future events or otherwise.

We encourage you to read *Management's Discussion and Analysis of our Financial Condition and Results of Operations* and our unaudited condensed consolidated financial statements contained in this quarterly report on Form 10-Q. In addition to the risks described below and in Item 1A of Part I of our annual report on Form 10-K for the fiscal year ended December 31, 2017, other unknown or unpredictable factors also could affect our results. Therefore, the information in this quarterly report should be read together with other reports and documents that we file with the Securities and Exchange Commission from time to time, including on Form 10-Q and Form 8-K, which may supplement, modify, supersede or update those risk factors. As a result of these factors, we cannot assure you that the forward-looking statements in this report will prove to be accurate. Furthermore, if our forward-looking statements prove to be inaccurate, the inaccuracy may be material. In light of the significant uncertainties in these forward-looking statements, you should not regard these statements as a representation or warranty by us or any other person that we will achieve our objectives and plans in any specified time frame, or at all.

Part I — FINANCIAL INFORMATION

ITEM 1 Financial Statements (Unaudited)

VANDA PHARMACEUTICALS INC.
CONDENSED CONSOLIDATED BALANCE SHEETS (Unaudited)

(in thousands, except for share and per share amounts)	March 31, 2018	December 31, 2017
ASSETS		
Current assets:		
Cash and cash equivalents	$ 155,293	$ 33,627
Marketable securities	93,541	109,786
Accounts receivable, net	23,314	17,601
Inventory	1,011	840
Prepaid expenses and other current assets	9,276	8,003
Total current assets	282,435	169,857
Property and equipment, net	5,105	5,306
Intangible assets, net	25,717	26,069
Non-current inventory and other	4,058	4,193
Total assets	$ 317,315	$ 205,425
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable and accrued liabilities	$ 17,242	$ 20,335
Product revenue allowances	27,713	23,028
Milestone obligations under license agreements	27,000	27,000
Total current liabilities	71,955	70,363
Other non-current liabilities	4,216	3,675
Total liabilities	76,171	74,038
Commitments and contingencies (Notes 8 and 14)		
Stockholders' equity:		
Preferred stock, $0.001 par value; 20,000,000 shares authorized, and no shares issued or outstanding	—	—
Common stock, $0.001 par value; 150,000,000 shares authorized; 52,109,701 and 44,938,133 shares issued and outstanding at March 31, 2018 and December 31, 2017, respectively	52	45
Additional paid-in capital	599,480	492,802
Accumulated other comprehensive loss	(28)	(34)
Accumulated deficit	(358,360)	(361,426)
Total stockholders' equity	241,144	131,387
Total liabilities and stockholders' equity	$ 317,315	$ 205,425

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

VANDA PHARMACEUTICALS INC.
CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS (Unaudited)

(in thousands, except for share and per share amounts)	Three Months Ended March 31, 2018	Three Months Ended March 31, 2017
Revenues:		
Net product sales	$ 43,592	$ 37,415
Total revenues	43,592	37,415
Operating expenses:		
Cost of goods sold, excluding amortization	4,560	4,003
Research and development	9,416	10,567
Selling, general and administrative	26,822	30,297
Intangible asset amortization	352	454
Total operating expenses	41,150	45,321
Income (loss) from operations	2,442	(7,906)
Other income	622	280
Income (loss) before income taxes	3,064	(7,626)
Provision (benefit) for income taxes	(2)	19
Net income (loss)	$ 3,066	$ (7,645)
Net income (loss) per share:		
Basic	$ 0.07	$ (0.17)
Diluted	$ 0.06	$ (0.17)
Weighted average shares outstanding:		
Basic	46,336,430	44,398,359
Diluted	48,225,041	44,398,359

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

VANDA PHARMACEUTICALS INC.
CONDENSED CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (LOSS) (Unaudited)

(in thousands)	Three Months Ended March 31, 2018	Three Months Ended March 31, 2017
Net income (loss)	$ 3,066	$ (7,645)
Other comprehensive income (loss):		
Net foreign currency translation gain	12	4
Change in net unrealized gain (loss) on marketable securities	(6)	(12)
Tax provision on other comprehensive income (loss)	—	—
Other comprehensive income (loss), net of tax	6	(8)
Comprehensive income (loss)	$ 3,072	$ (7,653)

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

VANDA PHARMACEUTICALS INC.
CONDENSED CONSOLIDATED STATEMENTS OF CHANGES IN STOCKHOLDERS' EQUITY (Unaudited)

(in thousands, except for share amounts)	Common Stock Shares	Common Stock Par Value	Additional Paid-in Capital	Other Comprehensive Income	Accumulated Deficit	Total
Balances at December 31, 2017	44,938,133	$ 45	$492,802	$ (34)	$ (361,426)	$131,387
Net proceeds from public offering of common stock	6,325,000	6	100,862	—	—	100,868
Issuance of common stock from the exercise of stock options and settlement of restricted stock units	846,568	1	2,665	—	—	2,666
Stock-based compensation expense	—	—	3,151	—	—	3,151
Net income	—	—	—	—	3,066	3,066
Other comprehensive income, net of tax	—	—	—	6	—	6
Balances at March 31, 2018	52,109,701	$ 52	$599,480	$ (28)	$ (358,360)	$241,144

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

VANDA PHARMACEUTICALS INC.
CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS (Unaudited)

(in thousands)	Three Months Ended March 31, 2018	March 31, 2017
Cash flows from operating activities		
Net income (loss)	$ 3,066	$ (7,645)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation of property and equipment	349	250
Stock-based compensation	3,151	2,256
Amortization of (discounts) premiums on marketable securities	(208)	(53)
Intangible asset amortization	352	454
Other non-cash adjustments, net	(113)	133
Changes in operating assets and liabilities:		
Accounts receivable	(5,713)	2,516
Prepaid expenses and other assets	(1,263)	(446)
Inventory	63	(83)
Accounts payable and accrued liabilities	(2,731)	1,442
Product revenue allowances	4,685	(4,181)
Net cash provided by (used in) operating activities	1,638	(5,357)
Cash flows from investing activities		
Purchases of property and equipment	(135)	(478)
Purchases of marketable securities	(30,433)	(53,467)
Maturities of marketable securities	46,880	36,777
Net cash provided by (used in) investing activities	16,312	(17,168)
Cash flows from financing activities		
Net proceeds from offering of common stock	101,068	—
Proceeds from the exercise of stock options	2,666	2,209
Net cash provided by financing activities	103,734	2,209
Effect of exchange rate changes on cash, cash equivalents and restricted cash	18	1
Net change in cash, cash equivalents and restricted cash	121,702	(20,315)
Cash, cash equivalents and restricted cash		
Beginning of period	34,335	41,256
End of period	$156,037	$ 20,941

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

VANDA PHARMACEUTICALS INC.

NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS (Unaudited)

1. Business Organization and Presentation

Business organization

Vanda Pharmaceuticals Inc. (the Company) is a global biopharmaceutical company focused on the development and commercialization of innovative therapies to address high unmet medical needs and improve the lives of patients. The Company commenced its operations in 2003 and operates in one reporting segment. The Company's portfolio includes the following products:

- HETLIOZ® (tasimelteon), a product for the treatment of Non-24-Hour Sleep-Wake Disorder (Non-24), was approved by the U.S. Food and Drug Administration (FDA) in January 2014 and launched commercially in the U.S. in April 2014. In July 2015, the European Commission (EC) granted centralized marketing authorization with unified labeling for HETLIOZ® for the treatment of Non-24 in totally blind adults. HETLIOZ® was commercially launched in Germany in August 2016. HETLIOZ® has potential utility in a number of other circadian rhythm disorders and is presently in clinical development for the treatment of Pediatric Non-24, Jet Lag Disorder and Smith-Magenis Syndrome (SMS).
- Fanapt® (iloperidone), a product for the treatment of schizophrenia, the oral formulation of which was approved by the FDA in May 2009 and launched commercially in the U.S. by Novartis Pharma AG (Novartis) in January of 2010. Novartis transferred all the U.S. and Canadian commercial rights to the Fanapt® franchise to the Company on December 31, 2014. Additionally, the Company's distribution partners launched Fanapt® in Israel in 2014. Fanapt® has potential utility in a number of other disorders. An assessment of new Fanapt® clinical opportunities is ongoing.
- Tradipitant (VLY-686), a small molecule neurokinin-1 receptor (NK-1R) antagonist, which is presently in clinical development for the treatment of chronic pruritus in atopic dermatitis and the treatment of gastroparesis.
- VTR-297, a small molecule histone deacetylase (HDAC) inhibitor.
- VQW-765, a Phase II alpha-7 nicotinic acetylcholine receptor partial agonist.
- Portfolio of Cystic Fibrosis Transmembrane Conductance Regulator (CFTR) activators and inhibitors.

Basis of Presentation

The accompanying unaudited condensed consolidated financial statements have been prepared in accordance with U.S. generally accepted accounting principles (GAAP) for interim financial information and the instructions to Form 10-Q and Article 10 of Regulation S-X. Accordingly, they do not include all the information and footnotes required by GAAP for complete financial statements and should be read in conjunction with the Company's consolidated financial statements for the fiscal year ended December 31, 2017 included in the Company's annual report on Form 10-K. The financial information as of March 31, 2018 and for the three months ended March 31, 2018 and 2017 is unaudited, but in the opinion of management, all adjustments considered necessary for a fair statement of the results for these interim periods have been included. The condensed consolidated balance sheet data as of December 31, 2017 was derived from audited financial statements but does not include all disclosures required by GAAP.

The results of the Company's operations for any interim period are not necessarily indicative of the results that may be expected for any other interim period or for a full fiscal year. The financial information included herein should be read in conjunction with the consolidated financial statements and notes in the Company's annual report on Form 10-K for the fiscal year ended December 31, 2017.

2. Summary of Significant Accounting Policies

Use of Estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates that affect the reported amounts of assets and liabilities at the date of the financial statements, disclosure of contingent assets and liabilities, and the reported amounts of revenue and expenses during the reporting period. Management continually re-evaluates its estimates, judgments and assumptions, and management's evaluation could change. Actual results could differ from those estimates.

Revenue Recognition

In accordance with Accounting Standards Codification (ASC) Subtopic 606 *Revenue from Contracts with Customers* (ASC 606), the Company accounts for a contract when it has approval and commitment from both parties, the rights of the parties are identified, payment terms are identified, the contract has commercial substance and collectability of consideration is probable. The Company recognizes revenue when control of the product is transferred to the customer in an amount that reflects the consideration the Company expects to be entitled to in exchange for those product sales, which is typically once the product physically arrives at the customer. Sales taxes, value add taxes, and usage-based taxes are excluded from revenues.

The Company's revenues consist of net product sales of HETLIOZ® and net product sales of Fanapt®. Net sales by product for the three months ended March 31, 2018 and 2017 were as follows:

	Three Months Ended	
(in thousands)	March 31, 2018	March 31, 2017
HETLIOZ® product sales, net	$ 25,423	$ 20,182
Fanapt® product sales, net	18,169	17,233
	$ 43,592	$ 37,415

Major Customers

HETLIOZ® is only available in the U.S. for distribution through a limited number of specialty pharmacies, and is not available in retail pharmacies. Fanapt® is available in the U.S. for distribution through a limited number of wholesalers and is available in retail pharmacies. The Company invoices and records revenue when its customers, specialty pharmacies and wholesalers, receive product from the third-party logistics warehouse which is the point at which control is transferred to the customer. There were five major customers that each accounted for more than 10% of total revenues and, as a group, represented 87% of total revenues for the three months ended March 31, 2018. There were four major customers that each accounted for more than 10% of accounts receivable and, as a group, represented 79% of total accounts receivable at March 31, 2018. The Company evaluates outstanding receivables to assess collectability. In performing this evaluation, the Company analyzes economic conditions, the aging of receivables and customer specific risks. Using this information, the Company reserves an amount that it estimates may not be collected.

Reserves for Variable Consideration

The transaction price is determined based upon the consideration to which the Company will be entitled in exchange for transferring product to the customer. The Company estimates the amount of variable consideration that should be included in the transaction price utilizing the most likely amount method and updates its estimate at each reporting date. Variable consideration is included in the transaction price if, in the Company's judgment, it is probable that a significant future reversal of cumulative revenue under the contract will not occur. The Company's product sales are recorded net of applicable discounts, rebates, chargebacks, service fees, co-pay assistance and product returns that are applicable for various government and commercial payors. Variable consideration for rebates, chargebacks and co-pay assistance is based upon the insurance benefits of the end customer, which is based on actual sales and an estimate for pending sales based on either historical activity or pending sales for which the Company has validated the insurance benefits. Reserves for variable consideration are classified as product revenue allowances on the condensed consolidated balance sheets, with the exception of prompt-pay discounts which are classified as reductions of accounts receivable. The reserve for product returns for which the product may not be returned for a period of greater than one year from the balance sheet date is classified other non-current liabilities on the condensed consolidated balance sheets. Uncertainties related to variable consideration are generally resolved in the quarter subsequent to period end, with the exception of product returns which are resolved during the product expiry period specified in the customer contract. The Company currently records sales allowances for the following:

Prompt-pay: Specialty pharmacies and wholesalers are offered discounts for prompt payment. The Company expects that the specialty pharmacies and wholesalers will earn prompt payment discounts and, therefore, deducts the full amount of these discounts from total product sales when revenues are recognized.

Rebates: Allowances for rebates include mandated and supplemental discounts under the Medicaid Drug Rebate Program as well as contracted rebate programs with other payors. Rebate amounts owed after the final dispensing of the product to a benefit plan participant are based upon contractual agreements or legal requirements with public sector benefit providers, such as Medicaid. The allowance for rebates is based on statutory or contracted discount rates and expected utilization.

Chargebacks: Chargebacks are discounts that occur when contracted indirect customers purchase directly from specialty pharmacies and wholesalers. Contracted indirect customers, which currently consist primarily of Public Health Service institutions, non-profit clinics, and Federal government entities purchasing via the Federal Supply Schedule, generally purchase the product at a discounted price. The specialty pharmacy or wholesaler, in turn, charges back the difference between the price initially paid by the specialty pharmacy or wholesaler and the discounted price paid to the specialty pharmacy or wholesaler by the contracted customer.

Medicare Part D Coverage Gap: Medicare Part D prescription drug benefit mandates manufacturers to fund approximately 50% of the Medicare Part D insurance coverage gap for prescription drugs sold to eligible patients. Vanda accounts for the Medicare Part D coverage gap using a point of sale model. Estimates for expected Medicare Part D coverage gap are based in part on historical activity and, where available, actual and pending prescriptions for which the Company has validated the insurance benefits.

Service Fees: The Company receives sales order management, data and distribution services from certain customers. These fees are based on contracted terms and are known amounts. The Company accrues service fees at the time of revenue recognition, resulting in a reduction of product sales and the recognition of an accrued liability, unless it is a payment for a distinct good or service from the customer in which case the fair value of those distinct goods or services are recorded as selling, general and administrative expense.

Co-payment Assistance: Patients who have commercial insurance and meet certain eligibility requirements may receive co-payment assistance. Co-pay assistance utilization is based on information provided by the Company's third-party administrator.

Product Returns: Consistent with industry practice, the Company generally offers direct customers a limited right to return as defined within the Company's returns policy. The Company considers several factors in the estimation process, including historical return activity, expiration dates of product shipped to specialty pharmacies, inventory levels within the distribution channel, product shelf life, prescription trends and other relevant factors. The Company does not expect returned goods to be resalable. There was no right of return asset as of March 31, 2018 or December 31, 2017.

Non-Cash Investing and Financing Activities

For the three months ended March 31, 2018 and 2017, the Company recorded purchases of property, plant and equipment and the related current liability in the amount of zero and $0.4 million, respectively. For the three months ended March 31, 2018, the Company accrued $0.2 million in expense associated with the March 2018 public offering of common stock.

Recent Accounting Pronouncements

In November 2016, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update (ASU) 2016-18, *Restricted Cash*. The new standard requires that a statement of cash flows explain the change during the period in the total of cash, cash equivalents and amounts generally described as restricted cash or restricted cash equivalents. Therefore, amounts generally described as restricted cash and restricted cash equivalents should be included with cash and cash equivalents when reconciling the beginning-of-period and end-of-period total amounts shown on the statement of cash flows. The standard is effective for annual reporting periods beginning after December 15, 2017, and interim periods within annual periods beginning after December 15, 2017. The Company adopted this new standard in the first quarter of 2018 and applied the provisions retrospectively. As a result of the adoption of the new guidance, the Company increased the beginning of year total amount shown on the condensed consolidated statements of cash flows by $0.7 million for the three months ended March 31, 2018, equal to the balance of restricted cash included in the condensed consolidated balance sheets as of December 31, 2017. The Company increased the beginning of year and end of year total amounts shown on the consolidated statements of cash flows by $0.8 million for the three months ended March 31, 2017, equal to the balance of restricted cash included in the condensed consolidated balance sheets as of the period ended March 31, 2017 and December 31, 2016. Restricted cash relates primarily to amounts held as collateral for letters of credit for leases for office space at the Company's Washington, D.C. headquarters. As of March 31, 2018 and December 31, 2017, restricted cash of $0.7 million is included in other non-current assets.

In August 2016, the FASB issued ASU 2016-15, *Statement of Cash Flows – Classification of Certain Cash Receipts and Cash Payments*, to clarify guidance on the classification of certain cash receipts and cash payments in the statement of cash flow. The standard is effective for annual reporting periods beginning after December 15, 2017, and interim periods within annual periods beginning after December 15, 2017. The Company's adoption of this standard in the first quarter of 2018 had no impact to the Company's condensed consolidated financial statements.

In June 2016, the FASB issued ASU 2016-13, *Financial Instruments – Credit Losses,* related to the measurement of credit losses on financial instruments. The standard will require the use of an "expected loss" model for instruments measured at amortized cost. The standard is effective for years beginning after December 15, 2019, and interim periods within annual periods beginning after December 15, 2019. The Company is evaluating this standard to determine if adoption will have a material impact on the Company's consolidated financial statements.

In February 2016, the FASB issued ASU 2016-02, *Leases*. The new standard requires that lessees will need to recognize a right-of-use asset and a lease liability for virtually all of their leases (other than leases that meet the definition of a short-term lease). The liability will be equal to the present value of lease payments. The asset will be based on the liability subject to certain adjustments. For income

statement purposes, the FASB retained a dual model, requiring leases to be classified as either operating or finance. Operating leases will result in straight-line expense (similar to current operating leases) while finance leases will result in a front-loaded expense pattern (similar to current capital leases). The new standard is effective for annual periods ending after December 15, 2018, and interim periods within annual periods beginning after December 15, 2018. Early adoption is permitted. The Company is evaluating the impact of this standard on the Company's consolidated financial statements; however, based on the Company's current operating leases, it is expected that most operating lease commitments will be recognized as operating lease liabilities and right-of-use assets upon adoption.

In May 2014, the FASB issued ASU 2014-09, *Revenue from Contracts with Customers*. This ASU supersedes the revenue recognition requirements in ASC 605, *Revenue Recognition*, and creates ASC 606, *Revenue from Contracts with Customers*. ASC 606 requires companies to recognize revenue when it transfers promised goods or services to customers in an amount that reflects the consideration to which a company expects to be entitled in exchange for those goods or services. Under the new standard, revenue is recognized when a customer obtains control of a good or service. The standard allows for two transition methods—entities can either apply the new standard (i) retrospectively to each prior reporting period presented (full retrospective), or (ii) retrospectively with the cumulative effect of initially applying the standard recognized at the date of initial adoption (modified retrospective). In July 2015, the FASB issued ASU 2015-14, *Revenue from Contracts with Customers*, which defers the effective date by one year to December 15, 2017 for fiscal years, and interim periods within those fiscal years, beginning after that date. Early adoption of the standard is permitted, but not before the original effective date of December 15, 2016. In March 2016, the FASB issued ASU 2016-08 *Revenue from Contracts with Customers, Principal versus Agent Considerations (Reporting Revenue versus Net),* in April 2016, the FASB issued ASU 2016-10, *Revenue from Contracts with Customers, identifying Performance Obligations and Licensing*, and in May 2016, the FASB issued ASU 2016-12, *Revenue from Contracts* with Customers, Narrow-Scope Improvements and Practical Expedients, which provide additional clarification on certain topics addressed in ASU 2014-09. ASU 2016-08, ASU 2016-10, and ASU 2016-12 follow the same implementation guidelines as ASU 2014-09 and ASU 2015-14. The Company adopted this new standard in the first quarter of 2018 using the modified retrospective method to those contracts which were not completed as of January 1, 2018. Results for reporting periods beginning after January 1, 2018 are presented under ASC 606, while prior period amounts are not adjusted and continue to be reported in accordance with historic accounting under ASC 605. There was no impact to opening retained earnings as of January 1, 2018 as a result of adoption of the new standard. The impact to the condensed consolidated statements of operations if the Company had applied ASC 605 for the three months ended March 31, 2018 is not material. As a result of adoption, the Company reclassified the provision for product revenue returns of $3.8 million from accounts receivable, net to product revenue allowances and other non-current liabilities in the condensed consolidated balance sheets as of March 31, 2018. The provision for product returns as of December 31, 2017 of $4.1 million is included in accounts receivable in the condensed consolidated balance sheet.

3. Marketable Securities

The following is a summary of the Company's available-for-sale marketable securities as of March 31, 2018, which all have contract maturities of less than one year:

March 31, 2018 ***(in thousands)***	**Amortized Cost**	**Gross Unrealized Gains**	**Gross Unrealized Losses**	**Fair Market Value**
U.S. Treasury and government agencies	$ 53,682	$ —	$ (82)	$53,600
Corporate debt	39,928	30	(17)	39,941
	$ 93,610	$ 30	$ (99)	$93,541

The following is a summary of the Company's available-for-sale marketable securities as of December 31, 2017, which all have contract maturities of less than one year:

December 31, 2017 ***(in thousands)***	**Amortized Cost**	**Gross Unrealized Gains**	**Gross Unrealized Losses**	**Fair Market Value**
U.S. Treasury and government agencies	$ 60,681	$ —	$ (63)	$ 60,618
Corporate debt	49,168	12	(12)	49,168
	$ 109,849	$ 12	$ (75)	$109,786

4. Fair Value Measurements

Authoritative guidance establishes a three-tier fair value hierarchy, which prioritizes the inputs used in measuring fair value. These tiers include:

- Level 1 — defined as observable inputs such as quoted prices in active markets
- Level 2 — defined as inputs other than quoted prices in active markets that are either directly or indirectly observable
- Level 3 — defined as unobservable inputs in which little or no market data exists, therefore requiring an entity to develop its own assumptions

Marketable securities classified in Level 1 and Level 2 as of March 31, 2018 and December 31, 2017 consist of available-for-sale marketable securities. The valuation of Level 1 instruments is determined using a market approach, and is based upon unadjusted quoted prices for identical assets in active markets. The valuation of investments classified in Level 2 also is determined using a market approach based upon quoted prices for similar assets in active markets, or other inputs that are observable for substantially the full term of the financial instrument. Level 2 securities include certificates of deposit, commercial paper and corporate notes that use as their basis readily observable market parameters. The Company did not transfer any assets between Level 2 and Level 1 during the three months ended March 31, 2018 and 2017.

As of March 31, 2018, the Company held certain assets that are required to be measured at fair value on a recurring basis, as follows:

		Fair Value Measurement as of March 31, 2018 Using		
(in thousands)	March 31, 2018	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
U.S. Treasury and government agencies	$ 53,600	$ 53,600	$ —	$ —
Corporate debt	39,941	—	39,941	—
	$ 93,541	$ 53,600	$ 39,941	$ —

As of December 31, 2017, the Company held certain assets that are required to be measured at fair value on a recurring basis, as follows:

		Fair Value Measurement as of December 31, 2017 Using		
(in thousands)	December 31, 2017	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
U.S. Treasury and government agencies	$ 60,618	$ 60,618	$ —	$ —
Corporate debt	53,164	—	53,164	—
	$ 113,782	$ 60,618	$ 53,164	$ —

Total assets measured at fair value as of December 31, 2017 include $4.0 million of cash equivalents.

The Company also has financial assets and liabilities, not required to be measured at fair value on a recurring basis, which primarily consist of cash and cash equivalents, accounts receivable, restricted cash, accounts payable and accrued liabilities, and milestone obligations under license agreements, the carrying values of which materially approximate their fair values.

5. Inventory

The Company evaluates expiry risk by evaluating current and future product demand relative to product shelf life. The Company builds demand forecasts by considering factors such as, but not limited to, overall market potential, market share, market acceptance and patient usage. Inventory levels are evaluated for the amount of inventory that would be sold within one year. At certain times, the level of inventory can exceed the forecasted level of cost of goods sold for the next twelve months. The Company classifies the estimate of such inventory as non-current. Inventory consisted of the following as of March 31, 2018 and December 31, 2017:

(in thousands)	March 31, 2018	December 31, 2017
Current assets		
Work-in-process	$ —	$ 80
Finished goods	1,011	760
	$ 1,011	$ 840
Non-Current assets		
Raw materials	$ 87	$ 87
Work-in-process	2,750	2,821
Finished goods	277	408
	$ 3,114	$ 3,316

6. Intangible Assets

HETLIOZ®. In January 2014, the Company announced that the FDA had approved the New Drug Application (NDA) for HETLIOZ®. As a result of this approval, the Company met a milestone under its license agreement with Bristol-Myers Squibb (BMS) that required the Company to make a license payment of $8.0 million to BMS. The $8.0 million is being amortized on a straight-line basis over the estimated economic useful life of the related product patents which is the remaining life of the U.S. method of use patent for HETLIOZ® that expires in May 2034.

The Company is obligated to make a future milestone payment to BMS of $25.0 million when cumulative worldwide sales of HETLIOZ® reach $250.0 million, which is expected to occur in the first half of 2018. The future obligation of $25.0 million was recorded as a current liability as of March 31, 2018 and December 31, 2017. The $25.0 million was determined to be additional consideration for the acquisition of the HETLIOZ® intangible asset. The intangible asset of $25.0 million is being amortized on a straight-line basis over the estimated economic useful life of the related product patents which is the remaining life of the U.S. method of use patent for HETLIOZ® that expires in May 2034.

Fanapt®. In 2009, the Company announced that the FDA had approved the NDA for Fanapt®. As a result of this approval, the Company met a milestone under its original sublicense agreement with Novartis that required the Company to make a license payment of $12.0 million to Novartis. The $12.0 million was amortized on a straight-line basis over the remaining life of the U.S. composition of matter patent for Fanapt® to November 2016.

Pursuant to a settlement agreement in December 2014, Novartis transferred all U.S. and Canadian rights in the Fanapt® franchise to the Company. As a result, the Company recognized an intangible asset of $15.9 million on December 31, 2014 related to the reacquired rights to Fanapt®, which was fully amortized on a straight-line basis as of November 2016. The useful life estimation for the Fanapt® intangible asset was based on the market participant methodology prescribed by ASC 805, and therefore does not reflect the impact of additional Fanapt® patents solely owned by the Company with varying expiration dates, the latest of which is December 2031.

The following is a summary of the Company's intangible assets as of March 31, 2018:

(in thousands)	Estimated Useful Life (Years)	March 31, 2018 Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount
HETLIOZ®	May 2034	$33,000	$ 7,283	$25,717
Fanapt®	November 2016	27,941	27,941	—
		$60,941	$ 35,224	$25,717

The following is a summary of the Company's intangible assets as of December 31, 2017:

(in thousands)	Estimated Useful Life (Years)	December 31, 2017 Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount
HETLIOZ®	May 2034	$33,000	$ 6,931	$26,069
Fanapt®	November 2016	27,941	27,941	—
		$60,941	$ 34,872	$26,069

Intangible assets are amortized over their estimated useful economic life using the straight-line method. Amortization expense was $0.4 million and $0.5 million for the three months ended March 31, 2018 and 2017, respectively. The following is a summary of the future intangible asset amortization schedule as of March 31, 2018:

(in thousands)	Total	2018	2019	2020	2021	2022	Thereafter
HETLIOZ®	$25,717	$1,193	$1,591	$1,591	$1,591	$1,591	$ 18,160

7. Accounts Payable and Accrued Liabilities

The following is a summary of the Company's accounts payable and accrued liabilities as of March 31, 2018 and December 31, 2017:

(in thousands)	March 31, 2018	December 31, 2017
Research and development expenses	$ 4,587	$ 4,663
Consulting and other professional fees	2,832	3,961
Compensation and employee benefits	3,447	5,323
Royalties payable	4,352	4,394
Other	2,024	1,994
	$ 17,242	$ 20,335

8. Commitments and Contingencies

Operating leases

Commitments relating to operating leases represent the minimum annual future payments under operating leases and subleases for its Company's headquarters at 2200 Pennsylvania Avenue, N.W. in Washington, D.C., and operating leases for office space in London and Berlin. The following is a summary of the minimum annual future payments under operating leases and subleases for office space as of March 31, 2018:

	Cash Payments Due by Year						
(in thousands)	Total	2018	2019	2020	2021	2022	Thereafter
Operating leases	$24,471	$1,729	$2,423	$2,521	$2,340	$2,354	$ 13,104

In June 2011, the Company entered into an operating lease for its headquarters at 2200 Pennsylvania Avenue, N.W. in Washington, D.C. for 21,400 square feet of office space. The Company subsequently amended the lease in March 2014 and March 2018 to increase the office space under lease to 33,534 square feet and, in March 2018, extended the lease term to July 2028. Subject to the prior rights of other tenants, the Company has the right to renew the lease for five years following its expiration. The Company has the right to sublease or assign all or a portion of the premises, subject to standard conditions. The lease may be terminated early by the Company or the landlord under certain circumstances.

In June 2016, the Company entered into a sublease under which the Company leases 9,928 square feet of office space for its headquarters at 2200 Pennsylvania Avenue, N.W. in Washington, D.C. The sublease term began in January 2017 and ends in July 2026, but may be terminated earlier by either party under certain circumstances. The Company has the right to sublease or assign all or a portion of the premises, subject to standard conditions.

The Company has an operating lease for 2,880 square feet of office space for the Company's European headquarters in London that has a noncancellable lease term ending in 2021, and 1,249 square feet of office space in Berlin under a short-term operating lease.

Rent expense under operating leases was $0.9 million and $0.8 million for the three months ended March 31, 2018 and 2017.

Guarantees and Indemnifications

The Company has entered into a number of standard intellectual property indemnification agreements in the ordinary course of its business. Pursuant to these agreements, the Company indemnifies, holds harmless, and agrees to reimburse the indemnified party for losses suffered or incurred by the indemnified party, generally the Company's business partners or customers, in connection with any U.S. patent or any copyright or other intellectual property infringement claim by any third party with respect to the Company's products. The term of these indemnification agreements is generally perpetual from the date of execution of the agreement. The maximum potential amount of future payments the Company could be required to make under these indemnification agreements is unlimited. Since inception, the Company has not incurred costs to defend lawsuits or settle claims related to these indemnification agreements. The Company also indemnifies its officers and directors for certain events or occurrences, subject to certain conditions.

License Agreements

The Company's rights to develop and commercialize its products are subject to the terms and conditions of licenses granted to the Company by other pharmaceutical companies.

HETLIOZ®. In February 2004, the Company entered into a license agreement with BMS under which it received an exclusive worldwide license under certain patents and patent applications, and other licenses to intellectual property, to develop and commercialize HETLIOZ®. As a result of the FDA's approval of the HETLIOZ® NDA in January 2014, the Company made an $8.0 million milestone payment to BMS in the first quarter of 2014 under the license agreement that was capitalized as an intangible asset and is being amortized over the estimated economic useful life of the related product patents which is the remaining life of the U.S. method of use patent for HETLIOZ® in the U.S. The Company is obligated to make a future milestone payment to BMS of $25.0 million when cumulative worldwide sales of HETLIOZ® reach $250.0 million, which is expected to occur in the first half of 2018. The probable future $25.0 million milestone obligation was capitalized as an intangible asset in the first quarter of 2015 and is being amortized over the estimated economic useful life of the related product patents which is the remaining life of the U.S. method of use patent for HETLIOZ® in the U.S. The Company has no remaining milestone obligations related to HETLIOZ® after the $25.0 million payment. Additionally, the Company is obligated to make royalty payments on HETLIOZ® net sales to BMS in any territory where the Company commercializes HETLIOZ® for a period equal to the greater of 10 years following the first commercial sale in the territory or the expiry of the new chemical entity (NCE) patent in that territory. During the period prior to the expiry of the NCE patent in a territory, the Company is obligated to pay a 10% royalty on net sales in that territory. The royalty rate is decreased by half for countries in which no NCE patent existed or for the remainder of the 10 years after the expiry of the NCE patent. The Company is also obligated under the license agreement to pay BMS a percentage of any sublicense fees, upfront payments and milestone and other payments (excluding royalties) that it receives from a third party in connection with any sublicensing arrangement, at a rate which is in the mid-twenties. The Company has agreed with BMS in the license agreement for HETLIOZ® to use its commercially reasonable efforts to develop and commercialize HETLIOZ®.

Fanapt ®. Pursuant to the terms of a settlement agreement with Novartis, Novartis transferred all U.S. and Canadian rights in the Fanapt® franchise to the Company on December 31, 2014. The Company has no remaining milestone obligations related to Fanapt®. The Company was obligated to make royalty payments to Sanofi S.A. (Sanofi) and Titan Pharmaceuticals Inc. (Titan) at a percentage rate equal to 23% on annual U.S. net sales of Fanapt® up to $200.0 million, and at a percentage rate in the mid-twenties on sales over $200.0 million through November 2016. In February 2016, the Company amended the agreement with Sanofi and Titan to remove Titan as the entity through which royalty payments from the Company are directed to Sanofi following the expiration of the NCE patent for Fanapt® in the U.S. on November 15, 2016. Under the amended agreement, the Company pays directly to Sanofi a fixed royalty of 3% of net sales from November 16, 2016 through December 31, 2019 related to manufacturing know-how. The Company made a $2.0 million payment during the year ended December 31, 2016 that applied to this 3% manufacturing know-how royalty. No further royalties on manufacturing know-how are payable by the Company after December 31, 2019. The Company is also obligated to pay Sanofi a fixed royalty on Fanapt® net sales equal up to 6% on Sanofi know-how not related to manufacturing under certain conditions for a period of up to 10 years in markets where the NCE patent has expired or was not issued.

Tradipitant. In April 2012, the Company entered into a license agreement with Eli Lilly and Company (Lilly) pursuant to which the Company acquired an exclusive worldwide license under certain patents and patent applications, and other licenses to intellectual property, to develop and commercialize an NK-1R antagonist, tradipitant, for all human indications. The patent describing tradipitant

as a NCE expires in April 2023, except in the U.S., where it expires in June 2024 absent any applicable patent term adjustments. Lilly is eligible to receive future payments based upon achievement of specified development and commercialization milestones as well as tiered-royalties on net sales at percentage rates up to the low double digits. These milestones include $4.0 million for pre-NDA approval milestones and up to $95.0 million for future regulatory approval and sales milestones. The $4.0 million of pre-NDA approval milestones includes $2.0 million due upon enrollment of the first subject into a Phase III study for tradipitant and $2.0 million due upon the filing of the first marketing authorization for tradipitant in either the U.S. or the European Union. The likelihood of achieving the enrollment of the first subject into a Phase III study for tradipitant was determined to be probable during 2017. As a result, the future obligation of $2.0 million tied to such milestone was recorded as research and development expense in the consolidated statement of operations for the year ended December 31, 2017 and a current liability in the condensed consolidated balance sheet as of March 31, 2018 and December 31, 2017. The Company is obligated to use its commercially reasonable efforts to develop and commercialize tradipitant.

VQW-765. In connection with a settlement agreement with Novartis relating to Fanapt®, the Company received an exclusive worldwide license under certain patents and patent applications, and other licenses to intellectual property, to develop and commercialize VQW-765, a Phase II alpha-7 nicotinic acetylcholine receptor partial agonist. Pursuant to the license agreement, the Company is obligated to use its commercially reasonable efforts to develop and commercialize VQW-765 and is responsible for all development costs. The Company has no milestone obligations; however, Novartis is eligible to receive tiered-royalties on net sales at percentage rates up to the mid-teens.

Portfolio of CFTR activators and inhibitors. In March 2017, the Company entered into a license agreement with the University of California San Francisco (UCSF), under which the Company acquired an exclusive worldwide license to develop and commercialize a portfolio of CFTR activators and inhibitors. Pursuant to the license agreement, the Company will develop and commercialize the CFTR activators and inhibitors and is responsible for all development costs under the license agreement, including current pre-investigational new drug development work. The license agreement provides for an initial license fee of $1.0 million that was paid by the Company in the first quarter of 2017, annual maintenance fees and up to $46.0 million in potential regulatory and sales milestone obligations. UCSF is eligible to receive single-digit tiered royalties on net sales.

Research and Development and Marketing Agreements

In the course of its business, the Company regularly enters into agreements with clinical organizations to provide services relating to clinical development and clinical manufacturing activities under fee service arrangements. The Company's current agreements for clinical and marketing services may be terminated on generally 60 days' notice without incurring additional charges, other than charges for work completed but not paid for through the effective date of termination and other costs incurred by the Company's contractors in closing out work in progress as of the effective date of termination.

9. Public Offering of Common Stock

In March 2018, the Company completed a public offering of 6,325,000 shares of common stock, including the exercise of the underwriters' option to purchase an additional 825,000 shares of common stock, at a price to the public of $17.00 per share. Net cash proceeds from the public offering were $100.9 million, after deducting the underwriting discounts and commissions and $0.2 million accrued offering expenses.

10. Accumulated Other Comprehensive Loss

The accumulated balances related to each component of other comprehensive income (loss) were as follows as of March 31, 2018 and December 31, 2017:

(in thousands)	March 31, 2018	December 31, 2017
Foreign currency translation	$ 41	$ 29
Available-for-sale securities	(69)	(63)
	$ (28)	$ (34)

There was no tax provision (benefit) included in accumulated other comprehensive loss as of March 31, 2018 and December 31, 2017. There were no reclassifications out of accumulated other comprehensive loss for the three months ended March 31, 2018 and 2017.

11. Stock-Based Compensation

As of March 31, 2018, there were 6,264,228 shares that were subject to outstanding options and RSUs under the 2006 Equity Incentive Plan (2006 Plan) and the Amended and Restated 2016 Equity Incentive Plan (2016 Plan, and together with the 2006 Plan, Plans). The 2006 Plan expired by its terms on April 12, 2016, and the Company adopted the 2016 Plan. Outstanding options and RSUs under the 2006 Plan remain in effect and the terms of the 2006 Plan continue to apply, but no additional awards can be granted under the 2006 Plan. In June 2016, the Company's stockholders approved the 2016 Plan under which 2,000,000 shares of common stock were reserved for issuance. In June 2017, the Company's stockholders approved the amendment and restatement of the 2016 Plan pursuant to which an additional 2,700,000 shares were reserved for issuance, among other administrative changes. As a result, there are a total of 4,700,000 shares of common stock reserved for issuance under the 2016 Plan, 2,123,780 shares of which remained available for future grant as of March 31, 2018.

Stock Options

The Company has granted option awards under the Plans with service conditions (service option awards) that are subject to terms and conditions established by the compensation committee of the board of directors. Service option awards have 10-year contractual terms. Service option awards granted to new employees vest and become exercisable on the first anniversary of the grant date with respect to the 25% of the shares subject to service option awards. The remaining 75% of the shares subject to the service option awards vest and become exercisable monthly in equal installments thereafter over three years. Service option awards granted to existing employees vest and become exercisable monthly in equal installments over four years. The initial service option awards granted to directors upon their election vest and become exercisable in equal monthly installments over a period of four years, while the subsequent annual service option awards granted to directors vest and become exercisable in either equal monthly installments over a period of one year or on the first anniversary of the grant date. Certain service option awards to executives and directors provide for accelerated vesting if there is a change in control of the Company. Certain service option awards to employees and executives provide for accelerated vesting if the respective employee's or executive's service is terminated by the Company for any reason other than cause or permanent disability.

As of March 31, 2018, $10.7 million of unrecognized compensation costs related to unvested service option awards are expected to be recognized over a weighted average period of 1.5 years. No option awards are classified as a liability as of March 31, 2018.

A summary of option activity under the Plans for the three months ended March 31, 2018 follows:

2006 and 2016 Plans *(in thousands, except for share and per share amounts)*	**Number of Shares**	**Weighted Average Exercise Price at Grant Date**	**Weighted Average Remaining Term (Years)**	**Aggregate Intrinsic Value**
Outstanding at December 31, 2017	4,719,784	$ 10.03	5.63	$ 24,421
Granted	437,500	18.85		
Forfeited	(5,298)	11.39		
Exercised	(371,201)	7.18		3,365
Outstanding at March 31, 2018	4,780,785	11.05	6.11	28,587
Exercisable at March 31, 2018	3,323,764	9.72	4.99	23,708
Vested and expected to vest at March 31, 2018	4,546,315	10.77	5.94	28,230

The weighted average grant-date fair value of options granted was $10.40 and $7.84 per share for the three months ended March 31, 2018 and 2017, respectively. Proceeds from the exercise of stock options amounted to $2.7 million and $2.2 million for the three months ended March 31, 2018 and 2017, respectively.

Restricted Stock Units

An RSU is a stock award that entitles the holder to receive shares of the Company's common stock as the award vests. The fair value of each RSU is based on the closing price of the Company's stock on the date of grant. The Company has granted RSUs under the Plans with service conditions (service RSUs) that generally vest in four equal annual installments provided that the employee remains employed with the Company. As of March 31, 2018, $21.4 million of unrecognized compensation costs related to unvested service RSUs are expected to be recognized over a weighted average period of 2.1 years. No RSUs are classified as a liability as of March 31, 2018.

A summary of RSU activity under the Plans for the three months ended March 31, 2018 follows:

2006 and 2016 Plans	Number of Shares Underlying RSUs	Weighted Average Grant Date Fair Value
Unvested at December 31, 2017	1,357,838	$ 12.72
Granted	626,086	18.77
Forfeited	(25,114)	13.33
Vested	(475,367)	12.50
Unvested at March 31, 2018	1,483,443	15.33

The grant date fair value for the 475,367 shares underlying RSUs that vested during the three months ended March 31, 2018 was $5.9 million.

Stock-Based Compensation

Stock-based compensation expense recognized for the three months ended March 31, 2018 and 2017 was comprised of the following:

	Three Months Ended	
(in thousands)	March 31, 2018	March 31, 2017
Research and development	$ 321	$ 409
Selling, general and administrative	2,830	1,847
	$ 3,151	$ 2,256

The fair value of each option award is estimated on the date of grant using the Black-Scholes-Merton option pricing model that uses the assumptions noted in the following table. Expected volatility rates are based on the historical volatility of the Company's publicly traded common stock and other factors. The risk-free interest rates are based on the U.S. Treasury yield for a period consistent with the expected term of the option in effect at the time of the grant. The Company has not paid dividends to its stockholders since its inception (other than a dividend of preferred share purchase rights, which was declared in September 2008) and does not plan to pay dividends in the foreseeable future. Assumptions used in the Black-Scholes-Merton option pricing model for stock options granted during the three months ended March 31, 2018 and 2017 were as follows:

	Thee Months Ended	
	March 31, 2018	March 31, 2017
Expected dividend yield	0%	0%
Weighted average expected volatility	57%	57%
Weighted average expected term (years)	5.90	5.89
Weighted average risk-free rate	2.64%	1.98%

12. Income Taxes

Deferred tax assets are reduced by a tax valuation allowance when, in the opinion of management, it is more likely than not that some portion or all of the deferred tax assets will not be realized. The fact that the Company has historically generated pretax losses in the U.S. serves as strong evidence that it is more likely than not that deferred tax assets in the U.S. will not be realized in the future. Therefore, the Company had a full tax valuation allowance against all deferred tax assets in the U.S. as of March 31, 2018 and December 31, 2017. As a result of the tax valuation allowance against deferred tax assets in the U.S., there was no benefit for income taxes associated with the income (loss) before income taxes for three months ended March 31, 2018 and 2017. Taxes have been recorded related to certain U.S. state jurisdictions and non-U.S. income for the three months ended March 31, 2018 and 2017. Differences between the statutory tax rate and effective tax rate for these jurisdictions relate to settlements of equity compensation awards that occurred during the period.

Certain tax attributes of the Company, including NOLs and credits, would be subject to a limitation should an ownership change as defined under the Internal Revenue Code of 1986, as amended (IRC), Section 382, occur. The limitations resulting from a change in ownership could affect the Company's ability to utilize its NOLs and credit carryforward (tax attributes). Ownership changes occurred

in the years ended December 31, 2014 and December 31, 2008. The Company believes that the ownership changes in 2014 and 2008 will not impact its ability to utilize NOL and credit carryforwards; however, future ownership changes may cause the Company's existing tax attributes to have additional limitations. Because the Company maintains a valuation allowance on its U.S. tax attributes, any limitation as a result of application of IRC Section 382 limitation would not have a material impact on the Company's provision for income taxes for the three months ended March 31, 2018.

The Tax Cuts and Jobs Act (TCJA) was enacted in December 2017. The TCJA reduces the U.S. federal corporate tax rate from 35% to 21%, requires companies to pay a one-time transition tax on earnings of certain foreign subsidiaries that were previously deferred and creates new taxes on certain foreign sourced earnings. At March 31, 2018, the Company has not completed our accounting for the tax effects of the TCJA. Certain U.S. federal deferred tax assets and liabilities were remeasured as of December 31, 2017 based on the rates at which they are expected to reverse in the future, which is generally 21%. However, the Company is still analyzing certain aspects of the U.S. international and executive compensation provisions of the TCJA and refining our calculations, which could potentially affect the measurement of these balances or potentially give rise to new deferred tax amounts. Because the Company has recorded a valuation allowance against deferred tax assets in the U.S., future adjustments recorded as we complete our analysis will not have a material impact to our net deferred tax asset or liability.

13. Earnings per Share

Basic earnings per share (EPS) is calculated by dividing the net loss by the weighted average number of shares of common stock outstanding. Diluted EPS is computed by dividing the net loss by the weighted average number of shares of common stock outstanding, plus potential outstanding common stock for the period. Potential outstanding common stock includes stock options and shares underlying RSUs, but only to the extent that their inclusion is dilutive.

The following table presents the calculation of basic and diluted net loss per share of common stock for the three months ended March 31, 2018 and 2017:

	Three Months Ended	
(in thousands, except for share and per share amounts)	**March 31, 2018**	**March 31, 2017**
Numerator:		
Net income (loss)	$ 3,066	$ (7,645)
Denominator:		
Weighted average shares outstanding, basic	46,336,430	44,398,359
Effect of dilutive securities	1,888,611	—
Weighted average shares outstanding, diluted	48,225,041	44,398,359
Net income (loss) per share, basic and diluted:		
Basic	$ 0.07	$ (0.17)
Diluted	$ 0.06	$ (0.17)
Antidilutive securities excluded from calculations of diluted net income (loss) per share	1,057,444	3,160,500

The Company incurred a net loss for the three months ended March 31, 2017 causing inclusion of any potentially dilutive securities to have an anti-dilutive effect, resulting in dilutive loss per share and basic loss per share attributable to common stockholders being equivalent.

14. Legal Matters

Fanapt®. In June 2014, the Company filed suit against Roxane Laboratories, Inc. (Roxane) in the U.S. District Court for the District of Delaware (Delaware District Court). The suit sought an adjudication that Roxane has infringed one or more claims of the Company's U.S. Patent No. 8,586,610 ('610 Patent) by submitting to the FDA an Abbreviated New Drug Application (ANDA) for a generic version of Fanapt® prior to the expiration of the '610 Patent in November 2027. In addition, pursuant to a settlement agreement with Novartis, the Company assumed Novartis' patent infringement action against Roxane in the Delaware District Court. That suit alleges that Roxane has infringed one or more claims of U.S. Patent RE39198 ('198 Patent), which is licensed exclusively to the Company, by filing an ANDA for a generic version of Fanapt® prior to the expiration of the '198 Patent in November 2016. These two cases against

Roxane were consolidated by agreement of the parties and were tried together in a five-day bench trial that concluded on March 4, 2016. On August 25, 2016, the Delaware District Court ruled in favor of the Company, finding that Roxane's ANDA product infringed the asserted claims of the '610 Patent and the '198 Patent. The Delaware District Court ruled that the Company is entitled to a permanent injunction against Roxane enjoining Roxane from infringing the '610 Patent, including the manufacture, use, sale, offer to sell, sale, distribution or importation of any generic iloperidone product described in the '610 Patent ANDA until the expiration of the '610 Patent in November 2027. If the Company obtains pediatric exclusivity, the injunction against Roxane would be extended until May 2028 under the Delaware District Court's order. On September 23, 2016, Roxane filed a notice of appeal with the Federal Circuit Court of Appeals (Federal Circuit). On July 27, 2017, Roxane, now a subsidiary of Hikma Pharmaceuticals PLC (Hikma), petitioned the Federal Circuit to substitute Roxane with new defendants West-Ward Pharmaceuticals International Limited and West-Ward Pharmaceuticals Corp. (each of which is a subsidiary of Hikma and both of which are referred to collectively herein as West-Ward). The Company did not oppose the substitution of West-Ward for Roxane. On April 13, 2018, the Federal Circuit affirmed the Delaware District Court's decision that West-Ward infringed the '610 Patent.

In 2015, the Company filed six separate patent infringement lawsuits in the Delaware District Court against Roxane, Inventia Healthcare Pvt. Ltd. (Inventia), Lupin Ltd. and Lupin Pharmaceuticals, Inc. (Lupin), Taro Pharmaceuticals USA, Inc. and Taro Pharmaceutical Industries, Ltd. (Taro), and Apotex Inc. and Apotex Corp. (collectively, the Defendants). The lawsuits each seek an adjudication that the respective Defendants infringed one or more claims of the '610 Patent and/or the Company's U.S. Patent No. 9,138,432 ('432 Patent) by submitting to the FDA an ANDA for a generic version of Fanapt® prior to the expiration of the '610 Patent in November 2027 or the '432 Patent in September 2025. The Defendants denied infringement and counterclaimed for declaratory judgment of invalidity and noninfringement of the '610 Patent and the '432 Patent. Certain Defendants have since entered into agreements resolving these lawsuits, as discussed below. The remaining parties are scheduled to submit to the Delaware District Court a status report and request a schedule for trial no later than 14 days after the Federal Circuit issues its mandate in the West-Ward appeal. The Company entered into a confidential stipulation with Inventia regarding any potential launch of Inventia's generic ANDA product. The Company also entered into a confidential stipulation with Lupin regarding any potential launch of Lupin's generic ANDA product.

Lupin filed counter claims for declaratory judgment of invalidity and noninfringement of seven of the Company's method of treatment patents that are listed in the *Approved Drug Products with Therapeutic Equivalence Evaluations* (Orange Book) related to Fanapt® (such seven patents, the Method of Treatment Patents). The Company has not sued Lupin for infringing the Method of Treatment Patents. On October 13, 2016, the Company and Lupin filed a Stipulation of Dismissal in the Delaware District Court pursuant to which Lupin's counterclaims relating to the Method of Treatment Patents were dismissed without prejudice in recognition of an agreement reached between the parties by which the Company would not assert those patents against Lupin absent certain changes in Lupin's proposed prescribing information for its iloperidone tablets.

On October 24, 2016, the Company entered into a License Agreement with Taro to resolve the Company's patent litigation against Taro regarding Taro's ANDA seeking approval of its generic version of Fanapt® (Taro License Agreement). Under the Taro License Agreement, the Company granted Taro a non-exclusive license to manufacture and commercialize Taro's version of Fanapt® in the U.S. effective November 2, 2027, unless prior to that date the Company obtains pediatric exclusivity for Fanapt®, in which case, the license will be effective May 2, 2028. Taro may enter the market earlier under certain limited circumstances. The Taro License Agreement, which is subject to review by the U.S. Federal Trade Commission (FTC) and the U.S. Department of Justice (DOJ), provides for a full settlement and release by the Company and Taro of all claims that are the subject of the litigation.

On December 7, 2016, the Company entered into a License Agreement with Apotex to resolve the Company's patent litigation against Apotex regarding Apotex's ANDA seeking approval of its generic version of Fanapt® (Apotex License Agreement). Under the Apotex License Agreement, the Company granted Apotex a non-exclusive license to manufacture and commercialize Apotex's version of Fanapt® in the U.S. effective November 2, 2027, unless prior to that date the Company obtains pediatric exclusivity for Fanapt®, in which case, the license will be effective May 2, 2028. Apotex may enter the market earlier under certain limited circumstances. The Apotex License Agreement, which is subject to review by the FTC and the DOJ, provides for a full settlement and release by the Company and Apotex of all claims that are the subject of the litigation.

On February 26, 2016, Roxane filed suit against the Company in the U.S. District Court for the Southern District of Ohio (Ohio District Court). The suit sought a declaratory judgment of invalidity and noninfringement of the Method of Treatment Patents. The Company has not sued Roxane for infringing the Method of Treatment Patents. The Company filed a motion to dismiss this lawsuit for lack of personal jurisdiction or to transfer the lawsuit to the Delaware District Court. On December 20, 2016, the Ohio District Court ruled in the Company's favor, dismissing Roxane's suit without prejudice for lack of personal jurisdiction.

On February 26, 2016, Roxane filed a Petition for *Inter Partes* Review (IPR) of the '432 Patent with the Patent Trials and Appeals Board (PTAB) of the U.S. Patent and Trademark Office. The Company filed a Preliminary Response on June 7, 2016, and on August 30, 2016 the PTAB denied the request by Roxane to institute an IPR of the '432 Patent. On September 29, 2016, Roxane filed a Petition for Rehearing with the PTAB, and on October 13, 2016 the Company filed a Response to Roxane's Petition. On November 4, 2016, the PTAB denied Roxane's Petition for Rehearing.

HETLIOZ®. On March 23, 2018, the Company received a Paragraph IV certification notice letter from Teva Pharmaceuticals USA, Inc. (Teva) notifying the Company that Teva had submitted an ANDA for HETLIOZ® to the FDA requesting approval to market, sell and use a generic version of the 20mg HETLIOZ® capsules for Non-24-Hour-Sleep-Wake Disorder. In its notice letter, Teva alleges that the Company's Orange Book listed U.S. Patent No. RE46,604, U.S. Patent No. 9,060,995, U.S. Patent 9,539,234, U.S. Patent 9,549,913, U.S. Patent 9,730,910 and U.S. Patent 9,885,241, (collectively, the Vanda Patents), which cover methods of using HETLIOZ®, are invalid, unenforceable and/or will not be infringed by Teva's manufacture, use or sale of the product described in its ANDA.

Since receiving Teva's notice letter, the Company has received similar notice letters from two additional generic drug manufacturers. The Company received notice letters from (a) MSN Pharmaceuticals Inc. and MSN Laboratories Private Limited (together, MSN) on April 2, 2018 and (b) Apotex on April 3, 2018. Each of MSN and Apotex notified the Company that it has submitted an ANDA to the FDA seeking to market, sell and use a generic version of the 20mg HETLIOZ® capsules for Non-24-Hour Sleep-Wake Disorder. In their respective notice letters, each of MSA and Apotex allege that the Vanda Patents are invalid, unenforceable and/or will not be infringed by MSN's or Apotex's, respectively, manufacture, use or sale of the product described in their respective ANDA's. The Company is currently reviewing the MSN and Apotex notice letters and intends to vigorously enforce its intellectual property rights relating to HETLIOZ®. By statute, the Company has 45 days from receipt of each of the respective notice letters to initiate patent infringement lawsuits against MSN and Apotex. Such lawsuits would automatically preclude the FDA from approving either MSN's or Apotex's ANDA until the earlier of 30 months from the date the Company received the respective notice letters, or entry of a district court decision finding the patents invalid, unenforceable or not infringed. The composition and use of HETLIOZ® are currently protected by seven patents that are listed in the FDA's Orange Book.

On April 30, 2018, the Company filed a patent infringement lawsuit in the Delaware District Court against Teva. The lawsuit seeks an adjudication that Teva has infringed one or more claims of the Vanda Patents by submitting to the FDA an ANDA for a generic version of HETLIOZ® prior to the expiration of the latest to expire of the Vanda Patents in 2034. The relief requested by the Company in the lawsuit includes a request for a permanent injunction preventing Teva from infringing the asserted claims of the Vanda Patents by engaging in the manufacture, use, offer to sell, sale, importation or distribution of generic versions of HETLIOZ® before the last expiration date of the Vanda Patents. The lawsuit automatically precludes the FDA from approving Teva's ANDA until the earlier of 30 months from the date the Company received the notice letter, or entry of a district court decision finding the Patents invalid, unenforceable or not infringed.

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

Overview

Vanda Pharmaceuticals Inc. (we, our or Vanda) is a global biopharmaceutical company focused on the development and commercialization of innovative therapies to address high unmet medical needs and improve the lives of patients. We commenced operations in 2003 and our product portfolio includes:

- HETLIOZ® (tasimelteon), a product for the treatment of Non-24-Hour Sleep-Wake Disorder (Non-24), was approved by the U.S. Food and Drug Administration (the FDA) in January 2014 and launched commercially in the U.S. in April 2014. In July 2015, the European Commission (the EC) granted centralized marketing authorization with unified labeling for HETLIOZ® for the treatment of Non-24 in totally blind adults. HETLIOZ® was commercially launched in Germany in August 2016. HETLIOZ® has potential utility in a number of other circadian rhythm disorders and is presently in clinical development for the treatment of Pediatric Non-24, Jet Lag Disorder and Smith-Magenis Syndrome (SMS). In March 2018, we announced results from our JET8 Phase-III clinical study (3107) (the JET8 study) of HETLIOZ® for Jet Lag Disorder.
- Fanapt® (iloperidone), a product for the treatment of schizophrenia, the oral formulation of which was approved by the FDA in May 2009 and launched commercially in the U.S. by Novartis Pharma AG (Novartis) in January of 2010. Novartis transferred all the U.S. and Canadian commercial rights to the Fanapt® franchise to us on December 31, 2014. Additionally, our distribution partners launched Fanapt® in Israel in 2014. Fanapt® has potential utility in a number of other disorders. An assessment of new Fanapt® clinical opportunities is ongoing.
- Tradipitant (VLY-686), a small molecule neurokinin-1 receptor (NK-1R) antagonist, which is presently in clinical development for the treatment of chronic pruritus in atopic dermatitis and the treatment of gastroparesis.
- VTR-297, a small molecule histone deacetylase (HDAC) inhibitor.
- VQW-765, a Phase II alpha-7 nicotinic acetylcholine receptor partial agonist.
- Portfolio of Cystic Fibrosis Transmembrane Conductance Regulator (CFTR) activators and inhibitors.

Operational Highlights

Tradipitant

- Vanda held an end of Phase II meeting with the FDA in April 2018 to discuss the clinical and regulatory path forward for tradipitant as a treatment for chronic pruritus in atopic dermatitis. A Phase III clinical study is expected to begin in the second quarter of 2018.
- A tradipitant clinical study for the treatment of gastroparesis is ongoing. Results are expected by the end of 2018.

HETLIOZ®

- Results from the JET8 Phase III clinical study to treat jet lag disorder in an 8 hour phase advance (3107) showed significant and clinically meaningful effects of HETLIOZ® 20mg on the primary endpoint of the study as well as multiple secondary endpoints in the treatment of jet lag disorder. Vanda intends to seek U.S. marketing approval for the use of HETLIOZ® in the treatment of jet lag disorder.
- A pharmacokinetic study of the HETLIOZ® pediatric liquid formulation is now complete.
- Enrollment in the SMS clinical study is ongoing. Results are expected by the end of 2018.

VTR-297

- A VTR-297 Phase I study (1101) in patients with hematologic malignancies is expected to start in the second half of 2018.

Since we began operations in March 2003, we have devoted substantially all of our resources to the in-licensing, clinical development and commercialization of our products. Our ability to generate meaningful product sales and achieve profitability largely depends on our ability to successfully commercialize HETLIOZ® and Fanapt® in the U.S. and Europe, on our ability, alone or with others, to complete the development of our products, and to obtain the regulatory approvals for and to manufacture, market and sell our products. The results of our operations will vary significantly from year-to-year and quarter-to-quarter and depend on a number of factors, including risks related to our business, risks related to our industry, and other risks which are detailed in *Risk Factors* reported in Item 1A of Part I of our annual report on Form 10-K for the year ended December 31, 2017.

As described in Part II, Item 1, *Legal Proceedings*, of this quarterly report on Form 10-Q, we have initiated lawsuits to enforce our patent rights against certain generic pharmaceutical companies.

Critical Accounting Policies

The preparation of our condensed consolidated 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 our financial statements, as well as the reported revenues and expenses during the reported periods. 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 apparent from other sources. Actual results may differ from these estimates under different assumptions or conditions.

With the exception of the revenue recognition as a result of adoption of the new revenue recognition standard on January 1, 2018, there have been no significant changes in our critical accounting policies including estimates, assumptions and judgments from those described in Item 7, *Management's Discussion and Analysis of Financial Condition and Results of Operations*, included in our annual report on Form 10-K for the fiscal year ended December 31, 2017. A summary of our significant accounting policies appears in the notes to our audited consolidated financial statements included in our annual report on Form 10-K for the fiscal year ended December 31, 2017. We believe that the following accounting policies are important to understanding and evaluating our reported financial results, and we have accordingly included them in this discussion.

Inventory. Inventory, which is recorded at the lower of cost or net realizable value, includes the cost of third-party manufacturing and other direct and indirect costs and is valued using the first-in, first-out method. We capitalize inventory costs associated with our products upon regulatory approval when, based on management's judgment, future commercialization is considered probable and the future economic benefit is expected to be realized; otherwise, such costs are expensed as research and development. Inventory not expected to be sold within 12 months following the balance sheet date are classified as non-current.

Net Product Sales. Our net product sales consist of sales of HETLIOZ® and sales of Fanapt®. In accordance with Accounting Standards Codification (ASC) Subtopic 606 *Revenue from Contracts with Customers* (ASC 606), we account for a contract when it has approval and commitment from both parties, the rights of the parties are identified, payment terms are identified, the contract has commercial substance and collectability of consideration is probable. We recognize revenue when control of the product is transferred to the customer in an amount that reflects the consideration we expect to be entitled to in exchange for those product sales, which is typically once the product physically arrives at the customer. Sales, value add, and usage-based taxes are excluded from revenues.

HETLIOZ® is only available in the U.S. for distribution through a limited number of specialty pharmacies, and is not available in retail pharmacies. Fanapt® is available in the U.S. for distribution through a limited number of wholesalers and is available in retail pharmacies. We invoice and record revenue when customers, specialty pharmacies and wholesalers, receive product from the third-party logistics warehouse which is the point at which control is transferred to the customer. Revenues and accounts receivable are concentrated with these customers. Outside the U.S., we commercially launched HETLIOZ® in Germany in August 2016. We have also entered into a distribution agreement with Megapharm Ltd. for the commercialization of Fanapt® in Israel.

The transaction price is determined based upon the consideration to which we will be entitled in exchange for transferring product to the customer. We estimate the amount of variable consideration that should be included in the transaction price utilizing the most likely amount method and updates its estimate at each reporting date. Variable consideration is included in the transaction price if, in our judgment, it is probable that a significant future reversal of cumulative revenue under the contract will not occur. Our product sales are recorded net of applicable discounts, rebates, chargebacks, service fees, co-pay assistance and product returns that are applicable for various government and commercial payors. Variable consideration for rebates, chargebacks and co-pay assistance is based upon the insurance benefits of the end customer, which is based on actual sales and an estimate for pending sales based on either historical activity or pending sales for which we have validated the insurance benefits. Reserves for variable consideration are classified as product revenue allowances on the condensed consolidated balance sheets, with the exception of prompt-pay discounts which are classified as reductions of accounts receivable. The reserve for product returns for which the product may not be returned for a period of greater than one year from the balance sheet date is classified other non-current liabilities on the condensed consolidated balance sheets. Uncertainties related to variable consideration are generally resolved in the quarter subsequent to period end, with the exception of product returns which are resolved during the product expiry period specified in the customer contract. We currently record sales allowances for the following:

Prompt-pay: Specialty pharmacies and wholesalers are offered discounts for prompt payment. We expect that the specialty pharmacies and wholesalers will earn prompt payment discounts and, therefore, deduct the full amount of these discounts from total product sales when revenues are recognized.

Rebates: Allowances for rebates include mandated and supplemental discounts under the Medicaid Drug Rebate Program as well as contracted rebate programs with other payors. Rebate amounts owed after the final dispensing of the product to a benefit plan participant are based upon contractual agreements or legal requirements with public sector benefit providers, such as Medicaid. The allowance for rebates is based on statutory or contracted discount rates and expected utilization.

Chargebacks: Chargebacks are discounts that occur when contracted indirect customers purchase directly from specialty pharmacies and wholesalers. Contracted indirect customers, which currently consist primarily of Public Health Service institutions, non-profit clinics, and Federal government entities purchasing via the Federal Supply Schedule, generally purchase the product at a discounted price. The specialty pharmacy or wholesaler, in turn, charges back the difference between the price initially paid by the specialty pharmacy or wholesaler and the discounted price paid to the specialty pharmacy or wholesaler by the contracted customer.

Medicare Part D Coverage Gap: Medicare Part D prescription drug benefit mandates manufacturers to fund approximately 50% of the Medicare Part D insurance coverage gap for prescription drugs sold to eligible patients. Vanda accounts for the Medicare Part D coverage gap using a point of sale model. Estimates for expected Medicare Part D coverage gap are based in part on historical activity and, where available, actual and pending prescriptions for we have validated the insurance benefits.

Service Fees: We receive sales order management, data and distribution services from certain customers. These fees are based on contracted terms and are known amounts. We accrue service fees at the time of revenue recognition, resulting in a reduction of product sales and the recognition of an accrued liability, unless it is a payment for a distinct good or service from the customer in which case the fair value of those distinct goods or services are recorded as selling, general and administrative expense.

Co-payment Assistance: Patients who have commercial insurance and meet certain eligibility requirements may receive co-payment assistance. Co-pay assistance utilization is based on information provided by our third-party administrator.

Product Returns: Consistent with industry practice, we generally offer direct customers a limited right to return as defined within our returns policy. We consider several factors in the estimation process, including historical return activity, expiration dates of product shipped to specialty pharmacies, inventory levels within the distribution channel, product shelf life, prescription trends and other relevant factors. We do not expect returned goods to be resalable. There was no right of return asset as of March 31, 2018 or December 31, 2017.

The following table summarizes sales discounts and allowance activity for the three months ended March 31, 2018:

(in thousands)	Rebates & Chargebacks	Discounts, Returns and Other	Total
Balance at December 31, 2017	$ 20,229	$ 7,357	$ 27,586
Provision related to current period sales	14,252	5,493	19,745
Adjustments for prior period sales	(121)	36	(85)
Credits/payments made	(12,783)	(5,740)	(18,523)
Balance at March 31, 2018	$ 21,577	$ 7,146	$ 28,723

The provision of $14.3 million for rebates and chargebacks for the three months ended March 31, 2018 primarily represents Medicaid rebates applicable to sales of Fanapt® and HETLIOZ®. The provision of $5.5 million for discounts, returns and other for the three months ended March 31, 2018 primarily represents wholesaler distribution fees applicable to sales of Fanapt® and co-pay assistance costs and prompt pay discounts applicable to the sales of both HETLIOZ® and Fanapt®.

Stock-based compensation. Compensation costs for all stock-based awards to employees and directors are measured based on the grant date fair value of those awards and recognized over the period during which the employee or director is required to perform service in exchange for the award. We use the Black-Scholes-Merton option pricing model to determine the fair value of stock options. The determination of the fair value of stock options on the date of grant using an option pricing model is affected by our stock price as well as assumptions regarding a number of complex and subjective variables. These variables include the expected stock price volatility over the expected term of the awards, actual and projected employee stock option exercise behaviors, risk-free interest rate and expected dividends. Expected volatility rates are based on the historical volatility of our publicly traded common stock and other factors. The risk-free interest rates are based on the U.S. Treasury yield for a period consistent with the expected term of the option in effect at the time of the grant. We have not paid dividends to our stockholders since our inception (other than a dividend of preferred share purchase rights which was declared in September 2008) and do not plan to pay dividends in the foreseeable future. As stock-based compensation expense recognized in the condensed consolidated statements of operations is based on awards ultimately expected to vest, it has been reduced for estimated forfeitures. Forfeitures are estimated at the time of grant and revised, if necessary, in subsequent periods if actual forfeitures differ from those estimates.

Research and development expenses. Research and development expenses consist primarily of fees for services provided by third parties in connection with the clinical trials, costs of contract manufacturing services for clinical trial use, milestone payments made under licensing agreements prior to regulatory approval, costs of materials used in clinical trials and research and development, costs for regulatory consultants and filings, depreciation of capital resources used to develop products, related facilities costs, and salaries, other employee-related costs and stock-based compensation for research and development personnel. We expense research and development costs as they are incurred for products in the development stage, including manufacturing costs and milestone payments made under license agreements prior to FDA approval. Upon and subsequent to FDA approval, manufacturing and milestone payments made under license agreements are capitalized. Milestone payments are accrued when it is deemed probable that the milestone event will be achieved. Costs related to the acquisition of intellectual property are expensed as incurred if the underlying technology is developed in connection with our research and development efforts and has no alternative future use.

Clinical trials are inherently complex, often involve multiple service providers, and can include payments made to investigator physicians at study sites. Because billing for services often lags delivery of service by a substantial amount of time, we often are required to estimate a significant portion of our accrued clinical expenses. Our assessments include, but are not limited to: (i) an evaluation by the project manager of the work that has been completed during the period, (ii) measurement of progress prepared internally and/or provided by the third-party service provider, (iii) analyses of data that justify the progress, and (iv) management's judgment. In the event that we do not identify certain costs that have begun to be incurred or we under- or over-estimates the level of services performed or the costs of such services, our reported expenses for such period would be too low or too high.

Selling, general and administrative expenses. Selling, general and administrative expenses consist primarily of salaries, other related costs for personnel, including stock-based compensation, related to executive, finance, accounting, information technology, marketing, medical affairs and human resource functions. Other costs include facility costs not otherwise included in research and development expenses and fees for marketing, medical affairs, legal, accounting and other professional services. Selling, general and administrative expenses also include third party expenses incurred to support sales, business development, and other business activities. Additionally, selling, general and administrative expenses included our estimate for the annual Patient Protection and Affordable Care fee.

Intangible Assets. Our intangible assets consist of capitalized license costs for products approved by the FDA. We amortize our intangible assets on a straight-line basis over estimated useful economic life of the related product patents. We assess the impairment of intangible assets whenever events or changes in circumstances indicate that the carrying value may not be recoverable. Factors we consider important which could trigger an impairment review include significant underperformance relative to expected historical or projected future operating results, a significant adverse change in legal or regulatory factors that could affect the value or patent life including our ability to defend and enforce patent claims and other intellectual property rights and significant negative industry or economic trends. When we determine that the carrying value of our intangible assets may not be recoverable based upon the existence of one or more of the indicators of impairment, we measure any impairment based on the amount that carrying value exceeds fair value. No impairments have been recognized on our intangible assets.

Income taxes. On a periodic basis, we evaluate the realizability of our deferred tax assets and liabilities and will adjust such amounts in light of changing facts and circumstances, including but not limited to future projections of taxable income, the reversal of deferred tax liabilities, tax legislation, rulings by relevant tax authorities and tax planning strategies. Settlement of filing positions that may be challenged by tax authorities could impact our income taxes in the year of resolution.

In assessing the realizability of deferred tax assets, we consider whether it is more likely than not that some portion or all of the deferred tax assets will not be realized. The ultimate realization of deferred tax assets is dependent upon the generation of future taxable income during the period in which those temporary differences becomes deductible or the net operating losses (NOLs) and credit carryforwards can be utilized. When considering the reversal of the valuation allowance, we consider the level of past and future taxable income, the reversal of deferred tax liabilities, the utilization of the carryforwards and other factors. Revisions to the estimated net realizable value of the deferred tax asset could cause our provision for income taxes to vary significantly from period to period.

Recent Accounting Pronouncements

See *Summary of Significant Accounting Policies* footnote to the condensed consolidated financial statements included in Part I of this quarterly report on Form 10-Q for information on recent accounting pronouncements.

Results of Operations

We anticipate that our results of operations will fluctuate for the foreseeable future due to several factors, including our and our partners' ability to successfully commercialize our products, any possible payments made or received pursuant to license or collaboration agreements, progress of our research and development efforts, the timing and outcome of clinical trials and related possible regulatory approvals. Since our inception, we have incurred significant losses resulting in an accumulated deficit of $358.4 million as of March 31, 2018.

Three months ended March 31, 2018 compared to three months ended March 31, 2017

Revenues. Total revenues increased by $6.2 million, or 17%, to $43.6 million for the three months ended March 31, 2018 compared to $37.4 million for the three months ended March 31, 2017. Revenues were as follows:

	Three Months Ended			
(in thousands)	**March 31 2018**	**March 31 2017**	**Net Change**	**Percent**
HETLIOZ® product sales, net	$25,423	$20,182	$5,241	26%
Fanapt® product sales, net	18,169	17,233	936	5%
	$43,592	$37,415	$6,177	17%

HETLIOZ® product sales increased by $5.2 million, or 26%, to $25.4 million for the three months ended March 31, 2018 compared to $20.2 million for the three months ended March 31, 2017. The increase to net product sales was attributable to an increase in volume and an increase in price net of deductions.

Fanapt® product sales increased by $0.9 million, or 5%, to $18.2 million for the three months ended March 31, 2018 compared to $17.2 million for the three months ended March 31, 2017. The increase to net product sales was attributable to an increase in price net of deductions.

Cost of goods sold. Cost of goods sold increased by $0.6 million, or 15%, to $4.6 million for the three months ended March 31, 2018 compared to $4.0 million for the three months ended March 31, 2017. Cost of goods sold includes third party manufacturing costs of product sold, third party royalty costs and distribution and other costs. Third party royalty costs are 10% of net sales of HETLIOZ® and 9% of net sales of Fanapt®.

In addition to third party royalty costs, HETLIOZ® and Fanapt® cost of goods sold as a percentage of revenue depends upon our cost to manufacture inventory at normalized production levels with our third party manufacturers. We expect that, in the future, total HETLIOZ® manufacturing costs included in cost of goods sold will continue to be less than 2% of our net HETLIOZ® product sales. We expect that, in the future, total U.S. Fanapt® manufacturing costs included in cost of goods sold will continue to be less than 4% of our net U.S. Fanapt® product sales.

Research and development expenses. Research and development expenses decreased by $1.2 million, or 11%, to $9.4 million for the three months ended March 31, 2018 compared to $10.6 million for the three months ended March 31, 2017. The decrease was primarily due a $1.0 million expense during the three months ended March 31, 2017 for an initial license fee to develop and commercialize a portfolio of CFTR activators and inhibitors. The following table summarizes the costs of our product development initiatives for the three months ended March 31, 2018 and 2017:

	Three Months Ended	
(in thousands)	**March 31, 2018**	**March 31, 2017**
Direct project costs (1)		
HETLIOZ®	$ 4,058	$ 4,570
Fanapt®	662	553
Tradipitant	2,277	2,303
VTR-297	664	768
CFTR	509	1,181
Other	169	57
	8,339	9,432
Indirect project costs (1)		
Stock-based compensation	322	409
Other indirect overhead	755	726
	1,077	1,135
Total research and development expense	$ 9,416	$ 10,567

(1) We record direct costs, including personnel costs and related benefits, on a project-by-project basis. Many of our research and development costs are not attributable to any individual project because we share resources across several development projects. We record indirect costs that support a number of our research and development activities in the aggregate, including stock-based compensation.

We expect to incur significant research and development expenses as we continue to develop our products. In addition, we expect to incur licensing costs in the future that could be substantial, as we continue our efforts to expand our product pipeline.

Selling, general and administrative expenses. Selling, general and administrative expenses decreased by $3.5 million, or 12%, to $26.8 million for the three months ended March 31, 2018 compared to $30.3 million for the three months ended March 31, 2017. The decrease was primarily the result of lower spend on marketing efforts around HETLIOZ® in the U.S. and Europe, partially offset by an increase in stock-based compensation expense.

Intangible asset amortization. Intangible asset amortization was $0.4 million for the three months ended March 31, 2018 compared to $0.5 million for the three months ended March 31, 2017.

Provision for income taxes. As a result of the tax valuation allowance against deferred tax assets in the U.S., there was no benefit for income taxes associated with the income (loss) before income taxes for three months ended March 31, 2018 and 2017. Taxes have been recorded related to certain U.S. state jurisdictions and non-U.S. income for the three months ended March 31, 2018 and 2017. Differences between the statutory tax rate and effective tax rate for these jurisdictions relate to settlements of equity compensation awards that occurred during the period.

Liquidity and Capital Resources

As of March 31, 2018, our total cash and cash equivalents and marketable securities (Cash) were $248.8 million compared to $143.4 million at December 31, 2017. The increase in Cash of $105.4 million includes $100.9 million net cash proceeds from the public offering of our common stock completed in March 2018, after deducting the underwriting discounts and commissions and accrued offering expenses. Our cash and cash equivalents are deposits in operating accounts and highly liquid investments with an original maturity of 90 days or less at date of purchase and consist of investments in money market funds with commercial banks and financial institutions, and commercial paper of high-quality corporate issuers. Our marketable securities consist of investments in government sponsored and corporate enterprises and commercial paper.

Our liquidity resources as of March 31, 2018 and December 31, 2017 are summarized as follows:

(in thousands)	March 31, 2018	December 31, 2017
Cash and cash equivalents	$155,293	$ 33,627
Marketable securities:		
U.S. Treasury and government agencies	53,600	60,618
Corporate debt	39,941	49,168
Total marketable securities	93,541	109,786
Total cash, cash equivalents and marketable securities	$248,834	$ 143,413

As of March 31, 2018, we maintained all of our Cash in three financial institutions. Deposits held with these institutions may exceed the amount of insurance provided on such deposits, but we do not anticipate any losses with respect to such deposits.

We expect to incur substantial costs and expenses throughout 2018 and beyond in connection with our U.S. commercial activities for HETLIOZ® and Fanapt®, including Medicaid rebates, the European commercial launch activities for HETLIOZ®, a probable future milestone payment of $25.0 million to BMS in the first half of 2018 when we expect cumulative worldwide sales of HETLIOZ® to reach $250.0 million, a probable future milestone payment of $2.0 million to Lilly due upon enrollment of the first subject into a Phase III study for tradipitant, and the continued clinical development of tradipitant and our other products. Additionally, we continue to pursue market approval of HETLIOZ® and Fanapt® in other regions. Because of the uncertainties discussed above, the costs to advance our research and development projects and the commercial activities for HETLIOZ® and Fanapt® are difficult to estimate and may vary significantly. Management believes that our existing funds will be sufficient to meet our operating plans for at least the next twelve months. Our future capital requirements and the adequacy of our available funds will depend on many factors, primarily including our ability to generate revenue, the scope and costs of our commercial, manufacturing and process development activities, the magnitude of our discovery, preclinical and clinical development programs, and potential costs to acquire or license the rights to additional products.

We may need or desire to obtain additional capital to finance our operations through debt, equity or alternative financing arrangements. We may also seek capital through collaborations or partnerships with other companies. The issuance of debt could require us to grant liens on certain of our assets that may limit our flexibility and debt securities may be convertible into common stock. If we raise additional capital by issuing equity securities, the terms and prices for these financings may be much more favorable to the new investors than the terms obtained by our existing stockholders. These financings also may significantly dilute the ownership of our existing stockholders. If we are unable to obtain additional financing, we may be required to reduce the scope of our future activities which could harm our business, financial condition and operating results. There can be no assurance that any additional financing required in the future will be available on acceptable terms, if at all.

Cash Flow

The following table summarizes our net cash flows from operating, investing and financing activities for the three months ended March 31, 2018 and 2017:

	Three Months Ended		
(in thousands)	March 31, 2018	March 31, 2017	Net Change
Net cash provided by (used in):			
Operating activities:			
Net income (loss)	$ 3,066	$ (7,645)	$ 10,711
Non-cash charges	3,531	3,040	491
Net change in operating assets and liabilities	(4,959)	(752)	(4,207)
Operating activities	1,638	(5,357)	6,995
Investing activities:			
Purchases of property and equipment	(135)	(478)	343
Net purchases of marketable securities	16,447	(16,690)	33,137
Investing activities	16,312	(17,168)	33,480
Financing activities:			
Net proceeds from offering of common stock	101,068	—	101,068
Proceeds from the exercise of stock options	2,666	2,209	457
Financing activities	103,734	2,209	101,525
Effect of exchange rate changes on cash, cash equivalents and restricted cash	18	1	17
Net change in cash, cash equivalents and restricted cash	$121,702	$(20,315)	$142,017

The increase of $7.0 million in net cash provided by operating activities reflects an increase of $10.7 million in the net income partially offset by and a decrease of $4.2 million from the net change in operating assets and liabilities. The decrease of $4.2 million from the net change in operating assets and liabilities primarily relates to a decrease in accounts payable and accrued liabilities attributable to the timing of activities and payments.

Off-Balance Sheet Arrangements

We have no off-balance sheet arrangements, as defined in Item 303(a) (4) of the Securities and Exchange Commission's Regulation S-K.

Contractual Obligations and Commitments

The following is a summary of our non-cancellable long-term contractual cash obligations as of March 31, 2018:

	Cash Payments Due by Year (1) (2)						
(in thousands)	Total	2018	2019	2020	2021	2022	Thereafter
Operating leases	$24,471	$ 1,729	$2,423	$2,521	$2,340	$2,354	$ 13,104
Milestone obligations (3) (4)	27,000	27,000	—	—	—	—	—
	$51,471	$28,729	$2,423	$2,521	$2,340	$2,354	$ 13,104

(1) This table does not include various agreements that we have entered into for services with third party vendors, including agreements to conduct clinical trials, to manufacture products, and for consulting and other contracted services due to the cancelable nature of the services. We accrued the costs of these agreements based on estimates of work completed to date. Additionally, this table does not include rebates, chargebacks or discounts recorded as liabilities at the time that product sales are recognized as revenue.

(2) This table includes a probable future $2.0 million milestone obligation under our license agreement with Lilly, for the exclusive rights to develop and commercialize tradipitant, which is due upon enrollment of the first subject into a Phase III study for tradipitant. This table does not include other potential future milestone obligations under the license agreement of $97.0 million, which consist of $2.0 million due upon the filing of the first marketing authorization for tradipitant in either the U.S. or the E.U. and up to $95.0 million for future regulatory approval and sales milestones.

(3) This table does not include potential future milestone obligations under our license agreement with the University of California San Francisco for the exclusive rights to develop and commercialize a portfolio of CFTR activators and inhibitors where we could be obligated to make potential future milestone payments of up to $46.0 million for regulatory and sales milestones.

(4) This table includes a milestone obligation under our license agreement with BMS, where we are obligated to make a milestone payment of $25.0 million when cumulative worldwide sales of HETLIOZ® reach $250.0 million, which is expected to occur in the first half of 2018. This obligation is accrued as a current liability in our condensed consolidated balance sheet as of March 31, 2018.

Operating leases

Commitments relating to operating leases represent the minimum annual future payments under operating leases and subleases for a total of 43,462 square feet of office space for our headquarters office at 2200 Pennsylvania Avenue, N.W. in Washington, D.C. that generally expire in 2028, an operating lease for 2,880 square feet of office space for our European headquarters in London that has a noncancellable lease term ending in 2021, and 1,249 square feet of office space in Berlin under a short-term operating lease.

ITEM 3 Quantitative and Qualitative Disclosures about Market Risk

Interest rate risks

Our exposure to market risk is currently confined to our cash and cash equivalents, marketable securities and restricted cash. We currently do not hedge interest rate exposure. We have not used derivative financial instruments for speculation or trading purposes. Because of the short-term maturities of our cash and cash equivalents and marketable securities, we do not believe that an increase in market rates would have any significant impact on the realized value of our investments.

Concentrations of credit risk

We deposit our cash with financial institutions that we consider to be of high credit quality and purchase marketable securities which are generally investment grade, liquid, short-term fixed income securities and money-market instruments denominated in U.S. dollars. Our marketable securities consist of certificates of deposit, commercial paper, corporate notes and U.S. government agency notes.

Revenues and accounts receivable are concentrated with specialty pharmacies and wholesalers. There were five major customers that each accounted for more than 10% of total revenues and, as a group, represented 87% of total revenues for the three months ended March 31, 2018. There were four major customers that each accounted for more than 10% of accounts receivable and, as a group, represented 79% of total accounts receivable at March 31, 2018. We mitigate our credit risk relating to accounts receivable from customers by performing ongoing credit evaluations.

Foreign currency risk

We are exposed to risks related to changes in foreign currency exchange rates relating to our foreign operations. The functional currency of our international subsidiaries is the local currency. We are exposed to foreign currency risk to the extent that we enter into transactions denominated in currencies other than our subsidiaries' respective functional currencies. We are also exposed to unfavorable fluctuations of the U.S. dollar, which is our reporting currency, against the currencies of our operating subsidiaries when their respective financial statements are translated into U.S. dollars for inclusion in our condensed consolidated financial statements. We do not currently hedge our foreign currency exchange rate risk. Foreign currency has not had a material impact on our results of operations.

Effects of inflation

Inflation has not had a material impact on our results of operations.

ITEM 4 Controls and Procedures

Conclusion Regarding the Effectiveness of Disclosure Controls and Procedures

Under the supervision and with the participation of our management, including our Chief Executive Officer and Chief Financial Officer, we evaluated the effectiveness of the design and operation of our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended (Exchange Act)) as of March 31, 2018. Based upon that evaluation, our Chief Executive Officer and Chief Financial Officer concluded that our disclosure controls and procedures are effective as of March 31, 2018, the end of the period covered by this quarterly report, to ensure that the information required to be disclosed by us in the reports that we file or submit under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the Securities and Exchange Commission's rules and forms, and that such information is accumulated and communicated to our management, including our Chief Executive Officer and Chief Financial Officer, as appropriate to allow timely decisions regarding required disclosures.

Changes in Internal Control over Financial Reporting

There has been no change in our internal control over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act) during the first quarter of 2018 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

PART II — OTHER INFORMATION

ITEM 1 Legal Proceedings

Fanapt®. In June 2014, we filed suit against Roxane Laboratories, Inc. (Roxane) in the U.S. District Court for the District of Delaware (Delaware District Court). The suit sought an adjudication that Roxane has infringed one or more claims of our U.S. Patent No. 8,586,610 (‘610 Patent) by submitting to the U.S. Food and Drug Administration (FDA) an Abbreviated New Drug Application (ANDA) for a generic version of Fanapt® prior to the expiration of the ‘610 Patent in November 2027. In addition, pursuant to a settlement agreement with Novartis Pharma AG (Novartis), we assumed Novartis’ patent infringement action against Roxane in the Delaware District Court. That suit alleges that Roxane has infringed one or more claims of U.S. Patent RE39198 (‘198 Patent), which is licensed exclusively to us, by filing an ANDA for a generic version of Fanapt® prior to the expiration of the ‘198 Patent in November 2016. These two cases against Roxane were consolidated by agreement of the parties and were tried together in a five-day bench trial that concluded on March 4, 2016. On August 25, 2016, the Delaware District Court ruled in our favor, finding that Roxane’s ANDA product infringed the asserted claims of the ‘610 Patent and the ‘198 Patent. The Delaware District Court ruled that we are entitled to a permanent injunction against Roxane enjoining Roxane from infringing the ‘610 Patent, including the manufacture, use, sale, offer to sell, sale, distribution or importation of any generic iloperidone product described in the ‘610 Patent ANDA until the expiration of the ‘610 Patent in November 2027. If we obtain pediatric exclusivity, the injunction against Roxane would be extended until May 2028 under the Delaware District Court’s order. On September 23, 2016, Roxane filed a notice of appeal with the Federal Circuit Court of Appeals (Federal Circuit). On July 27, 2017, Roxane, now a subsidiary of Hikma Pharmaceuticals PLC (Hikma), petitioned the Federal Circuit to substitute Roxane with new defendants West-Ward Pharmaceuticals International Limited and West-Ward Pharmaceuticals Corp. (each of which is a subsidiary of Hikma and both of which are referred to collectively herein as West-Ward). We did not oppose the substitution of West-Ward for Roxane. On April 13, 2018, the Federal Circuit affirmed the Delaware District Court’s decision that West-Ward infringed the ‘610 Patent.

In 2015, we filed six separate patent infringement lawsuits in the Delaware District Court against Roxane, Inventia Healthcare Pvt. Ltd. (Inventia), Lupin Ltd. and Lupin Pharmaceuticals, Inc. (Lupin), Taro Pharmaceuticals USA, Inc. and Taro Pharmaceutical Industries, Ltd. (Taro), and Apotex Inc. and Apotex Corp. (collectively, the Defendants). The lawsuits each seek an adjudication that the respective Defendants infringed one or more claims of the ‘610 Patent and/or our U.S. Patent No. 9,138,432 (‘432 Patent) by submitting to the FDA an ANDA for a generic version of Fanapt® prior to the expiration of the ‘610 Patent in November 2027 or the ‘432 Patent in September 2025. The Defendants denied infringement and counterclaimed for declaratory judgment of invalidity and noninfringement of the ‘610 Patent and the ‘432 Patent. Certain Defendants have since entered into agreements resolving these lawsuits, as discussed below. The remaining parties are scheduled to submit to the Delaware District Court a status report and request a schedule for trial no later than 14 days after the Federal Circuit issues its mandate in the West-Ward appeal. We entered into a confidential stipulation with Inventia regarding any potential launch of Inventia’s generic ANDA product. We also entered into a confidential stipulation with Lupin regarding any potential launch of Lupin’s generic ANDA product.

Lupin filed counter claims for declaratory judgment of invalidity and noninfringement of seven of our method of treatment patents that are listed in the *Approved Drug Products with Therapeutic Equivalence Evaluations* (Orange Book) related to Fanapt® (such seven patents, the Method of Treatment Patents). We have not sued Lupin for infringing the Method of Treatment Patents. On October 13, 2016, we, along with Lupin, filed a Stipulation of Dismissal in the Delaware District Court pursuant to which Lupin’s counterclaims relating to the Method of Treatment Patents were dismissed without prejudice in recognition of an agreement reached between Lupin and us by which we would not assert those patents against Lupin absent certain changes in Lupin’s proposed prescribing information for its iloperidone tablets.

On October 24, 2016, we entered into a License Agreement with Taro to resolve our patent litigation against Taro regarding Taro’s ANDA seeking approval of its generic version of Fanapt® (Taro License Agreement). Under the Taro License Agreement, we granted Taro a non-exclusive license to manufacture and commercialize Taro’s version of Fanapt® in the U.S. effective November 2, 2027, unless prior to that date we obtain pediatric exclusivity for Fanapt®, in which case, the license will be effective May 2, 2028. Taro may enter the market earlier under certain limited circumstances. The Taro License Agreement, which is subject to review by the U.S. Federal Trade Commission (FTC) and the U.S. Department of Justice (DOJ), provides for a full settlement and release by us and Taro of all claims that are the subject of the litigation.

On December 7, 2016, we entered into a License Agreement with Apotex to resolve our patent litigation against Apotex regarding Apotex’s ANDA seeking approval of its generic version of Fanapt® (Apotex License Agreement). Under the Apotex License Agreement, we granted Apotex a non-exclusive license to manufacture and commercialize Apotex’s version of Fanapt® in the U.S. effective November 2, 2027, unless prior to that date we obtain pediatric exclusivity for Fanapt®, in which case, the license will be effective May 2, 2028. Apotex may enter the market earlier under certain limited circumstances. The Apotex License Agreement, which is subject to review by the FTC and the DOJ, provides for a full settlement and release by us and Apotex of all claims that are the subject of the litigation.

On February 26, 2016, Roxane filed suit against us in the U.S. District Court for the Southern District of Ohio (Ohio District Court). The suit sought a declaratory judgment of invalidity and noninfringement of the Method of Treatment Patents. We have not sued Roxane for infringing the Method of Treatment Patents. We filed a motion to dismiss this lawsuit for lack of personal jurisdiction or to transfer the lawsuit to the Delaware District Court. On December 20, 2016, the Ohio District Court ruled in our favor, dismissing Roxane's suit without prejudice for lack of personal jurisdiction.

On February 26, 2016, Roxane filed a Petition for *Inter Partes* Review (IPR) of the '432 Patent with the Patent Trials and Appeals Board (PTAB) of the U.S. Patent and Trademark Office. We filed a Preliminary Response on June 7, 2016, and on August 30, 2016, the PTAB denied the request by Roxane to institute an IPR of the '432 Patent. On September 29, 2016, Roxane filed a Petition for Rehearing with the PTAB, and on October 13, 2016, we filed a Response to Roxane's Petition. On November 4, 2016, the PTAB denied Roxane's Petition for Rehearing.

HETLIOZ®. On March 23, 2018, we received a Paragraph IV certification notice letter from Teva Pharmaceuticals USA, Inc. (Teva) notifying us that Teva had submitted an ANDA for HETLIOZ® to the FDA requesting approval to market, sell and use a generic version of the 20mg HETLIOZ® capsules for Non-24-Hour-Sleep-Wake Disorder. In its notice letter, Teva alleges that our Orange Book listed U.S. Patent No. RE46,604, U.S. Patent No. 9,060,995, U.S. Patent 9,539,234, U.S. Patent 9,549,913, U.S. Patent 9,730,910 and U.S. Patent 9,885,241, (collectively, the Vanda Patents), which cover methods of using HETLIOZ®, are invalid, unenforceable and/or will not be infringed by Teva's manufacture, use or sale of the product described in its ANDA.

Since receiving Teva's notice letter, we have received similar notice letters from two additional generic drug manufacturers. We received notice letters from (a) MSN Pharmaceuticals Inc. and MSN Laboratories Private Limited (together, MSN) on April 2, 2018 and (b) Apotex on April 3, 2018. Each of MSN and Apotex notified us that it has submitted an ANDA to the FDA seeking to market, sell and use a generic version of the 20mg HETLIOZ® capsules for Non-24-Hour Sleep-Wake Disorder. In their respective notice letters, each of MSA and Apotex allege that the Vanda Patents are invalid, unenforceable and/or will not be infringed by MSN's or Apotex's, respectively, manufacture, use or sale of the product described in their respective ANDA's. We are currently reviewing the MSN and Apotex notice letters and intend to vigorously enforce our intellectual property rights relating to HETLIOZ®. By statute, we have 45 days from receipt of each of the respective notice letters to initiate patent infringement lawsuits against MSN and Apotex. Such lawsuits would automatically preclude the FDA from approving either MSN's or Apotex's ANDA until the earlier of 30 months from the date we received the respective notice letters, or entry of a district court decision finding the patents invalid, unenforceable or not infringed. The composition and use of HETLIOZ® are currently protected by seven patents that are listed in the FDA's Orange Book.

On April 30, 2018, we filed a patent infringement lawsuit in the Delaware District Court against Teva. The lawsuit seeks an adjudication that Teva has infringed one or more claims of our Vanda Patents by submitting to the FDA an ANDA for a generic version of HETLIOZ® prior to the expiration of the latest to expire of the Vanda Patents in 2034. The relief requested by us in the lawsuit includes a request for a permanent injunction preventing Teva from infringing the asserted claims of the Vanda Patents by engaging in the manufacture, use, offer to sell, sale, importation or distribution of generic versions of HETLIOZ® before the last expiration date of the Vanda Patents. The lawsuit automatically precludes the FDA from approving Teva's ANDA until the earlier of 30 months from the date we received the notice letters or entry of a district court decision finding the patents invalid, unenforceable or not infringed.

ITEM 1A Risk Factors

We previously disclosed in Part I, Item 1A of our annual report on Form 10-K for the year ended December 31, 2017, filed with the Securities and Exchange Commission on February 15, 2018, important factors which could affect our business, financial condition, results of operations and future operations under the heading *Risk Factors*. Our business, financial condition and operating results can be affected by a number of factors, whether current known or unknown, including but not limited to those described as risk factors, any one or more of which could, directly or indirectly, cause our actual operating results and financial condition to vary materially from past, or anticipated future, operating results and financial condition. Any of these factors, in whole or in part, could materially and adversely affect our business, financial condition, operating results and the price of our common stock. There have been no material changes in our risk factors subsequent to the filing of our annual report on Form 10-K for the fiscal year ended December 31, 2017.

ITEM 2 Unregistered Sales of Equity Securities and Use of Proceeds

None

ITEM 3 Defaults Upon Senior Securities

None

ITEM 4 Mine Safety Disclosures

Not applicable

ITEM 5 Other Information

Approval of Amended and Restated 2016 Equity Incentive Plan

On April 26, 2018 our Board of Directors approved, subject to stockholder approval, an amendment and restatement of our Amended and Restated 2016 Equity Incentive Plan (the 2016 Plan). The amendment and restatement of the 2016 Plan, if approved by the stockholders, will increase the aggregate number of shares of common stock that may be issued by us pursuant to awards under the 2016 Plan by 2,400,000 shares, among other changes.

Amended and Restated Employment Agreement with Gunther Birznieks

On April 30, 2018, we entered into an amended and restated employment agreement (the Employment Agreement) with Gunther Birznieks which amends and restates his prior employment agreement and incorporates provisions from a severance protection letter previously entered into between us and Mr. Birznieks. The Employment Agreement provides for an annual base salary of not less than $375,000 and the possibility of an annual target cash incentive bonus amount equal to 40% of his annual base salary upon achievement of certain performance criteria, in accordance with his previously approved base salary and target cash bonus. The Employment Agreement provides that if we terminate Mr. Birznieks' employment for any reason other than cause or permanent disability, or, if he terminates his employment within six months after the occurrence of any event constituting good reason (as defined below), Mr. Birznieks will receive the following severance benefits following termination: (1) base salary for a period of 12 months; (2) his annual target bonus, payable in a lump sum; and (3) an additional three months of service credit under all options held by him and all such options shall be exercisable for six months following his termination. In addition, pursuant to the terms of his option and restricted stock unit award agreements, if Mr. Birznieks is terminated without cause or if he terminates his employment for good reason, within 24 months following a change in control of the Company, he will become vested in all of his then unvested options and restricted stock units.

Pursuant to the Employment Agreement, the following terms are defined as follows:

"Good reason" means: (i) a change in the named executive officer's position with the Company that materially reduces his level of authority or responsibility, (ii) a material reduction in his base compensation or (iii) receipt of notice that his principal workplace will be relocated by more than 30 miles. A condition shall not be considered "good reason" unless Mr. Birznieks gives the Company written notice of such condition within 90 days after such condition comes into existence and the Company fails to remedy such condition within 30 days after receiving such written notice.

"Change in control" means: (i) a change in the composition of our Board, as a result of which fewer than 50% of the incumbent directors are directors who either: (A) had been directors of the Company on the date 24 months prior to the date of such change in the composition of the Board (the "Original Directors"); or (B) were appointed to the Board, or nominated for election to the Board, with the affirmative votes of at least a majority of the aggregate of (1) the Original Directors who were in office at the time of their appointment or nomination and (2) the directors whose appointment or nomination was previously approved in a manner consistent with (B); and (ii) any transaction as a result of which any person is the "beneficial owner" (as defined in Rule 13d-3 promulgated under the Securities Exchange Act 1934, as amended), directly or indirectly, of securities of the Company representing at least 50% of the total voting power represented by the Company's then outstanding voting securities. A transaction shall not constitute a change in control if its sole purpose is to change the state of the Company's incorporation or to create a holding company that will be owned in substantially the same proportions by the persons who held the Company's securities immediately before such transaction.

"Cause" means: (i) an unauthorized use or disclosure of the Company's confidential information or trade secrets, which use or disclosure causes material harm to the Company; (ii) a material breach of any agreement between the named executive officer and the Company; (iii) a material failure to comply with the Company's written policies or rules; (iv) conviction of, or plea of "guilty" or "no contest" to, a felony under the laws of the United States or any state thereof; (v) gross negligence or willful misconduct which causes material harm to the Company; (vi) a continued failure to perform assigned duties after receiving written notification of such failure from the Board; or (vii) a failure by the named executive officer to cooperate in good faith with a governmental or internal investigation of the Company or its directors, officers or employees, if the Company has requested Mr. Birznieks' cooperation.

The foregoing summary of the Employment Agreement does not purport to be complete and is subject to, and qualified in its entirety by, the full text of the Employment Agreement, a copy of which is attached hereto as Exhibit 10.40, and the terms of which are incorporated herein by reference.

ITEM 6 Exhibits

Exhibit Number	Description
3.1	Form of Amended and Restated Certificate of Incorporation of the registrant (filed as Exhibit 3.8 to Amendment No. 2 to the registrant's registration statement on Form S-1 (File No. 333-130759) on March 17, 2006 and incorporated herein by reference).
3.2	Form of Certificate of Designation of Series A Junior Participating Preferred Stock (filed as Exhibit 3.10 to the registrant's current report on Form 8-K (File No. 001-34186) on September 25, 2008 and incorporated herein by reference).
3.3	Fourth Amended and Restated Bylaws of the registrant, as amended and restated on December 17, 2015 (filed as Exhibit 3.1 to the registrant's current report on Form 8-K (File No. 001-34186) on December 21, 2015 and incorporated herein by reference).
10.38	Third Amendment to Lease Agreement, dated March 28, 2018, by and between Square 54 Office Owner LLC and the registrant.
10.39	Fourth Amendment to Lease Agreement, dated March 29, 2018, by and between Square 54 Office Owner LLC and the registrant.
10.40	Amended and Restated Employment Agreement, dated April 30, 2018, by and between Gunther Birznieks and the registrant.
31.1	Certification of the Chief Executive Officer, as required by Section 302 of the Sarbanes-Oxley Act of 2002.
31.2	Certification of the Chief Financial Officer, as required by Section 302 of the Sarbanes-Oxley Act of 2002.
32.1	Certification of the Chief Executive Officer (Principal Executive Officer) and Chief Financial Officer (Principal Financial Officer and Principal Accounting Officer), as required by Section 906 of the Sarbanes-Oxley Act of 2002.
101	The following financial information from this quarterly report on Form 10-Q for the fiscal quarter ended March 31, 2018 formatted in XBRL (eXtensible Business Reporting Language) and filed electronically herewith: (i) Condensed Consolidated Balance Sheets as of March 31, 2018 and December 31, 2017; (ii) Condensed Consolidated Statements of Operations for the three months ended March 31, 2018 and 2017; (iii) Condensed Consolidated Statement of Comprehensive Loss for the three months ended March 31, 2018 and 2017; (iv) Condensed Consolidated Statement of Changes in Stockholders' Equity for the three months ended March 31, 2018; (v) Condensed Consolidated Statements of Cash Flows for the three months ended March 31, 2018 and 2017; and (vi) Notes to Condensed Consolidated Financial Statements.

SIGNATURES

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

Vanda Pharmaceuticals Inc.

May 2, 2018 /s/ Mihael H. Polymeropoulos, M.D.

Mihael H. Polymeropoulos, M.D.
President and Chief Executive Officer
(Principal Executive Officer)

May 2, 2018 /s/ James P. Kelly

James P. Kelly
Executive Vice President, Chief Financial Officer and Treasurer
(Principal Financial Officer and Principal Accounting Officer)

Exhibit 10.38

EXECUTION VERSION

AMENDMENT NO. 3 TO LEASE

THIS AMENDMENT NO. 3 TO LEASE ("**Amendment No. 3**") is made as of the 28th day of March, 2018 ("**Effective Date**"), by and between SQUARE 54 OFFICE OWNER LLC, a Delaware limited liability company ("**Landlord**"), and VANDA PHARMACEUTICALS INC., a Delaware corporation ("**Tenant**").

WITNESSETH:

WHEREAS, by Lease dated as of July 25, 2011 (the "**Initial Lease**"), as amended by that Amendment No. 1 to Lease dated as of March 18, 2014 ("**Amendment No. 1**"), and that Amendment No. 2 to Lease dated as of June 20, 2016 ("**Amendment No. 2**") (the Initial Lease, Amendment No. 1 and Amendment No. 2 collectively, the "**Lease**"), Landlord is leasing to Tenant thirty thousand two hundred sixty (30,260) square feet of rentable area (the "**Initial Premises**"), comprised of (i) twenty-one thousand four hundred (21,400) square feet of rentable area located on the third (3rd) floor ("**3rd Floor East Premises**") and (ii) eight thousand eight hundred sixty (8,860) square feet of rentable area located on the second (2nd) floor ("**2nd Floor East Premises**") of the East Tower of the building located at 2200 Pennsylvania Avenue, N.W., Washington, D.C. (the "**Building**"); and

WHEREAS, Tenant desires to lease from Landlord and Landlord desires to lease to Tenant certain additional office space located on the second (2nd) floor of the East Tower, following the vacation thereby by the tenant occupying such space as of the Effective Date, for a period to expire one (1) year and ten (10) months following the September 30, 2026 scheduled expiration of the Lease Term; and

WHEREAS, Landlord and Tenant desire to so amend the Lease to expand the Premises and extend the Lease Term solely with respect to such expansion space, and to modify certain other terms of the Lease in accordance with and subject to the terms and conditions set forth below.

NOW, THEREFORE, in consideration of the mutual covenants and premises contained herein and other good and valuable consideration the receipt and sufficiency of which hereby are acknowledged, Landlord and Tenant hereby agree to amend the Lease as follows:

1. Defined Terms. All capitalized terms used herein and not otherwise defined herein shall have the same meanings as provided for such terms in the Lease.

2. Premises.

(a) Notwithstanding anything to the contrary contained in the Lease, subject to satisfaction of the Contingency (as defined below), Landlord does hereby lease to Tenant and Tenant does hereby lease from Landlord three thousand two hundred seventy-four (3,274) square feet of rentable area located on the second (2nd) floor of the East Tower (currently known as Suite 200E), as shown more particularly on **Attachment A** hereto ("**Amendment No. 3 Expansion Space**"). The rentable area of the Amendment No. 3 Expansion Space has been calculated in accordance with BOMA (as defined in the Initial Lease). The Lease Term with respect to the Amendment No. 3 Expansion Space shall commence on the Expansion Delivery Date (as defined below), shall continue through the Expansion Commencement Date (as defined below), shall be coterminous with the Lease Term for the Initial Premises, and shall be extended for the Amendment No. 3 Renewal Term (as defined below) (which Amendment No. 3 Renewal Term shall be applicable solely with respect to the Amendment No. 3 Expansion Space). From and after the Expansion Delivery Date, the Amendment No. 3 Expansion Space shall be subject to, and have the benefits of, all of the terms and conditions of the Lease applicable with respect to the Initial Premises for the entire Lease Term with respect to the Initial Premises, and thereafter for the Amendment No. 3 Renewal Term, except as otherwise expressly provided herein.

(b) (i) Landlord shall deliver possession of the Amendment No. 3 Expansion Space to Tenant ("**Expansion Delivery Date**"), in its as-is condition as of the date of delivery, promptly after the latest to occur of the following: (A) the date on which this Amendment No. 3 has been fully executed and delivered, (B) April 1, 2018, and (C) the later of (I) the date on which a termination agreement with the current occupant of the Amendment No. 3 Expansion Space ("**Current Occupant**") has been fully executed and delivered, and (II) the date on which the Current Occupant has vacated and surrendered possession to Landlord of the Amendment No. 3 Expansion Space. The "**Expansion Commencement Date**" shall be the date that is ninety (90) days after the Expansion Delivery Date.

(ii) In the event that (A) the conditions in clauses (A) and (B) of Paragraph 2(b)(i) above have been satisfied, and (B) Landlord fails to deliver possession of the Amendment No. 3 Expansion Space to Tenant within seventy-two (72) hours after the occurrence of the conditions in clause (C) of Paragraph 2(b)(i) above, then this Amendment No. 3 shall not be rendered void or voidable as a result of such delay and Landlord shall not have any liability to Tenant on account of such delay, except that, as Tenant's sole and exclusive remedy resulting from such delay, the Expansion Commencement Date shall be extended by one (1) day for each day of delay following such seventy-two (72)-hour period until the occurrence of the Expansion Delivery Date.

(iii) Notwithstanding anything to the contrary contained in the Lease (as amended hereby), a condition precedent to the operation and effect of this Amendment No. 3 (the "**Contingency**") shall be the full execution and delivery of a termination agreement for the early termination, effective on or before March 31, 2018, of the lease of the Current Occupant, on terms and conditions satisfactory to Landlord and such Current Occupant in each such party's sole discretion. In the event the Contingency has not been satisfied by March 31, 2018 (the "**Contingency Satisfaction Deadline**"), Landlord shall inform Tenant thereof within five (5) business days after the Contingency Satisfaction Deadline, Landlord shall not have any liability

in connection therewith (except as otherwise expressly provided below in this Paragraph 2(b)(iii)), this Amendment No. 3 shall be void and without force or effect, the Lease shall remain in full force and effect without any reference to this Amendment No. 3, and Landlord shall promptly return to Tenant any advanced rent and supplemental security deposit received by Landlord in connection with this Amendment No. 3. In the event that Landlord fails to enter into a termination agreement with the Current Occupant for the Amendment No. 3 Expansion Space (and expressly not in any other event, including without limitation, any inability or unwillingness of the Current Occupant to execute an early termination agreement for, or to timely vacate, the Amendment No. 3 Expansion Space, or any failure of Landlord and Current Occupant to agree, in each such party's sole discretion, on the terms and conditions of any such early termination agreement), Landlord shall reimburse Tenant for all commercially reasonable third-party, out-of-pocket design, engineering, consulting and other costs (provided all such costs are the type of costs to which the Amendment No. 3 Allowance is permitted to be applied pursuant to Paragraph 6(c) below) incurred by Tenant for the Amendment No. 3 Expansion Space prior to the date on which Landlord provides Tenant with written notice that Landlord has so terminated negotiations ("**Approved Costs**"), within thirty (30) days after Landlord's receipt of invoices reasonably evidencing the amount of such Approved Costs. In any such event, the applicable provisions of this Amendment No. 3 shall remain in full force and effect solely with respect to any obligation of Landlord pursuant to this Paragraph 2(b)(iii) to pay to Tenant any advanced rent, supplemental security deposit and/or Approved Costs.

(iv) In the event the Current Occupant holds over in the Amendment No. 3 Expansion Space beyond the termination date contained in any early termination agreement entered into by Landlord and such Current Occupant, Landlord shall not have any liability whatsoever on account of any resulting delay in the Expansion Delivery Date. In any such event, Landlord agrees to use commercially reasonable efforts to obtain possession of such Amendment No. 3 Expansion Space as soon as reasonably possible (including instituting eviction proceedings and pursuing the same with commercially reasonable diligence).

(c) During the period commencing on the Expansion Delivery Date for the Amendment No. 3 Expansion Space and ending on (and including) the last day of the Lease Term with respect to the Initial Premises, the term "Premises" as used in the Lease and this Amendment No. 3 shall be deemed to mean a total of thirty-three thousand five hundred thirty-four (33,534) square feet of rentable area, comprised of (i) twenty-one thousand four hundred (21,400) square feet of rentable area located on, and comprising the entire rentable area of, the third (3rd) floor of the East Tower and (ii) twelve thousand one hundred thirty-four (12,134) square feet of rentable area located on the second (2nd) floor of the East Tower, and from and after the first day of the Amendment No. 3 Renewal Term, the term "Premises" as used in the Lease and this Amendment No. 3 shall be deemed to mean a total of three thousand two hundred seventy-four (3,274) square feet of rentable area located on the second (2nd) floor of the East Tower (i.e., solely the Amendment No. 3 Expansion Space). Promptly after the Expansion Delivery Date has occurred, Landlord and Tenant shall execute a written declaration setting forth the Expansion Delivery Date, the Expansion Commencement Date, and the other information set forth therein, in a form substantially similar to the form of declaration attached to the Original Lease as **Exhibit D**; provided, however, that any failure of the parties to execute such declaration shall not affect the validity of the Expansion Delivery Date or the Expansion Commencement Date as determined in accordance with this Paragraph.

(d) Solely with respect to the Amendment No. 3 Expansion Space, the term "Lease Year" shall mean a period of twelve (12) consecutive calendar months, commencing on the Expansion Commencement Date and each successive twelve (12) month period thereafter, except that if the Expansion Commencement Date shall occur on a date other than the first day of a month, then the first Lease Year for the Amendment No. 3 Expansion Space shall also include the period from the Expansion Commencement Date to the first day of the following month.

3. Lease Term.

(a) Notwithstanding anything to the contrary contained in the Lease, the Lease Term solely with respect to the Amendment No. 3 Expansion Space hereby is extended for the period ("**Amendment No. 3 Renewal Term**") commencing on October 1, 2026 (the "**Amendment No. 3 Renewal Commencement Date**") and expiring on July 31, 2028 (the "**Amendment No. 3 Renewal Expiration Date**"), unless extended or earlier terminated pursuant to the terms of the Lease (as amended hereby). Tenant acknowledges that the Lease (as amended hereby) contains no right or option whatsoever for Tenant to renew or extend the Lease Term with respect to the Amendment No. 3 Expansion Space beyond the Amendment No. 3 Renewal Expiration Date, except as otherwise set forth in Rider No. 1 to the Original Lease (as modified by Paragraph 7 below), or to terminate the Lease Term with respect to the Amendment No. 3 Expansion Space prior to the Amendment No. 3 Renewal Expiration Date.

(b) (i) It is hereby acknowledged and agreed that the Lease Term with respect to the Initial Premises is scheduled to expire on September 30, 2026, notwithstanding the extension of the Lease Term solely with respect to the Amendment No. 3 Expansion Space for the Amendment No. 3 Renewal Term. Notwithstanding the foregoing, Landlord and Tenant shall negotiate in good faith the terms of an amendment to the Lease providing for the renewal of the Lease Term with respect to the Initial Premises for a period that is coterminous with the Amendment No. 3 Expansion Space, to expire on the Amendment No. 3 Renewal Expiration Date, on terms and conditions satisfactory to Landlord and Tenant in each such party's sole discretion (the "**Amendment No 4**").

(ii) In the event Amendment No. 4 is not fully executed and delivered on or before March 31, 2018, which date, provided Landlord and Tenant are then negotiating in good faith the terms of Amendment No. 4, may be extended by Tenant for a period of time not to exceed thirty (30) days by written notice delivered to Landlord not later than March 31, 2018 (the "**Amendment No. 4 Deadline**"), then (A) Tenant shall pay to Landlord, on or before the Amendment No. 4 Deadline, a non-refundable amount equal to Two Hundred Sixty Thousand Dollars ($260,000.00), (B) the Lease Term with respect to the Initial Premises shall expire on September 30, 2026 (unless extended or earlier terminated pursuant to the terms of the Lease (as amended hereby), and (C) on or before the date on which the Lease Term expires or is earlier

terminated with respect to the Initial Premises, Tenant shall vacate and surrender the Initial Premises in accordance with the applicable provisions of the Lease (as amended hereby) as though such date was the scheduled expiration date for the Lease Term with respect to the entire Premises.

4. Base Rent.

(a) Commencing on the Expansion Commencement Date and continuing thereafter during the Lease Term (as extended hereby with respect to the Amendment No. 3 Expansion Space through the Amendment No. 3 Renewal Expiration Date), Tenant shall pay to Landlord as annual base rent for the Amendment No. 3 Expansion Space, net of all Operating Expenses, without set off, deduction or demand and in accordance with the terms and conditions of Article III of the Initial Lease, an amount equal to the product of Forty-Seven and 00/100 Dollars ($47.00), multiplied by the total number of square feet of rentable area in the Amendment No. 3 Expansion Space, which amount shall be increased as provided in Paragraph 4(c) below. Concurrently with Tenant's execution and delivery of this Amendment No. 3, Tenant shall pay to Landlord advanced rent in an amount equal to Twelve Thousand Eight Hundred Twenty-Three and 17/100 Dollars ($12,823.17), which sum shall be credited by Landlord toward the monthly installment of annual base rent due on the first (1st) day of the first calendar month falling after the month in which the Expansion Commencement Date occurs (subject to any abatement to which Tenant is entitled pursuant to Paragraph 4(b) below). In addition, if the Expansion Commencement Date is a date other than on the first day of a month, rent from such date until the first day of the following month shall be prorated on a per diem basis at the base rate payable during the first month, and such prorated rent shall be payable in advance on the day immediately following the last day of the Amendment No. 3 Abatement Period (as defined below).

(b) Notwithstanding anything to the contrary contained in this Paragraph 4 and provided no Event of Default by Tenant has occurred, Landlord hereby agrees to grant Tenant an abatement of the annual base rent payable hereunder (and the Operating Expenses payable pursuant to Paragraph 5 below) for a period of nine (9) full calendar months from the Expansion Commencement Date (the "**Amendment No. 3 Abatement Period**"). Thereafter, Tenant shall pay the full amount of annual base rent due for the Amendment No. 3 Expansion Space in accordance with the provisions of this Paragraph 4 and Article III of the Initial Lease (and the full amount of Tenant's proportionate share of Operating Expenses due in accordance with the provisions of Paragraph 5 below and Article IV of the Initial Lease). Notwithstanding anything to the contrary in this Paragraph, the rent escalation, as required by Paragraph 4(c) below, shall be based on the full and unabated amount of rent payable for the first (1st) Lease Year for the Amendment No. 3 Expansion Space as set forth in Paragraph 4(a) above.

(c) Commencing on the first (1st) day of the second (2nd) Lease Year for the Amendment No. 3 Expansion Space and on the first day of each and every Lease Year thereafter during the Lease Term (as extended hereby with respect to the Amendment No. 3 Expansion Space through the Amendment No. 3 Renewal Expiration Date), the annual base rent shall be increased by two and fifty hundredths percent (2.50%) of the amount of annual base rent payable for the Amendment No. 3 Expansion Space for the preceding Lease Year.

(d) Based on the foregoing, the Annual Base Rent and Monthly Base Rent payable for the Amendment No. 3 Expansion Space during the Lease Term (as extended hereby with respect to the Amendment No. 3 Expansion Space through the Amendment No. 3 Renewal Expiration Date) shall be as follows:

Lease Year for Amendment No. 3 Expansion Space	Base Rate/RSF for Amendment No. 3 Expansion Space	Annual Base Rent for Amendment No. 3 Expansion Space*	Monthly Base Rent for Amendment No. 3 Expansion Space
1	$ 47.00	$ 153,878.00	$ 12,823.17
2	$ 48.18	$ 157,741.32	$ 13,145.11
3	$ 49.38	$ 161,670.12	$ 13,472.51
4	$ 50.61	$ 165,697.20	$ 13,808.10
5	$ 51.88	$ 169,855.08	$ 14,154.59
6	$ 53.18	$ 174,111.36	$ 14,509.28
7	$ 54.51	$ 178,465.80	$ 14,872.15
8	$ 55.87	$ 182,918.40	$ 15,243.20
9	$ 57.27	$ 187,502.04	$ 15,625.17
10	$ 58.70	$ 192,183.84	$ 16,015.32
11	$ 60.17	$ 196,996.56	$ 16,416.38

* based on 12 full calendar months

5. Operating Expenses. Commencing on the Expansion Commencement Date and continuing thereafter during the Lease Term (as extended hereby with respect to the Amendment No. 3 Expansion Space through the Amendment No. 3 Renewal Expiration Date), Tenant shall pay to Landlord Tenant's proportionate share, with respect to the Amendment No. 3 Expansion Space, of the Operating Expenses incurred by Landlord in connection with the management, operation and ownership of the Building, pursuant to the terms set forth in Article IV of the Initial Lease. Notwithstanding the foregoing, Tenant hereby is granted an abatement of the foregoing requirement to pay Operating Expenses with respect to the Amendment No. 3 Expansion Space for the Amendment No. 3 Abatement Period, subject to the terms of Paragraph 4(b) above.

6. Condition.

(a) Tenant hereby accepts the Amendment No. 3 Expansion Space in its "as is" condition as of the Expansion Delivery Date. Landlord is under no obligation to make any alterations or improvements in or to any part of the Amendment No. 3 Expansion Space in connection with Tenant's leasing thereof or, other than the Test Fit Allowance (as defined below) and the Amendment No. 3 Allowance (as defined below), to pay any allowance with respect to Alterations to be made by Tenant therein.

(b) Tenant shall contract with an architect and an engineer each selected by Tenant and reasonably approved by Landlord to perform any Alterations desired by Tenant and approved by Landlord in accordance with Article IX of the Initial Lease for the Amendment No. 3 Expansion Space. Provided no Event of Default has occurred, Landlord shall provide a test fit allowance ("**Test Fit Allowance**") in an amount equal to the product of (i) Twelve Cents ($0.12), multiplied by (ii) the number of square feet of rentable area in the Amendment No. 3 Expansion Space (i.e., $392.88 based on 3,274 RSF in the Amendment No. 3 Expansion Space) to be applied toward the costs incurred by Tenant for space planning for the Amendment No. 3 Expansion Space. Landlord shall pay the Test Fit Allowance directly to Tenant's architect pursuant to a separate agreement between Landlord and Tenant's architect. Landlord shall provide to Tenant's architect applicable CADD files that are in Landlord's possession or control for the Amendment No. 3 Expansion Space and the 2nd floor of the East Tower.

(c) Provided no Event of Default has occurred, Landlord shall grant Tenant an improvement allowance ("**Amendment No. 3 Allowance**") in an amount equal to the product of (i) Eighty Dollars ($80.00), multiplied by (ii) the number of square feet of rentable area in the Amendment No. 3 Expansion Space (i.e., $261,920.00 based on 3,274 RSF in the Amendment No. 3 Expansion Space) to be applied toward the costs incurred by Tenant in connection with any Alterations desired by Tenant and approved by Landlord in accordance with Article IX of the Initial Lease for the Amendment No. 3 Expansion Space. At least eighty percent (80%) (on a per rentable square foot basis) of the Amendment No. 3 Allowance shall be applied within the Amendment No. 3 Expansion Space toward "hard construction costs" (which shall include cabling and wiring for purposes hereof), and an amount not to exceed twenty percent (20%) (on a per rentable square foot basis) of the Amendment No. 3 Allowance may be applied toward architectural design fees, engineering fees, telephone/data installation, security systems installed for the Amendment No. 3 Expansion Space, and construction management fees. In no event whatsoever shall the Amendment No. 3 Allowance be applied against any costs incurred in connection with Tenant's furniture, fixtures, equipment, moving costs or other move-related expenses, or rental abatement. All improvements that are funded by the Amendment No. 3 Allowance shall be the property of Landlord.

(d) The Amendment No. 3 Allowance shall be available to be disbursed in accordance with the terms and conditions hereof commencing after the full execution and delivery of this Amendment No. 3, Landlord's receipt of the advanced rent and supplemental security deposit for the Amendment No. 3 Expansion Space, and satisfaction of all contingencies for the effectiveness hereof, including without limitation, the Contingency and any required approval of this Amendment No. 3 by GWU. All costs incurred in connection with the Alterations performed by Tenant for the Amendment No. 3 Expansion Space (the "**Amendment No. 3 Costs**") in excess of the Amendment No. 3 Allowance shall be borne by Tenant. The following provisions shall apply with respect to disbursement of the Amendment No. 3 Allowance.

(i) In the event that the Amendment No. 3 Costs are equal to or less than the Amendment No. 3 Allowance, then Landlord shall be responsible for paying the Amendment No. 3 Costs from the Amendment No. 3 Allowance, net of previous disbursements therefrom, in accordance with the terms of Paragraph 6(d)(iii) below following receipt of a requisition and all supporting documentation.

(ii) In the event that the Amendment No. 3 Costs are greater than the Amendment No. 3 Allowance, then the Amendment No. 3 Allowance (or such portion thereof as has not previously been disbursed) shall be disbursed in pro rata payments, based on the percentage of the Alterations for the Amendment No. 3 Expansion Space that have been completed (but not in excess of the sums actually being disbursed to Tenant's contractor). If the cost to construct such Alterations, as adjusted by any increase or decrease in Amendment No. 3 Costs resulting from change orders, will exceed the unapplied (and unreserved) portion of the Amendment No. 3 Allowance ("**Unused Amendment No. 3 Allowance**"), then Landlord's pro rata share of the requisition shall be determined by multiplying said requisition by a fraction, the numerator of which is the amount of the Unused Amendment No. 3 Allowance as of the date of such requisition, and the denominator of which is the total cost to complete such Alterations, as adjusted by any increase or decrease in Amendment No. 3 Costs resulting from change orders as of such date.

(iii) Notwithstanding any of the foregoing to the contrary, a condition precedent to Landlord's obligation to disburse any portion of the Amendment No. 3 Allowance shall be the delivery to Landlord of a requisition from Tenant therefor, to include (A) invoices for the costs to which the Amendment No. 3 Allowance is permitted to be applied, (B) partial lien waivers from all persons or entities that are legally permitted to file mechanics' or materialmen's liens against the Building or the Land with respect to all work performed or services or materials provided through the date of each such invoice (subject only to receipt of the requisitioned amount), (C) evidence that all labor and materials for which a requisition is being submitted has been incorporated into the Amendment No. 3 Expansion Space, and (D) such other documentation as may be reasonably requested by Landlord or its lender. Disbursements of the Amendment No. 3 Allowance shall be made, within thirty (30) days following Landlord's receipt of all of the items to be provided pursuant to clauses (A) through (D) herein (provided that Tenant provides such requisition and all required information by the deadline required for Landlord's lender's payment cycle, of which Landlord shall notify Tenant), no more frequently than once per month. Any portion of the Amendment No. 3 Allowance that has not been requisitioned in accordance with the foregoing within twelve (12) months after the Expansion Commencement Date shall be deemed waived and forfeited.

(e) Tenant shall pay to Landlord a coordination and monitoring fee in an amount equal to one percent (1%) of the hard construction costs incurred in connection with the Alterations performed by Tenant for the Amendment No. 3 Expansion Space, which shall be paid from the Amendment No. 3 Allowance throughout the construction process.

7. Renewal. Notwithstanding anything to the contrary contained in the Lease (as amended hereby), Tenant's right to extend the Lease Term pursuant to Rider No. 1 to the Initial Lease (as modified by Amendment No. 1 and Amendment No. 2) shall remain in full force and effect with respect to the entire Premises (including the Amendment No. 3 Expansion Space), except that Tenant's exercise of such option in accordance with the applicable terms of the Lease shall be deemed to extend the Lease Term with respect to the Amendment No. 3 Expansion Space for a period that is coterminous with the Renewal Term for the remainder of the Premises (i.e., the five-year Renewal Term shall be scheduled to expire on September 30, 2031 with respect to the entire Premises, notwithstanding that such date reflects a renewal term of less than five years with respect to the Amendment No. 3 Expansion Space).

8. Security Deposit. Notwithstanding anything to the contrary contained in the Lease, Landlord requires a supplemental Security Deposit in connection with the expansion of the Premises to include the Amendment No. 3 Expansion Space. Accordingly, concurrently with Tenant's execution and delivery of this Amendment No. 3, Tenant shall deliver to Landlord a Letter of Credit in an amount equal to Thirty-five Thousand Dollars ($35,000.00) and otherwise in accordance with the terms and conditions of Article V of the Initial Lease, which amount shall be held by Landlord subject to and in accordance with the terms of Article V of the Initial Lease. It is hereby acknowledged and agreed that the reduction terms of Section 5.1(d)(ii) of the Initial Lease shall apply solely with respect to the Security Deposit provided in connection with the Initial Lease, and the reduction terms of Paragraph 4 of Amendment No. 1 shall apply solely with respect to the Security Deposit provided in connection with Amendment No. 1.

9. Parking. During the period commencing on the Expansion Commencement Date and ending on (and including) the last day of the Lease Term with respect to the Initial Premises, Tenant shall have the right to purchase three (3) additional unreserved parking permits for the Garage (in addition to the unreserved parking permits that Tenant has the right to purchase pursuant to the Lease with respect to the Initial Premises), and from and after the first day of the Amendment No. 3 Renewal Term, Tenant shall have the right to purchase a total of three (3) unreserved parking permits in the aggregate for the Garage, in any event at the then prevailing monthly market rate for non-reserved parking permits in comparable trophy class and class A office buildings in downtown Washington, D.C., and otherwise subject to all of the terms and conditions contained in Article XXIV of the Initial Lease.

10. Signs.

(a) Commencing on the Expansion Commencement Date, Landlord shall list Tenant's name and the names of Tenant's professional employees who will work in the Amendment No. 3 Expansion Space as of the Expansion Commencement Date in the Building lobby directory; provided however, that if Tenant requests Landlord to change the names on such lobby directory, then Tenant shall reimburse Landlord for all actual costs incurred by Landlord therefor.

(b) Landlord shall provide, at Landlord's cost, Building standard suite entry signage at one entrance to the Amendment No. 3 Expansion Space; provided, however, that in lieu thereof, Tenant shall have the right, upon written notice thereof to Landlord, at Tenant's sole cost and expense, to install and maintain signage identifying Tenant on or near the suite entrance to the portion of the Premises located on the second (2nd) floor of the East Tower, but only in such place, number, size, color and style as are approved by Landlord, which approval shall not be unreasonably withheld, conditioned or delayed provided that such signage is consistent with signage standards in other Class A office buildings in the Market Area. Any such sign that is approved by Landlord shall, at Landlord's election, be installed by Tenant at Tenant's cost and expense and shall be removed by Tenant at Tenant's sole cost and expense at the end of the Lease Term with respect to the Amendment No. 3 Expansion Space (and Tenant shall repair any damage to the Building or the Premises caused by such removal, reasonable wear and tear excepted).

11. Access Control. Commencing on the Expansion Commencement Date, Landlord, at its cost, shall provide an initial set of access cards to the Building in an amount equal to the number of initial employees of Tenant who work on a full-time basis in the Amendment No. 3 Expansion Space as of the Expansion Commencement Date, based on a ratio of up to but not more than one (1) access card for each five hundred (500) square feet of above grade rentable area in the Amendment No. 3 Expansion Space; provided, however, that any replacement or additional cards requested by Tenant after the Expansion Commencement Date shall be provided by Landlord and Tenant shall reimburse Landlord for Landlord's cost therefor. Upon Landlord's receipt of written request therefor from Tenant and all of other tenants leasing space on the second (2nd) floor of the East Tower, Landlord shall program the Building elevators to require access cards for access to the second (2nd) floor of the East Tower.

12. Ratification. Except as otherwise expressly modified by the terms of this Amendment No. 3, the Lease shall remain unchanged and continue in full force and effect. All terms, covenants and conditions of the Lease not expressly modified herein are hereby confirmed and ratified and remain in full force and effect, and, as further amended hereby, constitute valid and binding obligations of Landlord and Tenant enforceable according to the terms thereof.

13. Broker. Landlord recognizes Savills Studley, Inc. (the "**Broker**") as the sole broker procuring this Amendment No. 3 and shall pay said Broker a commission pursuant to a separate agreement between said Broker and Landlord. Landlord and Tenant each represent and warrant to the other that, except as provided in the preceding sentence, neither of them has employed or dealt with any broker, agent or finder in carrying on the negotiations relating to this Amendment No. 3. Landlord and Tenant shall indemnify and hold the other harmless from and against any claim or claims for brokerage or other commissions asserted by any broker, agent or finder engaged by Landlord or Tenant or with whom Landlord or Tenant has dealt in connection with this Amendment No. 3, other than the Broker.

14. Authority.

(a) Tenant hereby represents and warrants to Landlord that Tenant is a duly organized and existing corporation and is in good standing under the laws of the State of Delaware and the District of Columbia, that all necessary corporate action has been taken to enter into this Amendment No. 3 and that the person signing this Amendment No. 3 on behalf of Tenant has been duly authorized to do so.

(b) Landlord hereby represents and warrants to Tenant that Landlord is a duly organized and existing limited liability company and is in good standing under the laws of the State of Delaware and the District of Columbia, that all necessary company action has been taken to enter into this Amendment No. 3 and that the person signing this Amendment No. 3 on behalf of Landlord has been duly authorized to do so.

15. Landlord and Tenant Representations and Acknowledgements.

(a) To the best of Tenant's knowledge, Landlord has performed all of its obligations under the Lease. To the best of Tenant's knowledge, Landlord is not in default under the Lease as of the date hereof, and Tenant is unaware of any condition or circumstance which, but for the passage of time or delivery of notice, or both, would constitute an event of default by Landlord under the Lease. Tenant has no current claims, defenses or set-offs of any kind to the payment or performance of Tenant's obligations under the Lease. Nothing contained herein shall be deemed to waive any sums due from Tenant to Landlord, or any default or event which, with the passage of time or delivery of notice, or both, would constitute a default by Tenant under the Lease as of the date hereof.

(b) To the best of Landlord's knowledge, Tenant has performed all of its obligations under the Lease. To the best of Landlord's knowledge, Tenant is not in default under the Lease as of the date hereof, and Landlord is unaware of any condition or circumstance which, but for the passage of time or delivery of notice, or both, would constitute an event of default by Tenant under the Lease. Landlord has no current claims, defenses or set-offs of any kind to the payment or performance of Landlord's obligations under the Lease. Nothing contained herein shall be deemed to waive any sums due from Landlord to Tenant, or any default or event which, with the passage of time or delivery of notice, or both, would constitute a default by Landlord under the Lease as of the date hereof.

16. Mutual Negotiation. Landlord and Tenant each hereby covenants and agrees that each and every provision of this Amendment No. 3 has been jointly and mutually negotiated and authorized by both Landlord and Tenant, and in the event of any dispute arising out of any provision of this Amendment No. 3, Landlord and Tenant each does hereby waive any claim of authorship against the other party.

17. General Provisions. Landlord and Tenant agree that the terms and conditions of this Amendment No. 3 shall also be subject to the same provisions regarding confidentiality as are contained within Section 25.20 of the Initial Lease.

18. Binding Effect. This Amendment No. 3 shall not be effective and binding unless and until fully executed and delivered by each of the parties hereto. All of the covenants contained in this Amendment No. 3, including, but not limited to, all covenants of the Lease as modified hereby, shall be binding upon and inure to the benefit of the parties hereto, their respective heirs, legal representatives, and permitted successors and assigns.

[REMAINDER OF PAGE INTENTIONALLY BLANK.
SIGNATURE PAGE FOLLOWS.]

IN WITNESS WHEREOF, Landlord and Tenant have executed this Amendment No. 3 to Lease as of the date and year first above written.

LANDLORD:

SQUARE 54 OFFICE OWNER LLC,
a Delaware limited liability company

By: BP/DC PROPERTIES, INC.,
a Maryland corporation, its sole member and manager

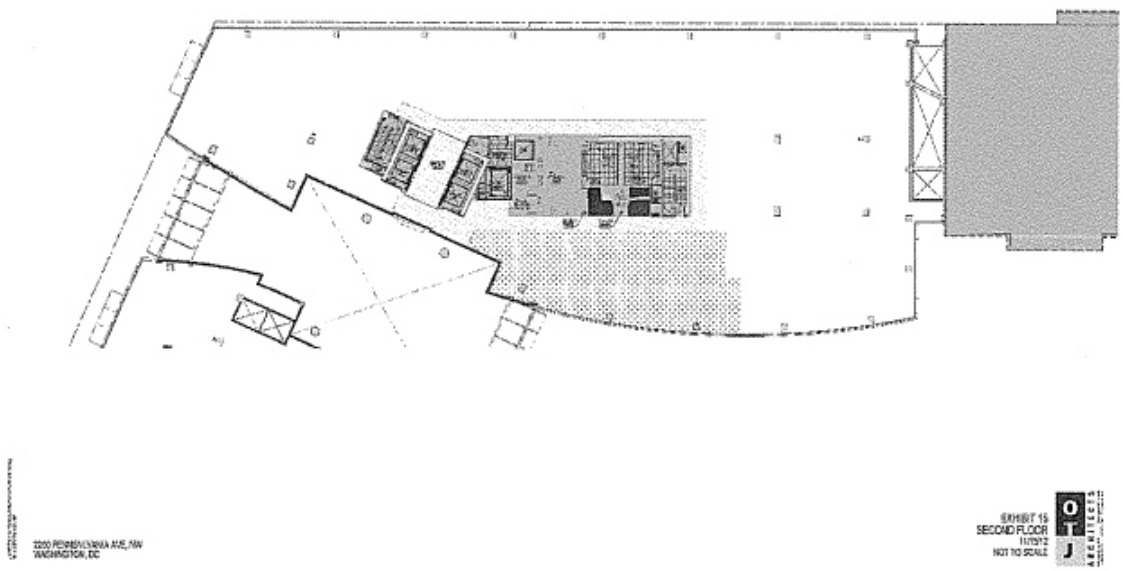
By: /s/ Jonathan L. Kaylor
Name: Jonathan L. Kaylor
Title: Senior Vice President

TENANT:

VANDA PHARMACEUTICALS INC.,
a Delaware corporation

By: /s/ Mihael H. Polymeropoulos
Name: Mihael H. Polymeropoulos
Title: CEO

ATTACHMENT A
DIAGRAM OF AMENDMENT NO. 3 EXPANSION SPACE



2200 PENNSYLVANIA AVE. NW
WASHINGTON, DC

EXHIBIT 1S
SECOND FLOOR
11/15/12
NOT TO SCALE

EXECUTION VERSION

AMENDMENT NO. 4 TO LEASE

THIS AMENDMENT NO. 4 TO LEASE ("**Amendment No. 4**") is made as of the 29th day of March, 2018 ("**Effective Date**"), by and between SQUARE 54 OFFICE OWNER LLC, a Delaware limited liability company ("**Landlord**"), and VANDA PHARMACEUTICALS INC., a Delaware corporation ("**Tenant**").

WITNESSETH:

WHEREAS, by Lease dated as of July 25, 2011 (the "**Initial Lease**"), as amended by that Amendment No. 1 to Lease dated as of March 18, 2014 ("**Amendment No. 1**"), and that Amendment No. 2 to Lease dated as of June 20, 2016 ("**Amendment No. 2**"), and that Amendment No. 3 to Lease dated as of March 28, 2018 ("**Amendment No. 3**") (the Initial Lease, Amendment No. 1, Amendment No. 2 and Amendment No. 3 collectively, the "**Lease**"), Landlord is leasing to Tenant thirty-three thousand five hundred thirty-four (33,534) square feet of rentable area (the "**Premises**"), comprised of (i) twenty-one thousand four hundred (21,400) square feet of rentable area located on the third (3rd) floor ("**3rd Floor East Premises**"), (ii) eight thousand eight hundred sixty (8,860) square feet of rentable area located on the second (2nd) floor ("**2nd Floor East Premises**"), and (iii) three thousand two hundred seventy-four (3,274) square feet of rentable area located on the second (2nd) floor ("**Amendment No. 3 Expansion Space**"), all located in the East Tower of the building located at 2200 Pennsylvania Avenue, N.W., Washington, D.C. (the "**Building**"); and

WHEREAS, the Lease Term is scheduled to expire effective as of September 30, 2026 with respect to all portions of the Premises other than the Amendment No. 3 Expansion Space (for which the Lease Term is scheduled to expire effective as of July 31, 2028), and Landlord and Tenant desire to extend the Lease Term for the entire remainder of the Premises (i.e., the 3rd Floor East Premises and the 2nd Floor East Premises) for one (1) additional period of one (1) year and ten (10) months, so that the Lease Term with respect to the entire remainder of the Premises is coterminous with the Lease Term with respect to the Amendment No. 3 Expansion Space; and

WHEREAS, Landlord and Tenant desire to so amend the Lease to extend the Lease Term and to modify certain other terms of the Lease in accordance with and subject to the terms and conditions set forth below.

NOW, THEREFORE, in consideration of the mutual covenants and premises contained herein and other good and valuable consideration the receipt and sufficiency of which hereby are acknowledged, Landlord and Tenant hereby agree to amend the Lease as follows:

1. Defined Terms. All capitalized terms used herein and not otherwise defined herein shall have the same meanings as provided for such terms in the Lease.

2. Lease Term. Notwithstanding anything to the contrary contained in the Lease, the Lease Term with respect to the entire Premises other than the Amendment No. 3 Expansion

Space (such portion of the Premises comprised of solely the 3rd Floor East Premises and the 2nd Floor East Premises being sometimes hereinafter referred to as the "**Remaining Premises**") hereby is extended for the Amendment No. 3 Renewal Term set forth in Amendment No. 3 and applicable with respect to the Amendment No. 3 Expansion Space (i.e., the period commencing on October 1, 2026 (also referred to as the Amendment No. 3 Renewal Commencement Date) and expiring on July 31, 2028 (also referred to as the Amendment No. 3 Renewal Expiration Date), unless extended or earlier terminated pursuant to the terms of the Lease (as amended hereby). Tenant acknowledges that the Lease (as amended hereby) contains no right or option whatsoever for Tenant to renew or extend the Lease Term with respect to the Remaining Premises beyond the Amendment No. 3 Renewal Expiration Date, except as otherwise set forth in Rider No. 1 to the Original Lease (as modified by Paragraph 6 below), or to terminate the Lease Term with respect to the Remaining Premises prior to the Amendment No. 3 Renewal Expiration Date.

3. Base Rent.

(a) (i) Commencing on the Amendment No. 3 Renewal Commencement Date (i.e., October 1, 2026) and continuing thereafter during the Lease Term (as extended hereby through the Amendment No. 3 Renewal Expiration Date), Tenant shall pay to Landlord as annual base rent for the 3rd Floor East Premises, net of all Operating Expenses, without set off, deduction or demand and in accordance with the terms and conditions of Article III of the Initial Lease, an amount equal to the product of Sixty-Six and 40/100 Dollars ($66.40), multiplied by the total number of square feet of rentable area in the 3rd Floor East Premises, which amount shall be increased as provided in Paragraph 3(a)(ii) below.

(ii) Commencing on April 1, 2027, and on each April 1 thereafter during the Amendment No. 3 Renewal Term, the annual base rent for the 3rd Floor East Premises shall be increased by two and fifty hundredths percent (2.50%) of the amount of annual base rent payable for the 3rd Floor East Premises for the preceding Lease Year.

(iii) Based on the foregoing, the Annual Base Rent and Monthly Base Rent payable for the 3rd Floor East Premises during the Amendment No. 3 Renewal Term shall be as follows:

Period During Amendment No. 3 Renewal Term	Base Rate/RSF For 3rd Floor East Premises	Annual Base Rent for 3rd Floor East Premises*	Monthly Base Rent for 3rd Floor East Premises
10/1/26 – 3/31/27	$66.40	$1,420,959.96	$118,413.33
4/1/27 – 3/31/28	$68.06	$1,456,484.04	$121,373.67
4/1/28 – 7/31/28	$69.76	$1,492,863.96*	$124,405.33

*based on 12 full calendar months

(b) (i) Commencing on the Amendment No. 3 Renewal Commencement Date (i.e., October 1, 2026) and continuing thereafter during the Lease Term (as extended hereby through the Amendment No. 3 Renewal Expiration Date), Tenant shall pay to Landlord as annual

base rent for the 2nd Floor East Premises, net of all Operating Expenses, without set off, deduction or demand and in accordance with the terms and conditions of Article III of the Initial Lease, an amount equal to the product of Fifty-Seven and 83/100 Dollars ($57.83), multiplied by the total number of square feet of rentable area in the 2nd Floor East Premises, which amount shall be increased as provided in Paragraph 3(b)(ii) below.

(ii) Commencing on September 1, 2027, the annual base rent for the 2nd Floor East Premises shall be increased by two and fifty hundredths percent (2.50%) of the amount of annual base rent payable for the 2nd Floor East Premises for the preceding Lease Year.

(iii) Based on the foregoing, the Annual Base Rent and Monthly Base Rent payable for the 2nd Floor East Premises during the Amendment No. 3 Renewal Term shall be as follows:

Period During Amendment No. 3 Renewal Term	Base Rate/RSF For 2nd Floor East Premises	Annual Base Rent for 2nd Floor East Premises*	Monthly Base Rent for 2nd Floor East Premises
10/1/26 – 8/31/27	$57.83	$512,373.84	$42,697.82
9/1/27 – 7/31/28	$59.28	$525,220.80*	$43,768.40

*based on 12 full calendar months

4. Operating Expenses. During the Amendment No. 3 Renewal Term, Tenant shall continue to pay its proportionate share, with respect to the 3rd Floor East Premises and the 2nd Floor East Premises (i.e., the Remaining Premises), of the Operating Expenses incurred by Landlord in connection with the management, operation and ownership of the Building, pursuant to the terms set forth in Article IV of the Initial Lease.

5. Condition. Tenant shall accept and continue to occupy the Remaining Premises in its then "as is" condition as of the Amendment No. 3 Renewal Commencement Date. Landlord is under no obligation to make any alterations or improvements in or to any part of the Remaining Premises or to pay any allowance with respect to Alterations to be made by Tenant in the Remaining Premises in connection with the extension of the Lease Term for the Remaining Premises to include the Amendment No. 3 Renewal Term.

6. Renewal.

(a) Tenant shall maintain the right to extend the term of the Lease provided in **Rider No. 1** to the Initial Lease, as modified by Amendment No. 1, Amendment No. 2, and Amendment No. 3, effective upon the Amendment No. 3 Renewal Expiration Date; it being acknowledged and agreed, however, that such renewal right is subject and subordinate to the right of Hunton & Williams LLP (and its successors and assigns, as applicable "**HW**") to expand into the entire portion of the Premises located on the second (2nd) floor, and/or the entire portion of the Premises located on the third (3rd) floor, pursuant to expansion rights (including rights to first offer space) contained in the HW lease or pursuant to the mutual agreement of Landlord and

HW, in which event Tenant's renewal rights shall be applicable solely with respect to the entire portion of the Premises (if any) not so leased by HW.

(b) All other terms and conditions of the Renewal Term shall be in accordance with **Rider No. 1** to the Lease; provided however, the first sentence of Section 1(a) of **Rider No. 1** to Lease shall be amended to read as follows:

"1. (a) Tenant shall exercise its right of renewal with respect to the Renewal Term by giving Landlord written notice of the exercise thereof ("**Renewal Option Notice**") not less than twelve (12) months ("**Outside Notice Deadline**") and not more than fourteen (14) months prior to the Amendment No. 3 Renewal Expiration Date."

7. Ratification. Except as otherwise expressly modified by the terms of this Amendment No. 4, the Lease shall remain unchanged and continue in full force and effect. All terms, covenants and conditions of the Lease not expressly modified herein are hereby confirmed and ratified and remain in full force and effect, and, as further amended hereby, constitute valid and binding obligations of Landlord and Tenant enforceable according to the terms thereof.

8. Broker. Landlord recognizes Savills Studley, Inc. (the "**Broker**") as the sole broker procuring this Amendment No. 4 and shall pay said Broker a commission pursuant to a separate agreement between said Broker and Landlord. Landlord and Tenant each represent and warrant to the other that, except as provided in the preceding sentence, neither of them has employed or dealt with any broker, agent or finder in carrying on the negotiations relating to this Amendment No. 4. Landlord and Tenant shall indemnify and hold the other harmless from and against any claim or claims for brokerage or other commissions asserted by any broker, agent or finder engaged by Landlord or Tenant or with whom Landlord or Tenant has dealt in connection with this Amendment No. 4, other than the Broker.

9. Authority.

(a) Tenant hereby represents and warrants to Landlord that Tenant is a duly organized and existing corporation and is in good standing under the laws of the State of Delaware and the District of Columbia, that all necessary corporate action has been taken to enter into this Amendment No. 4 and that the person signing this Amendment No. 4 on behalf of Tenant has been duly authorized to do so.

(b) Landlord hereby represents and warrants to Tenant that Landlord is a duly organized and existing limited liability company and is in good standing under the laws of the State of Delaware and the District of Columbia, that all necessary company action has been taken to enter into this Amendment No. 4 and that the person signing this Amendment No. 4 on behalf of Landlord has been duly authorized to do so.

10. Landlord and Tenant Representations and Acknowledgements.

(a) To the best of Tenant's knowledge, Landlord has performed all of its obligations under the Lease. To the best of Tenant's knowledge, Landlord is not in default under

the Lease as of the date hereof, and Tenant is unaware of any condition or circumstance which, but for the passage of time or delivery of notice, or both, would constitute an event of default by Landlord under the Lease. Tenant has no current claims, defenses or set-offs of any kind to the payment or performance of Tenant's obligations under the Lease. Nothing contained herein shall be deemed to waive any sums due from Tenant to Landlord, or any default or event which, with the passage of time or delivery of notice, or both, would constitute a default by Tenant under the Lease as of the date hereof.

(b) To the best of Landlord's knowledge, Tenant has performed all of its obligations under the Lease. To the best of Landlord's knowledge, Tenant is not in default under the Lease as of the date hereof, and Landlord is unaware of any condition or circumstance which, but for the passage of time or delivery of notice, or both, would constitute an event of default by Tenant under the Lease. Landlord has no current claims, defenses or set-offs of any kind to the payment or performance of Landlord's obligations under the Lease. Nothing contained herein shall be deemed to waive any sums due from Landlord to Tenant, or any default or event which, with the passage of time or delivery of notice, or both, would constitute a default by Landlord under the Lease as of the date hereof.

11. Mutual Negotiation. Landlord and Tenant each hereby covenants and agrees that each and every provision of this Amendment No. 4 has been jointly and mutually negotiated and authorized by both Landlord and Tenant, and in the event of any dispute arising out of any provision of this Amendment No. 4, Landlord and Tenant each does hereby waive any claim of authorship against the other party.

12. General Provisions. Landlord and Tenant agree that the terms and conditions of this Amendment No. 4 shall also be subject to the same provisions regarding confidentiality as are contained within Section 25.20 of the Initial Lease.

13. Binding Effect. This Amendment No. 4 shall not be effective and binding unless and until fully executed and delivered by each of the parties hereto. All of the covenants contained in this Amendment No. 4, including, but not limited to, all covenants of the Lease as modified hereby, shall be binding upon and inure to the benefit of the parties hereto, their respective heirs, legal representatives, and permitted successors and assigns.

[REMAINDER OF PAGE INTENTIONALLY BLANK.
SIGNATURE PAGE FOLLOWS.]

IN WITNESS WHEREOF, Landlord and Tenant have executed this Amendment No. 4 to Lease as of the date and year first above written.

LANDLORD:

SQUARE 54 OFFICE OWNER LLC,
a Delaware limited liability company

By: BP/DC PROPERTIES, INC.,
a Maryland corporation, its sole member and manager

By: /s/ Jonathan L. Kaylor [SEAL]

Name: Jonathan L. Kaylor

Title: Senior Vice President

TENANT:

VANDA PHARMACEUTICALS INC.,
a Delaware corporation

By: /s/ Mihael H. Polymeropoulos [SEAL]

Name: Mihael H. Polymeropoulos

Title: CEO

Exhibit 10.40

VANDA PHARMACEUTICALS INC.

AMENDED AND RESTATED EMPLOYMENT AGREEMENT

This Employment Agreement (this "Agreement") by and between **GUNTHER BIRZNIEKS** (the "Employee") and **VANDA PHARMACEUTICALS INC.**, a Delaware corporation (the "Company") was originally entered into as of June 12, 2009. This Agreement is hereby further amended and restated as of April 30, 2018.

1. **Duties and Scope of Employment.**

(a) **Position**. During his employment under this Agreement ("Employment"), the Company agrees to employ the Executive in the position of Senior Vice President, Business Development. The Executive shall be subject to the supervision of, and shall have such authority as is delegated to him by, the Company's Chief Executive Officer. The Executive hereby accepts such employment and agrees to undertake the duties and responsibilities normally inherent in such position and such other duties and responsibilities as the Company's Chief Executive Officer shall from time to time reasonably assign to him.

(b) **Obligations to the Company**. During his Employment, the Executive shall devote his full business efforts and time to the Company. In addition, during his Employment, without the prior written approval of the Company's Board of Directors (the "Board"), the Executive shall not render services in any capacity to any other person or entity and shall not act as a sole proprietor or partner of any other person or entity or as a shareholder owning more than five percent of the voting power of any other entity. The Executive shall comply with the Company's policies and rules, as they may be in effect from time to time during his Employment.

(c) **No Conflicting Obligations**. The Executive represents and warrants to the Company that he is under no obligations or commitments, whether contractual or otherwise, that are inconsistent with his obligations under this Agreement. The Executive represents and warrants that he will not use or disclose, in connection with his Employment, any trade secrets or other proprietary information or intellectual property in which the Executive or any other person has any right, title or interest and that his Employment as contemplated by this Agreement will not infringe or violate the rights of any other person or entity. The Executive represents and warrants to the Company that he has returned all property and confidential information belonging to any prior employers.

2. **Cash and Incentive Compensation.**

(a) **Salary**. The Company shall pay the Executive as compensation for his services a base salary at a gross annual rate of not less than $375,000. Such salary shall be payable in accordance with the Company's standard payroll procedures. The annual compensation specified in this Subsection (a), together with any increases in such compensation that the Company may grant from time to time, is referred to in this Agreement as "Base Compensation."

(b) **Incentive Bonuses**. Executive shall be eligible for an annual incentive bonus with a target amount equal to 40% of his Base Compensation (the "Annual Target Bonus"). Such Annual Target Bonus (if any) shall be awarded based on objective or subjective criteria established in advance by the Board or the Compensation Committee of the Board (the "Compensation Committee"). Any Annual Target Bonus for the fiscal year in which Executive's employment begins shall not be prorated. Any Annual Target Bonus for a fiscal year shall in no event be paid later than 2 ½ months after the close of such fiscal year. Except as provided in Section 6, such Annual Target shall be paid only if the Executive is employed by the Company at the time of payment. The determinations of the Board or the Compensation Committee with respect to such Annual Target Bonus shall be final and binding.

(c) **Equity Awards**. The Executive has previously been granted options to purchase shares of the Company's common stock and restricted stock units. In addition, the Executive will be eligible to receive annual equity awards, if any, subject to the approval of the Board or the Compensation Committee in their sole discretion. The timing and size of the annual equity awards, if any, shall be determined in the sole discretion of the Board or the Compensation Committee based on the Executive's and/or the Company's performance.

3. **Vacation and Employee Benefits.** During his Employment, the Executive shall be eligible for 25 paid vacation days each year. Vacation days shall accrue, and may be taken, in accordance with the Company's standard policy for similarly situated employees, as it may be amended from time to time. During his Employment, the Executive shall be eligible to participate in any employee benefit plans maintained by the Company for similarly situated employees, subject in each case to the generally applicable terms and conditions of the plan in question and to the determinations of any person or committee administering such plan.

4. **Business Expenses.** During his Employment, the Executive shall be authorized to incur necessary and reasonable travel, entertainment and other business expenses in connection with his duties hereunder. The Company shall reimburse the Executive for such expenses upon presentation of an itemized account and appropriate supporting documentation, all in accordance with the Company's generally applicable policies. Any reimbursement shall (a) be paid promptly but not later than the last day of the calendar year following the year in which the expense was incurred, (b) not be affected by any other expenses that are eligible for reimbursement in any calendar year and (c) not be subject to liquidation or exchange for another benefit.

5. **Term of Employment.**

(a) **Employment at Will**. The Executive's Employment with the Company shall be "at will," meaning that either the Executive or the Company may terminate the Executive's Employment at any time and for any reason, with or without Cause. Any contrary representations which may have been made to the Executive shall be superseded by this Agreement. This Agreement shall constitute the full and complete agreement between the Executive and the Company on the "at will" nature of the Executive's Employment, which may only be changed in an express written agreement signed by the Executive and a duly authorized officer of the Company (other than the Executive). The termination of Executive's Employment shall not limit or otherwise affect his obligations under Section 7 below.

(b) **Termination**. The Company may terminate the Executive's Employment at any time and for any reason (or no reason), and with or without Cause, by giving the Executive notice in writing. The Executive may terminate his Employment by giving the Company 14 days' advance notice in writing. The Executive's Employment shall terminate automatically in the event of his death.

(c) **Rights Upon Termination**. Except as expressly provided in Section 6, upon the termination of the Executive's Employment pursuant to this Section 5, the Executive shall only be entitled to accrued and unpaid compensation, benefits and expense reimbursements described in Sections 2, 3 and 4 for the period preceding the effective date of the termination. The payments under this Agreement shall fully discharge all responsibilities of the Company to the Executive.

6. **Termination Benefits.**

(a) **Preconditions**. Any other provision of this Agreement notwithstanding, the remaining Subsections of this Section 6 shall not apply unless each of the following requirements is satisfied:

(i) The Executive has executed a general release of all known and unknown claims that the Executive may then have against the Company or persons affiliated with the Company in a form prescribed by the Company, without alterations. The Executive shall execute and return the release on or before the date specified by the Company in the prescribed form (the "Release Deadline"). The Release Deadline shall in no event be later than 50 days after the Executive's Separation. If the Executive fails to return the release on or before the Release Deadline, or if the Executive revokes the release, then the Executive shall not be entitled to the benefits described in this Section 6.

(ii) The Executive has returned all property of the Company in the Executive's possession.

(b) **Severance Pay**. If, during the term of this Agreement, the Executive is subject to an Involuntary Termination, then the Company shall pay the Executive both of the following:

(i) **Base Compensation**. The Company shall continue to pay Executive his Base Compensation for a period of 12 months following the Separation (the "Continuation Period"). Such severance payments shall be paid at the Base Compensation rate in effect at the time of the Separation and in accordance with the Company's standard payroll procedures. The severance payments shall commence within 60 days after the Executive's Separation and, once they commence (the "Payment Commencement"), shall include any unpaid

amounts accrued from the date of the Employee's Separation. However, if the 60-day period described in the preceding sentence spans two calendar years, then the Payment Commencement shall in any event begin on the first payroll period following expiration of any applicable revocation period in the second calendar year.

(ii) **Target Bonus**. An amount equal to his Annual Target Bonus at the rate in effect at the time of the Separation. Such amount shall be payable in a lump sum on the Company's next regularly scheduled payroll that occurs following the Payment Commencement.

(c) **Options**. If, during the term of this Agreement, Executive is subject to an Involuntary Termination, then (i) the vested portion of the shares of the Company's Common Stock subject to all options held by the Executive at the time of his Separation shall be determined by adding three months to the actual period of service that he has completed with the Company and (ii) such options shall be exercisable for up to six months after the Executive's Separation (provided, however, that the Option shall remain subject to the terms of the Plan in the event the Company is subject to a Change in Control, and further provided that the Option in any event shall expire no later than the Expiration Date set forth in the Notice of Stock Option Grant evidencing the Option).

7. **Non-Solicitation, Non-Disclosure and Non-Competition.** The Executive has entered into a Proprietary Information and Inventions Agreement with the Company, which agreement is incorporated herein by reference.

8. **Successors.**

(a) **Company's Successors**. This Agreement shall be binding upon any successor (whether direct or indirect and whether by purchase, lease, merger, consolidation, liquidation or otherwise) to all or substantially all of the Company's business and/or assets. For all purposes under this Agreement, the term "Company" shall include any successor to the Company's business and/or assets which becomes bound by this Agreement.

(b) **Executive's Successors**. This Agreement and all rights of the Executive hereunder shall inure to the benefit of, and be enforceable by, the Executive's personal or legal representatives, executors, administrators, successors, heirs, distributees, devisees and legatees.

9. **Definitions.** For all purposes under this Agreement:

"**Cause**" shall mean:

(a) An unauthorized use or disclosure by the Executive of the Company's confidential information or trade secrets, which use or disclosure causes material harm to the Company;

(b) A material breach by the Executive of any agreement between the Executive and the Company;

(c) A material failure by the Executive to comply with the Company's written policies or rules;

(d) The Executive's conviction of, or plea of "guilty" or "no contest" to, a felony under the laws of the United States or any State thereof;

(e) The Executive's gross negligence or willful misconduct;

(f) A continuing failure by the Executive to perform assigned duties after receiving written notification of such failure from the Board; or

(g) A failure by the Executive to cooperate in good faith with a governmental or internal investigation of the Company or its directors, officers or employees, if the Company has requested the Executive's cooperation.

"**Change in Control**" shall mean:

(a) The consummation of a merger or consolidation of the Company with or into another entity or any other corporate reorganization, if persons who were not stockholders of the Company immediately prior to such merger, consolidation or other reorganization own immediately after such merger, consolidation or other reorganization 50% or more of the voting power of the outstanding securities of each of (i) the continuing or surviving entity and (ii) any direct or indirect parent corporation of such continuing or surviving entity;

(b) The sale, transfer or other disposition of all or substantially all of the Company's assets;

(c) A change in the composition of the Board, as a result of which fewer than 50% of the incumbent directors are directors who either:

(i) Had been directors of the Company on the date 24 months prior to the date of such change in the composition of the Board (the "Original Directors"); or

(ii) Were appointed to the Board, or nominated for election to the Board, with the affirmative votes of at least a majority of the aggregate of (A) the Original Directors who were in office at the time of their appointment or nomination and (B) the directors whose appointment or nomination was previously approved in a manner consistent with this Subsection (c)(ii); or

(d) Any transaction as a result of which any person is the "beneficial owner" (as defined in Rule 13d-3 under the Securities Exchange Act of 1934, as amended (the "Exchange Act")), directly or indirectly, of securities of the Company representing at least 50% of the total voting power represented by the Company's then outstanding voting securities. For

purposes of this Subsection (d), the term "person" shall have the same meaning as when used in Sections 13(d) and 14(d) of the Exchange Act but shall exclude (i) a trustee or other fiduciary holding securities under an employee benefit plan of the Company or of a parent or subsidiary of the Company and (ii) a corporation owned directly or indirectly by the stockholders of the Company in substantially the same proportions as their ownership of the Common Stock of the Company.

A transaction shall not constitute a Change in Control if its sole purpose is to change the State of the Company's incorporation or to create a holding company that will be owned in substantially the same proportions by the persons who held the Company's securities immediately before such transaction.

"**Code**" shall mean the Internal Revenue Code of 1986, as amended.

"**Good Reason**" shall mean Executive's resignation within 6 months after one of the following conditions has come into existence without Executive's consent: (i) a change in the Executive's position with the Company that materially reduces his level of authority or responsibility, (ii) a material reduction in his Base Compensation or (iii) receipt of notice that his principal workplace will be relocated by more than 30 miles. A condition shall not be considered "Good Reason" unless the Executive gives the Company written notice of such condition within 90 days after the initial existence of such condition and the Company fails to remedy such condition within 30 days after receiving the Executive's written notice.

"**Involuntary Termination**" shall mean a Separation resulting from either (i) the Executive's involuntary discharge by the Company for reasons other than Cause, Executive's death or Permanent Disability or (ii) the Executive's voluntary resignation for Good Reason.

"**Permanent Disability**" shall mean the Executive's inability to perform the essential functions of the Executive's position, with or without reasonable accommodation, for a period of at least 120 consecutive days because of a physical or mental impairment.

"**Separation**" shall mean a "separation from service," as defined in the regulations under Section 409A of the Code.

10. **Miscellaneous Provisions.**

(a) **Notice**. Notices and all other communications contemplated by this Agreement shall be in writing and shall be deemed to have been duly given when personally delivered or when mailed by overnight courier, U.S. registered or certified mail, return receipt requested and postage prepaid. In the case of the Executive, mailed notices shall be addressed to him at the home address that he most recently communicated to the Company in writing. In the case of the Company, mailed notices shall be addressed to its corporate headquarters, and all notices shall be directed to the attention of its Secretary.

(b) **Modifications and Waivers**. No provision of this Agreement shall be modified, waived or discharged unless the modification, waiver or discharge is agreed to

in writing and signed by the Executive and by an authorized officer of the Company (other than the Executive). No waiver by either party of any breach of, or of compliance with, any condition or provision of this Agreement by the other party shall be considered a waiver of any other condition or provision or of the same condition or provision at another time.

(c) **Whole Agreement**. No other agreements, representations or understandings (whether oral or written and whether express or implied) which are not expressly set forth in this Agreement have been made or entered into by either party with respect to the subject matter hereof. This Agreement and the Proprietary Information and Inventions Agreement contain the entire understanding of the parties with respect to the subject matter hereof. Additionally, by execution hereof, the Executive acknowledges and agrees that the severance protection letter between the Company and the Executive dated December 17, 2008 is hereby terminated and shall be of no further force or effect following April 30, 2018.

(d) **Tax Matters**. All payments made under this Agreement shall be subject to reduction to reflect taxes or other charges required to be withheld by law. For purposes of Section 409A of the Code, each payment under Section 6(b) is hereby designated as a separate payment. If the Company determines that the Executive is a "specified employee" within the meaning of Section 409A(a)(2)(B)(i) of the Code and the regulations thereunder at the time of his Separation, then:

(i) Any salary continuation payments under Section 6(b)(i), to the extent not exempt from Section 409A of the Code, shall commence with the Company's first regularly scheduled payroll that occurs following the earlier of (x) expiration of the six-month period measured from Executive's Separation or (y) the date of Executive's death and, once such payments commence, any amounts accrued from the Separation date shall be paid in a lump sum on the first payment date; and

(ii) Any lump-sum payment under Section 6(b)(ii), to the extent not exempt from Section 409A of the Code, shall be made with the Company's first regularly scheduled payroll that occurs following the earlier of (x) expiration of the six-month period measured from Executive's Separation or (y) the date of Executive's death.

The Company shall not have a duty to design its compensation policies in a manner that minimizes the Executive's tax liabilities, and the Executive shall not make any claim against the Company or the Board related to tax liabilities arising from the Executive's compensation.

(e) **Choice of Law**. The validity, interpretation, construction and performance of this Agreement shall be governed by the laws of the District of Columbia (except its provisions governing the choice of law).

(f) **Severability**. The invalidity or unenforceability of any provision or provisions of this Agreement shall not affect the validity or enforceability of any other provision hereof, which shall remain in full force and effect.

(g) **No Assignment**. This Agreement and all rights and obligations of the Executive hereunder are personal to the Executive and may not be transferred or assigned by the Executive at any time. The Company may assign its rights under this Agreement to any entity that assumes the Company's obligations hereunder in connection with any sale or transfer of all or a substantial portion of the Company's assets to such entity.

(h) **Counterparts**. This Agreement may be executed in two or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument.

[REMAINDER OF PAGE LEFT BLANK INTENTIONALLY]

IN WITNESS WHEREOF, each of the parties has executed this Agreement, in the case of the Company by its duly authorized officer, as of the date first written above.

/s/ Gunther Birznieks
Gunther Birznieks

VANDA PHARMACEUTICALS INC.

By /s/ Mihael H. Polymeropoulos
Title: President and CEO

EXHIBIT 31.1

CERTIFICATION OF CHIEF EXECUTIVE OFFICER
PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Mihael H. Polymeropoulos, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Vanda Pharmaceuticals Inc.;

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

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

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

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

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

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

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

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

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

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

May 2, 2018

/s/ Mihael H. Polymeropoulos, M.D.

Mihael H. Polymeropoulos, M.D.
President and Chief Executive Officer
(Principal Executive Officer)

EXHIBIT 31.2

CERTIFICATION OF CHIEF FINANCIAL OFFICER
PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, James P. Kelly, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Vanda Pharmaceuticals Inc.;

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

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

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

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

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

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

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

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

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

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

May 2, 2018

/s/ James P. Kelly

James P. Kelly
Executive Vice President, Chief Financial Officer and Treasurer
(Principal Financial Officer and Principal Accounting Officer)

EXHIBIT 32.1

CERTIFICATION OF CHIEF EXECUTIVE OFFICER AND CHIEF FINANCIAL OFFICER

Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
(Subsections (a) and (b) of Section 1350, Chapter 63 of Title 18, United States Code)

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

The Quarterly Report on Form 10-Q for the quarter ended March 31, 2018 (the Form 10-Q) of the Company fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended, and the information contained in the Form 10-Q fairly presents, in all material respects, the consolidated financial condition and results of operations of the Company.

May 2, 2018

/s/ Mihael H. Polymeropoulos, M.D.

Mihael H. Polymeropoulos, M.D.
President and Chief Executive Officer
(Principal Executive Officer)

May 2, 2018

/s/ James P. Kelly

James P. Kelly
Executive Vice President, Chief Financial Officer and Treasurer
(Principal Financial Officer and Principal Accounting Officer)

A signed original of this written statement required by Section 906 has been provided to the Company and will be retained by the Company and furnished to the Securities and Exchange Commission (SEC) or its staff upon request. This certification "accompanies" the Form 10-Q to which it relates, is not deemed filed with the SEC and is not to 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 the Form 10-Q), irrespective of any general incorporation language contained in such filing.